EXECUTIVE SUMMARY

This chapter of the Draft Environmental Impact Report (Draft EIR) is prepared pursuant to the California Environmental Quality Act (CEQA) for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Project or proposed Project). In accordance with State CEQA Guidelines Section 15123, this chapter provides a brief description of the Project; identifies significant environmental impacts and proposed mitigation measures or alternatives that would reduce or avoid those impacts; describes areas of controversy known to the lead agency; and presents issues to be resolved.

A. PROJECT LOCATION

The Project is located on a County-owned 72-acre property at 1000 West Carson Street in Torrance, California called the Medical Center Campus. The Project Site is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Center Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block (approximately 800 feet) east of the Medical Center Campus and the San Diego Freeway (I-405) is located approximately two miles to the north and northeast. The Harbor Freeway is accessed via Carson Street and the San Diego Freeway is accessed via Carson Street to the east and Vermont and Normandie Avenues to the north. Harbor-UCLA Medical Center was founded in 1943 as the U.S. Army's Port of Embarkation Station Hospital, a receiving point and hospital for servicemen returning from the Pacific during World War II (WWII). Harbor General Hospital began its affiliation with the University of California Los Angeles (UCLA) School of Medicine in 1948 and became the southern campus of the UCLA School of Medicine in 1951. Construction of the existing eight-story, 450,000-square-foot hospital called the Existing Hospital Tower was completed in 1962 in the eastern portion of the Medical Center Campus and replaced a number of the original Army facility's wooden barracks and cottages. In 1978, the name of the hospital was changed to Los Angeles County Harbor-UCLA Medical Center to highlight its working relationship with the David Geffen School of Medicine at UCLA.

B. PROPOSED PROJECT

Proposed Project components include the following: 1) a New Hospital Tower; 2) new and renovated outpatient care facilities to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower; 3) other services and facilities, including administrative offices, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop, etc.); 4) long-term buildout of the LA BioMed Campus; 5) a new Bioscience Tech Park; and 6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. The Project would add an additional 1,178,071 square feet to the existing 1,279,284 square feet of existing developed floor area, for a total at buildout of up to 2,457,355 square feet of developed floor area on the Harbor-UCLA Campus. The average campus-wide floor-area ratio (FAR) would increase from 0.40:1 to 0.78:1. The number of licensed in-patient hospital beds would decrease slightly from 453 to 446. New building heights across much of the Project Site would generally be four stories, with the tallest existing on-site building (the existing eight-story Hospital Tower) to be retained and a second building (New Hospital Tower) up to eight stories to be developed. Campus-wide parking would increase from 3,186 spaces

(including 281 spaces in an off-site parking lot) to up to 4,240 spaces (including the spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-floor parking structures. The number of Campus-wide employees would increase from approximately 5,464 to 7,494.

The Project proposes to locate related uses in proximity to one another, connected by a network of walkways and landscaped areas. The most publicly accessible zones, including commercial and community-oriented services, would be located along the northern edge of the Medical Center Campus fronting on Carson Street, with staff and support services located in the southern half of the Medical Center Campus. The New Hospital Tower would be centrally located within the Project site and is intended to be the most visible building on the Medical Center Campus, and therefore its primary focal point, signaling its location to visitors and identifying the Harbor-UCLA Medical Center Campus to the community. The LA BioMed Campus would continue to occupy the southern-central part of the Medical Center Campus, fronting on 220th Street. The Children's Institute, Inc.'s (CII) Burton E. Green Campus would remain in the northwestern corner of the Medical Center Campus at the intersection of Carson Street and Normandie Avenue, but the balance of the western end of the Medical Center Campus is the proposed site for a new Bioscience Tech Park.

Master Plan Project implementation would create clear distinctions between Harbor-UCLA Medical Center Campus access and on-site circulation and parking facilities for the general public and staff. Staff entries and parking would be located in the southeastern corner of the Medical Center Campus, while access for the public would be provided on Carson Street along the northern perimeter. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Medical Center Campus between the main parking areas and the New Hospital Tower and Outpatient buildings. Circular pick-up/drop-off loading zones would be provided at the main entrances to each of the New Hospital Tower and Outpatient buildings. The Master Plan Project would provide sufficient parking to meet or exceed the County's minimum code parking requirement. Buildout of the Project is anticipated to occur in eight main phases, culminating in 2030.

Discretionary and administrative land use approvals required for the Project are anticipated to include, but may not be limited to, the following:

- Certification of the Final EIR
- Approval of demolition, excavation, and building permits for component buildings and other structures
- California Office of Statewide Health Planning and Development (OSHPD) Approval
- Caltrans Division of Aeronautics Helistop Permit Approval

C. PUBLIC REVIEW PROCESS

As further described in Chapter 1.0, Introduction, the County circulated a Notice of Preparation (NOP) and Initial Study to State, regional, and local agencies, and members of the public for a 30-day scoping and early consultation period, commencing November 3, 2014 and ending December 2, 2014 to receive input on the issues to be addressed in an Draft EIR. Following the subsequently proposed inclusion of a Bioscience Tech Park within the Master Plan Project, a revised NOP and Initial Study were circulated for a second 30-day

scoping period commencing June 29, 2015 and ending July 29, 2015. Both NOPs were based on Initial Study determinations that the Project had the potential to result in significant impacts to the environment.

In addition, both NOPs included notification that public scoping meetings would be held in an open house format to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The meetings were held November 12, 2014 between 5:30 P.M. and 7:30 P.M. and on July 15, 2015, from 5:30 p.m. to 7:30 p.m. at Parlow Library on the Harbor UCLA Campus. In addition, early input was sought from County departments prior to public circulation of the NOPs. Both NOPs and Initial Studies, scoping materials from both meetings, and letters and comments received by the County during the two NOP comment periods are provided in Appendix A of this Draft EIR. This Draft EIR will be released for a minimum 45-day public comment period, which will include a community meeting on the Draft EIR.

The Draft EIR is subject to a minimum 45-day public review period in which the document is made available to responsible and trustee agencies, interested parties and members of the public. In compliance with the provision of Sections 15085(a) and 15087(a)(1) of the State CEQA Guidelines, the County, serving as the Lead Agency: (1) published a Notice of Completion and Availability (NOCA) of a Draft EIR in two (2) newspapers of general circulation, including the Daily Breeze (English language) and La Opinión (Spanish language), which indicated that the Draft EIR was available for review at the Harbor-UCLA Medical Center, (2) provided copies of the NOCA and Draft EIR to seven (7) local libraries, including the Carson Library, Harbor Gateway City Library, Southeast Branch Library, Lomita Library, Dr. Martin Luther King, Jr. Library, the Katy Geissert Civic Center Library, and the Wilmington Library, (3) posted the NOCA and the Draft EIR on the County website (http://dpw.lacounty.gov/landing/publicBuildings.cfm), (4) prepared and transmitted a NOCA to the State Clearinghouse; (5) mailed a NOCA to all property owners within 500 feet of the Project Site; and (6) sent a NOCA to the last-known name and address of all organizations and individuals who previously requested such notice in writing or attended one or both of the public scoping meetings about the Project. Proof of mailing is available at the County. The public review period commenced on August 17, 2016, and will end on October 3, 2016, for a total of 48 days.

Following the public comment period, a Final EIR will be prepared that includes responses to the comments on the Draft EIR.

D. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The following summarizes the areas of environmental concern known to the County including those raised during the NOP circulation period. The public and agency scoping period comments are included in Appendix A-4. The County decision makers will need to resolve choices between the project and alternatives and whether or how significant effects might be mitigated:

- Construction hours and associated noise in the Project vicinity, in addition to existing operational ambulance and helicopter noise
- Construction and operational traffic impact potential at area intersections
- Potential for impacts on City of Carson police and fire services, traffic, and infrastructure

- Air quality impacts resulting from Project-related vehicle trips and need to encourage use of public transit
- Potential to connect Blue Line and proposed South Bay Metro Green Line extension through the City of Carson
- Potential transit impacts
- Potential impacts on Caltrans facilities

E. SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Significant unavoidable impacts even with mitigation measures could occur as a result of Project impacts. Based on the analysis contained in Chapter 4.0, Environmental Impact Analysis, the Project would result in significant and unavoidable impacts. The proposed findings for the project will include a Statement of Overriding Considerations for the Board of Supervisors to consider to address these impacts, which are as follows:

- Construction noise impacts
- Operational noise impacts for temporary interim helistops
- Construction traffic impacts for both Project-level and cumulative conditions
- Operational traffic impacts at twelve (12) intersections and three (3) Caltrans facilities

F. PROJECT OBJECTIVES

Section 15124(b) of the State CEQA Guidelines requires that an EIR Project Description contain a statement of objectives for the proposed project and recommends that the statement of objectives include the underlying purpose of the project.

The overall goal of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system. It will provide a New Hospital Tower to replace the acute care functions in the Existing Hospital Tower before the state law deadline to meet seismic standards for critical trauma/tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting.

The goal is supported by the following Master Plan Project objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital Tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as up to 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

G. ALTERNATIVES TO REDUCE SIGNIFICANT IMPACTS

The State CEQA Guidelines, Section 15126.6(a) require an EIR to "describe the range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but will avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[1] The State CEQA Guidelines further direct that the range of alternatives

[1] *State CEQA Guidelines, Section 15126.6(b).*

be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed.[2]

As described in Chapter 5.0, Alternatives, of this Draft EIR, seven alternatives to the Proposed Project were analyzed. Four alternatives to the Project were analyzed in detail: the No Project/No Build Alternative, Reduced Density Alternative A: Acute Bed and Other Plan Reductions, Reduced Intensity Alternative B: Further Acute Bed and Other Plan Reductions, and Reduced Intensity Alternative C: New Acute Bed Hospital Tower Only. The other three alternatives that were considered but rejected after initial analysis included Alternative Off-Site Locations, Alternative On-Site Uses, and a No Bioscience Tech Park Alternative. These considered but rejected alternatives failed to meet basic project objectives, were infeasible and/or did not avoid significant project impacts. Based on an analysis of these alternatives, the No Project/No Build Alternative was identified as the environmentally superior alternative. In accordance with the State CEQA Guidelines requirement to identify an environmentally superior alternative other than the No Project/No Build Alternative, a comparative evaluation of the remaining alternatives indicates that the Reduced Intensity Alternative C would be the environmentally superior alternative.

H. SUMMARY OF ENVIRONMENTAL IMPACTS

This section provides a summary of impacts, Project Design Features, Mitigation Measures, and level of impact after implementation of mitigation measures associated with Project. The summary is provided by environmental issue area below in **Table ES-1**, *Summary of Project Impacts, Project Design Features, and Mitigation Measures*.

[2] *Ibid., Section 15126.6(f).*

Table ES-1

Summary of Project Impacts, Project Design Features and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.A Aesthetics			
Impact Statement AES-1: The Master Plan Project would generate adverse visual character impacts resulting from construction and landscaping activities, as well as off-site infrastructure improvements. Construction would occur in specified phases that would be temporary in nature and not encompass the site at any one time, construction is not considered to substantially degrade the existing visual character of the site and surrounding area. During operation, the visual character of the Medical Center Campus would be enhanced by high quality architecture and landscaping, including landscaping improvements along the public sidewalks. The Project would also be consistent with aesthetic policies of the Los Angeles County General Plan. Because of improvements in the public realm and consistency with the General Plan, operation is not considered to substantially degrade the existing visual character of the site and surrounding area. Therefore, impacts related to visual character would be less than significant.	Not Applicable	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement AES-2: The Master Plan Project would not substantially obstruct focal or panoramic views across the Medical Center Campus or substantially alter an existing recognized scenic vista or valued publicly available view as a result of view obstruction. The Project's tallest building would be visible from 220th Street. However, the deep setback of more than 200 feet from the nearest building corner to the street, the northwest orientation of the building, and new perimeter streetscape along 220th Street would reduce the visual effect to a less than significant level. Impacts related to views and view resources would be less than significant.	Not Applicable	Not Applicable	Less than Significant
Impact Statement AES-3: New light sources associated primarily with any new entrance/wayfinding signs, light spill from taller buildings, landscape lighting, and security lighting. All light sources would be low-level and directed downward to maintain ambient and point source lighting consistent with the on-site hospital use. As such, the Master Plan Project would not substantially alter the character of off-site areas surrounding the Medical Center Campus or result in substantial	Not Applicable	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
light spill and/or glare onto adjacent light-sensitive residential uses. The Harbor-UCLA Master Plan Design Guidelines would require that buildings be compatible with the style, materials, and massing of other Project buildings, the function of which are to serve as a medical campus. It is not anticipated that expanses of reflective glass and metals would be implemented in building design. As such, the Project would not cause adverse glare impacts. Therefore, potential impacts associated with nighttime illumination and/or glare from reflected sunlight would be less than significant.			
4.B Air Quality			
Impact Statement AQ-1: Construction and operation of the Project would not conflict with the growth projections in the SCAQMD AQMP and would comply with applicable control measures. As a result, the Project would not conflict with or obstruct implementation of the Plan and impacts would be less than significant.	Not Applicable	Not Applicable	Less than Significant
Impact Statement AQ-2: Construction of the Project would not exceed the applicable SCAQMD daily numeric indicators for VOC,	**PDF AQ-1:** The Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. As a result, construction and operations of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and operational impacts would be less than significant.	Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following: ▪ The Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris. ▪ The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code. ▪ The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means. ▪ The Project would include lighting controls with occupancy sensors to take advantage of available natural light. ▪ The Project shall install cool roofs for heat island reduction and strive to meet the		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent. ▪ Project buildings shall be constructed with solar-ready rooftops that provide for the installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading. ▪ The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care. ▪ To encourage carpooling and the use of electric vehicles by project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225). **PDF AQ-2:** The Project shall implement the following measures during construction activities: ▪ The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. ▪ To the extent possible, pole power will be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment. ▪ The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the clean-up of off-road diesel vehicles,		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/ SOONProgram.htm. ▪ In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. ▪ The Applicant shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits. ▪ The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust. ▪ Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. ▪ On-site vehicles shall be limited to 15 miles per hour on unpaved roadways. ▪ Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches. ▪ Prior to leaving areas of active		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out. ▪ Construction areas shall install temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas. ▪ The Applicant shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust. ▪ All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement AQ-3: Construction of the Project would not exceed the SCAQMD daily regional numeric indicators. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational emissions at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. Thus, construction and operations of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment and impacts would be less than significant.	See **PDF-AQ-1, Green Building Measures** and **PDF-AQ-2, Construction Measures**	Not Applicable	Less than Significant
Impact Statement AQ-4: Construction of the Project would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Project at full build-out would not exceed SCAQMD localized significance	See **PDF-AQ-1, Green Building Measures** and **PDF-AQ-2, Construction Measures**	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of the Project would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks that exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of the Project would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. As a result, construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, and localized emissions during construction and interim operations would result in a less than significant impact.			
Impact Statement AQ-5: Construction and operation of the Project would not create or introduce objectionable odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.	Not Applicable	Not Applicable	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.C Energy			
Impact Statement EN-1: Impacts regarding the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation would be less than significant. The Project would incorporate energy efficiency measures and comply with applicable measure to reduce energy consumption and would allow for future energy conservation.	See **PDF-AQ-1, Green Building Measures**	Not Applicable	Less than Significant
4.D Geology and Soils			
Impact Statement GEO-1: The Harbor-UCLA Campus is subject to seismic shaking due to its location in the seismically active southern California region. Based on subsurface geologic conditions and the depth to groundwater, the potential for substantial adverse effects due to fault rupture and ground failure are relatively low, but impacts are potentially significant.	Not Applicable	**MM-GEO-1:** All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1: ▪ *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards. ▪ *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting foundations with piles at depths designed specifically for liquefaction, shall be included. To evaluate the potential liquefaction hazard for the	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils. Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.	
Impact Statement GEO-2: Compliance with the County's National Pollutant Discharge Elimination System through implementation of a Storm Water Pollution Prevention Program for erosion control would be required during Project construction and with County's Low Impact Development (LID) ordinance requirements during operations. Impacts related to soil erosion and loss of soil would be less than significant.	Not Applicable	Not Applicable	Less than Significant
Impact Statement GEO-3: Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to differential soil settlement and liquefaction beneath proposed buildings, due to the presence of alluvium and possible undocumented fill, and relatively shallow depths to groundwater beneath the Campus. Subsidence hazards would be less than significant.	Not Applicable	**MM-GEO-2:** All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for	Less than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3: ▪ *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels. During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, drilling of	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions. Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting. ▪ *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.	
Impact Statement GEO-4: Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to expansive and corrosive soils beneath proposed buildings, based on the underlying soil type(s).	Not Applicable	**MM-GEO-3:** All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		to mitigate expansive soils hazards identified under Impacts GEO-4. ▪ *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions would reduce the impact from expansive soils to low levels. ▪ *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.E Greenhouse Gas Emissions			
Impact Statement GHG-1: Impacts from short- and long-term increases in GHG emissions would be less than significant. The Master Plan Project would generate GHG emissions due to construction and operational activities; however, the net increase in annual GHG emissions, directly and indirectly, would be consistent with the Los Angeles County *Community Climate Action Plan.*	See **PDF-AQ-1, Green Building Measures**	Not Applicable	Less than Significant
Impact Statement GHG-2: Construction and operation of the Master Plan Project would not conflict with applicable GHG emissions reductions plans, policies, or regulations. As a result, construction and operation of the Project would not have a significance impact with respect to consistency with GHG reduction plans, and impacts would be less than significant.	See **PDF-AQ-1, Green Building Measures**	Not Applicable	Less than Significant
4.F Hazards and Hazardous Materials			
Impact Statement HAZ-1: Project construction involves the demolition of existing buildings, grading, and excavation, which could result in the potential release into the environment of hazardous materials during	Not Applicable	**MM-HAZ-1:** The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, or the disturbance of on-site soil that may be contaminated by past USTs on the Campus or underlying groundwater that may be contaminated by nearby off-site LUSTs. These represent potential environmental concerns on the Harbor-UCLA Campus and their disturbance is considered a potentially significant impact. Project operations would require the storage, use, and disposal of limited quantities of hazardous materials and waste routinely used in hospitals and related facilities, in a manner consistent with manufacturer's recommendations and applicable regulatory requirements. The potential for upset and accidental conditions resulting in the release of these materials is low and related impacts are considered less than significant.		Survey prepared for the Harbor-UCLA Campus, which are as follows: ▪ The identified ACMs and surfaces containing LBP should not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor shall maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities. ▪ The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or encapsulated. Lead containing ceramic tiles shall be removed prior to	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1. ▪ Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material shall be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample shall be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample shall be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA- (California-) Hazardous waste. ▪ Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements. ▪ Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities. **MM-HAZ-2:** Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following: ▪ A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		Management Plan and to actively monitor the soils and excavations for evidence of contamination. ▪ Any soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility. ▪ All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.	
Impact Statement HAZ-2: As discussed under Threshold/Impact Statement HAZ-1, Project construction has the potential to	Not Applicable	See **MM-HAZ-1** and **MM-HAZ-2**	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
result in the accidental release of hazardous materials related to the removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, as well as the disturbance of on-site soil and/or groundwater that may be contaminated by nearby off-site LUSTs, which represent potential recognized environmental concerns on the Harbor-UCLA Campus. There are no schools within a quarter-mile of the Harbor-UCLA Campus and impacts related to the emissions or handling of hazardous materials in close proximity to schools would be less than significant. However, a child care facility located immediately north of the Medical Center Campus, which could be potentially affected by accidental releases of hazardous materials. As such, impacts in this regard are considered potentially significant.			
Impact Statement HAZ-3: Harbor-UCLA is listed on several environmental databases due to inconclusive documentation regarding proper remediation and site closure following 1994 removal of five on-site USTs, as well as the presence of Large and Small Quantity Generators of hazardous waste on the Campus. Four adjacent off-site properties to	Not Applicable	See **MM-HAZ-1** and **MM-HAZ-2**	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
the east were also listed due to the potential for LUST petroleum hydrocarbon contamination of underlying groundwater. As stated under Threshold/Impact Statement HAZ-1, construction could result in the release of hazardous materials due to disturbance of potentially contaminated on-site soil and/or groundwater; this is a potentially significant impact. Hazardous waste generated during Project operations is not considered a hazard to human health or the environment and related impacts would be less than significant.			
Impact Statement HAZ-4: Harbor-UCLA is not located within an airport land use plan or the vicinity of a private airstrip; the nearest public airports are between four and 11 miles away. The Project proposes relocation of the existing helistop to a temporary and, ultimately, permanent location on the Harbor-UCLA Campus during Master Plan Project buildout. Helistop operations during construction and following buildout would not differ substantively from existing helistop operations in terms of the number of flights, composition of the helicopter fleet, or proposed flight paths. Project-related safety	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
hazards due to airport or helistop operations would be less than significant.			
Impact Statement HAZ-5: Impacts regarding emergency response plans would be less than significant. The Project would not use hazardous materials or have on-site hazardous conditions that would conflict with or obstruct implementation of any emergency response plans. Further, the Project would not interfere with emergency access routes.	Not Applicable	Not Applicable	Less Than Significant
4.G Hydrology and Water Quality			
Impact Statement HWQ-1: With compliance with regulatory requirements governing stormwater management and water quality during construction and following buildout of master Plan Project components, impacts on water quality or related to waste discharge (i.e., construction dewatering) would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement HWQ-2: Project-related excavation is not expected to extend to the depth of groundwater beneath the Harbor-UCLA Campus, with only temporary dewatering anticipated in the event seepage is encountered at shallower depths	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
than anticipated. Project implementation would increase pervious area on the Campus over existing conditions through the introduction of more landscaped area and does not propose withdrawal of groundwater to meet water demand. The Project's indirect employment-related population growth would not substantially increase demand on groundwater supplies serving the Project Site, thus impacts regarding groundwater supplies would be less than significant.			
Impact Statement HWQ-3: The Project would redevelop the already fully developed Harbor-UCLA Campus, and, with compliance with NPDES regulations and County LID requirements governing construction and post-project stormwater management and water quality, would not substantially alter existing drainage patterns in a manner that would result in substantial erosion or siltation.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement HWQ-4: The Project would redevelop the already fully developed Harbor-UCLA Campus and would not substantially alter existing topography or affect the course of	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
any streams or rivers. Neither construction nor operations would increase surface runoff in a manner that would result in flooding. Therefore, impacts on existing drainage patterns of the Project site would be less than significant.			
Impact Statement HWQ-5: With adherence to County connection permit requirements and compliance with County LID requirements, the volumes of runoff discharged to the County's storm drain system following Project buildout would be similar or reduced compared to existing conditions and would not provide additional sources of polluted runoff; impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement HWQ-6: With compliance with County NPDES and LID requirements, the Project is not anticipated to substantially degrade water quality.	Not Applicable	Not Applicable	Less Than Significant
4.H Land Use and Planning			
Impact Statement LU-1: The Project would be substantially consistent with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, land use impacts associated with	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Project consistency with applicable land use plans, policies and regulations would be less than significant.			
Impact Statement LU-2: The Project would be compatible with existing adjacent off-site land uses because the nature (type, scale, height, location) of the existing on-site land uses would not substantially change under the Project, nor would the character of the area as perceived by the existing adjacent off-site land uses. Therefore, land use compatibility impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.I Noise			
Impact Statement NOISE -1 On-site construction noise associated with the Project would increase noise levels at nearby residential uses in excess of established thresholds. Therefore, impacts would be significant without implementation of mitigation measures.	**PDF-NOISE-1:** The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards. **PDF-NOISE-2:** On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings. **PDF-NOISE-3:** Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings. **PDF-NOISE-4:** Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent	**MM-NOISE-1:** Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows: ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6,	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	feasible. **PDF NOISE-5:** Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise. **PDF-NOISE-7:** As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet noise limits in Table 4.I-6.	and Phase LA Biomed. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4. ▪ Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.	
Impact Statement NOISE-2: Off-site construction traffic would not exceed the significance thresholds at off-site noise sensitive receptor locations. Therefore, impacts to off-site sensitive receptors would be less than significant.	See **PDF-NOISE-1**, **PDF-NOISE-2**, **PDF-NOISE-3**, **PDF-NOISE-4**, **PDF-NOISE-5**, and **PDF-NOISE-7**	See **MM-NOISE-1**	Less Than Significant
Impact Statement NOISE-3: Project implementation would increase noise levels at adjacent noise-sensitive receptors in the Project area as the result of increased Project traffic and temporary helicopter activity during use of the proposed interim helistop. Project-related noise	Not Applicable	See **MM-NOISE-1**	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
from traffic would not exceed established thresholds. Project-related noise from helicopter activity would only be significant when using the temporary interim helistops. Project-related noise from helicopter activity when using the permanent helistop after it is built will be less than significant. Therefore, the temporary interim helistops would result in a temporary and periodic significant impact but the permanent helistop would result in a less than significant permanent impact.			
Impact Statement NOISE-4: Project implementation would not increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. Therefore, impacts would be less than significant.	Not Applicable	See **MM-NOISE-1**	Less Than Significant
Impact Statement NOISE-5: Project implementation, including noise from the parking structure, would increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. However, Project-related noise generation would not exceed established thresholds and therefore impacts would be less than significant.	Not Applicable	See **MM-NOISE-1**	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement NOISE-6: Construction activities would result in sporadic, temporary vibration effects adjacent to the Project area. However, ground-borne vibration levels would not exceed established thresholds. Thus, construction vibration impacts would be less than significant and no mitigation measures are required.	**PDF NOISE-6:** To reduce the potential for serious construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on- site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.	See **MM-NOISE-1**	Less Than Significant
Impact Statement NOISE-7: Project implementation would not generate excessive vibration levels to nearby sensitive receptors. Thus, construction and long-term vibration impacts would be less than significant and no mitigation measures are required.	Not Applicable	See **MM-NOISE-1**	Not Applicable
4.J Population and Housing			
Impact Statement PH-1: Given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not have a notable impact on the demand for housing, nor affect general housing occupancy and population patterns. Thus, construction	**PDF TRAF-1, Construction Traffic Management Plan**	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
activities would not cause growth (i.e. new housing or employment generators) or accelerate development that exceeds projected/planned levels for the year of the Project occupancy/buildout, as compared to growth otherwise occurring, and would not result in a significant adverse physical change in the environment. Operation of the Master Plan Project would create new employment opportunities. The Project's contributions to employment would be consistent with SCAG's short-term and long-term growth projections for the South Bay Cities Subregion, unincorporated Los Angeles County communities and all of Los Angeles County, and would help the County meet or exceed its economic development objectives per the General Plan Economic Development Element, and housing allocation established in the SCAG RHNA. Overall, construction-related and long-term operational impacts regarding the relationship of the Project to growth projections would be less than significant.			
	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.K Public Services			
4.K.1 Fire Protection and Emergency Services			
Impact Statement FIRE-1: The Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing fire station to maintain service due to compliance with County Code and LACFD requirements that address fire safety, emergency access, emergency response times, and fire flow. Therefore, construction and operational impacts would be less than significant.	**PDF-FIRE-1:** The applicants, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix J-1, *Fire Department Correspondence*, of this Draft EIR. The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following: ▪ Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles. ▪ Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building. ▪ Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have	**MM FIRE-1:** The Project construction contractors will regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times. **MM FIRE-2:** Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	unobstructed vertical clearance "clear to sky" ▪ Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround. ▪ Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE". ▪ Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction. ▪ Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. ▪ The method of gate control shall be subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements. ▪ The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration.		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used. ▪ Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant. ▪ All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction. Provide a Fire Department-approved fire sprinkler system in all proposed buildings.		
4.K.2 Sheriff Protection			
Impact Statement SHER-1: The Project would not require the addition of a new police station or the expansion, consolidation, or relocation of an existing police station to maintain service due to compliance with applicable requirements and Project Design Features that address police protection service, response times, and Crime Prevention Through Environmental Design (CPTED). Therefore, construction and operational impacts would be less	**PDF-SHER-1:** The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.	**MM SHER-1:** During Project construction, construction sites will be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS. **MM SHER-2:** Emergency access to the LACSD will be provided and	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
than significant.	**PDF-SHER-2:** Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting, landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be provided to the LACSD for review and approval.	maintained to existing and new uses on-site uses, and to off-site uses, throughout construction. **MM SHER-3:** The Project construction contractors will regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times. **MM SHER-4:** The Security Management Plan for the Harbor-UCLA Campus will be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan will carried forward under the Project.	

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
4.K.3 Parks and Recreation			
Impact Statement PARKS-1: Project construction and operation would not create a demand for parks and recreational facilities that would require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. In addition, the Project would not include new recreational facilities or require the construction or expansion of existing facilities. Therefore, the impact would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.K.4 Schools			
Impact Statement SCHOOLS-1: Project construction and operation would not be expected to create a demand for schools that would require new or physically altered public schools, the construction of which would result in a substantial adverse physical impact. Therefore, the impact would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.K.5 Libraries			
Impact Statement LIBRARIES-1: Project construction and operation would not be expected to create a demand for libraries that would require new or physically altered public libraries, the construction of which would result in a substantial	**PDF-LIBRARIES-1:** The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
adverse physical impact. Therefore, the impact would be less than significant.	other building space on the HUCLA Campus.		
4.L Transportation and Traffic			
Impact Statement TRAF-1: With the implementation of PDF TRAF-1, Construction Traffic Management Plan, and PDF TRAF-2, Pedestrian Safety, potential construction impacts associated with hauling, deliveries and worker vehicles would be reduced. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance with the two Project Design Features would minimize the potential for the Project to result in substantial disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the Project area's commercial zones and residential neighborhoods. However, given the potential addition of construction-related vehicle trips during peak construction periods, transportation and parking impacts related to construction would be considered significant	**PDF TRAF-1: Construction Traffic Management Plan:** A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared and submitted to the County for review and approval. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate: ▪ Prohibition of construction worker parking on nearby residential streets. ▪ Prohibition of construction-related vehicles parking or staging on surrounding public streets. ▪ Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.	No feasible mitigation measures.	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
and unavoidable, though such impacts would only occur on a temporary basis while construction activities are occurring on-site.	▪ Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate. ▪ Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible. **PDF TRAF-2: Pedestrian Safety:** The construction contractor(s) would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as		

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
	reasonably feasible taking construction and construction staging into account.		
Impact Statement TRAF-2: Implementation of the Master Plan Project would result in a net increase in traffic generation on the Project Site of 1,640 daily trips under Interim Year (2023) conditions and 6,598 daily trips at Full Buildout (2030). Project-related operational traffic impacts on study area intersections would be considered potentially significant under Existing With Project Conditions, Future Interim Year (2023) conditions, and Full Buildout (2030) conditions.		**MM TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9)** - The existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane. **MM TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15)** - An additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane. **MM TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20)** - The southbound approach would be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane.	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
		Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.	
Impact Statement TRAF-3: The Project would not meet the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement TRAF-4: The Project would increase traffic on the Caltrans facilities. With regard to freeway segments and intersections, while the County would make a fair-share contribution to offset increases in trips that would occur as a result of Project traffic, the Project could have a significant impact on Caltrans facilities. While the County would contribute a fair-share contribution for future improvements, this impact is considered potentially significant.	Not Applicable	**MM TRAF-4:** The developer shall contribute a fair share contribution to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments and that would pass through the affected Caltrans intersections.	Significant and Unavoidable

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Impact Statement TRAF-5: The Project would increase traffic on the Caltrans facilities. However, with regard to off-ramps, the Project would not contribute traffic such that off-ramp queues would extend beyond the length of the ramp itself onto the mainline of a freeway during peak arrival periods. Thus, impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement TRAF-6: Transit ridership generated by the Project would not exceed the residual capacity of the public transit system under Future Interim (2023) and Buildout (2030) conditions. Therefore, impacts with respect to transit would be less than significant. With regard to other alternative transportation modes, the Project would be supportive of and would not conflict with applicable alternative transportation policies, plans, and programs. Thus, impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement TRAF-7: Site access would be provided via seven driveways designed to County standards that would accommodate left and right ingress/egress turning movements. The existing network	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. Impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant.			
Impact Statement TRAF-8: The Project would provide vehicle parking sufficient to meet projected demand. Therefore, impacts related to parking would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.M Utilities and Service Systems			
4.M.1 Water Supply			
Impact Statement WS-1: Construction of the water infrastructure required to serve the Master Plan Project would not result in significant environmental effects. Impacts would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement WS-2: Implementation of the proposed Master Plan Project would not result in a demand for water that would exceed projected available	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
supplies. As such, impacts would be less than significant.			
4.M.2 Wastewater			
Impact Statement WW-1: Although construction and operation of the Project would result in an increase in wastewater generation that would increase the overall demands on wastewater conveyance and treatment facilities in the area, this increase would not exceed the available capacity of affected wastewater facilities and thus would not, directly or indirectly, result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater conveyance and treatment would be less than significant.	Not Applicable	Not Applicable	Less Than Significant
4.M.3 Solid Waste			
Impact Statement SW-1: The Project would generate construction debris due to demolition and removal of multiple buildings throughout the	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites. As such, impacts related to solid waste disposal capacity due to construction activities would be less than significant.			
Impact Statement SW-2: Impacts on waste disposal facilities from operations would be less than significant because the County has sufficient landfill capacity to accommodate residual waste generation. The Project would generate solid waste as the result of operation of Project Site, but there will not be a substantial increase in operations and solid waste generation. Waste disposal would include design features and compliance with County waste disposal procedures for recycling and diversion of waste from County landfills.	Not Applicable	Not Applicable	Less Than Significant
Impact Statement SW-3: The Project would be implemented in compliance with all applicable Federal, State and local regulatory requirements regarding diversion of landfill materials and efficient	Not Applicable	Not Applicable	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts, Project Design Features, and Mitigation Measures

Environmental Impacts	Project Design Features (PDF-)	Mitigation Measures (MM-)	Level of Significance
use of County landfill facilities. Thus, impacts would be less than significant.			

1.0 INTRODUCTION

This Draft Environmental Impact Report (EIR) has been prepared for the proposed Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project). The Project would be a redesign of the existing County of Los Angeles Harbor-UCLA Campus to address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Harbor-UCLA Campus or Medical Center Campus). The existing 72-acre Harbor-UCLA Campus, located at 1000 West Carson Street in Torrance, California, currently includes 1,279,284 square feet of developed floor area, including a recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project, which will be developed into a total of approximately 2,457,355 square feet of developed floor area, will include development of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital tower (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The redesigned Medical Center Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central portion of the Medical Center Campus. The western side of the Medical Center Campus would be utilized for the development of a biotechnical research campus (Bioscience Tech Park) and would support open space, surface parking, and other similar ancillary short-term uses.

The Project Site is currently developed with multiple facilities throughout the Campus. The Existing Hospital Tower, related treatment facilities, and the majority of Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Campus, while buildings occupied by LA BioMed take up a portion of the central Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Campus.

The Project would remove many of the existing original and older buildings, including the original WWII barracks and modular structures. However, several existing buildings would remain, including the Existing Hospital Tower, which would be decommissioned and reused to provide non-acute care support services. Other major facilities to remain include the PCDC and the CII Burton E. Green Campus building at the western end of the Campus. The Campus's emergency generator would also remain in its current location.

The Project would provide a continuous pedestrian circulation network throughout the Harbor-UCLA Campus. Multiple north/south walks and promenades would connect the center of the Campus with the public edge along Carson Street. Landscaped outdoor spaces would accommodate active social gatherings and passive gardens for contemplation and relaxation. Landscaped areas for exercise would be provided to help maintain staff's endurance during long shifts and educate the public regarding preventative healthcare. Landscaped courtyard gardens and plazas and a network of walkways or trails that form a continuous circulation system will allow staff and guests to reach their destinations with minimal opportunities for pedestrian/vehicular conflicts.

Vehicle access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Staff entries and parking would be located in the southeastern corner of the Campus, while access for the public would be provided on Carson Street along

the northern perimeter. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Campus between the main parking areas and the New Hospital Tower and Outpatient buildings.

The Master Plan Project will provide a long-term guide for future development throughout the Harbor-UCLA Campus. Although the actual timing, phasing, and scheduling of future construction projects comprising Master Plan Project buildout has not been precisely determined, at this time it is reasonably anticipated that development would occur in an estimated six main construction phases, culminating in 2030.

Discretionary actions that would be required for the Project are anticipated to include certification of the Final EIR; approval of demolition, excavation, and building approvals for non-acute care buildings and ancillary structures; review and approval of proposed acute care facilities (i.e., New Hospital Tower) by the California Office of Statewide Health Planning and Development (OSHPD); approval of the haul route; helistop permit approval by the California Department of Transportation (Caltrans) Division of Aeronautics; and other entitlements and approvals as may be required.

A. PURPOSE OF THE DRAFT EIR

The purpose of this Draft EIR is to inform decision-makers and the general public of the environmental impacts resulting from the proposed Project. The County is the Lead Agency under the California Environmental Quality Act (CEQA) responsible for preparing an EIR. This Draft EIR has been prepared in conformance with CEQA (California Public Resources Code Section 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). The principal State CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Contents of an EIR), and Section 15161 (Project EIR). This is a Project EIR, in accordance with Section 15161 of the State CEQA Guidelines, and in accordance with that Section is intended to "examine the environmental impacts of a specific development project" – in this instance, all phases of the proposed Harbor-UCLA Medical Center Master Plan Project.

The County will consider the information in this Draft EIR, along with other information that may be presented during the CEQA process, including the Final EIR prior to making any decisions to implement the Project. The EIR will be used in connection with all other permits and all other approvals necessary for the construction and operation of the Project. The EIR will be used by the County's Department of Public Works, including the Divisions of Land Development, Geotechnical and Materials Engineering, Traffic and Lighting, Environmental Programs, Sewer Maintenance, and Land Development to provide CEQA clearance in support of future improvements on the Medical Center Campus. The EIR will also be relied upon by OSHPD in the review and approval process for proposed acute care facilities, which require its approval, as well as by the California Department of Transportation, Division of Aeronautics as part of its review and approval of proposed temporary and proposed helistop facilities on the Medical Center Campus.

In accordance with Section 15121 of the State *CEQA Guidelines*, this Draft EIR provides specific information regarding the environmental effects associated with development of the Project Site, and ways to minimize any significant environmental effects through mitigation measures or reasonable alternatives to the Project. For some effects, significant environmental impacts cannot be mitigated to a level considered less than significant; in such cases, impacts are considered significant and unavoidable. In accordance with Section 15093(b) of the State CEQA Guidelines, if a public agency approves a project that has significant unavoidable impacts where impacts cannot be mitigated to less than significant levels, the agency must state

in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is known as a "statement of overriding considerations."

This document analyzes the environmental effects of the Project to the degree of specificity appropriate to the underlying actions described in the EIR, as required under Section 15146 of the State CEQA Guidelines. This analysis considers the actions associated with the Project, to determine the short-term and long-term effects. This EIR discusses both the direct and indirect impacts of this Project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects. CEQA requires the preparation of an objective, full disclosure document to inform agency decision-makers and the general public of the direct and indirect environmental effects of the proposed action, including mitigation measures and reasonable alternatives that can reduce or eliminate any identified significant adverse effects.

B. EIR SCOPING PROCESS

In compliance with the State CEQA Guidelines, the County has taken steps to provide opportunities for public participation in the environmental process. During the preparation of the Draft EIR various federal, state, regional, and local government agencies and other interested parties were notified to solicit comments on the contents of a Draft EIR and inform the public of the Project. As further described below, early consultation with the public included the distribution of an Initial Study and Notice of Preparation (NOP), and noticing for and conducting of a Public Scoping Meeting.

1. Initial Study

In accordance with Section 15063(a) of the State CEQA Guidelines, the County prepared an Initial Study. The Initial Study, provided in Appendix A of the Draft EIR, determined that the Project had the potential to result in significant impacts associated with a number of environmental issues. As a result, this Draft EIR addresses those issues where the Project potentially could result in significant environmental impacts and proposes feasible mitigation measures.

The Draft EIR focuses on changes in the environment that would result from the Project, individually and cumulatively with other development projects. The EIR identifies potentially significant direct and indirect impacts resulting from construction and operation of the Project, and provides Project Design Features and mitigation measures to reduce or avoid such effects. This Draft EIR addresses environmental effects in the following areas:

- Aesthetics
  - Visual Character
  - Views
  - Light and Glare
  - Shading
- Air Quality
- Energy
- Geology and Soils

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
  - Fire Protection and Emergency Services
  - Sheriff Protection
  - Parks and Recreation
  - Schools
  - Libraries
- Traffic and Transportation
- Utilities and Services Systems
  - Water Supply
  - Wastewater
  - Solid Waste

Based on the Initial Study, issues for which no significant impacts are anticipated to occur are addressed in Chapter 6.0, Other CEQA Considerations, of this Draft EIR. Those include Aesthetics (scenic resources within a scenic corridor); Agriculture and Forestry Resources and Mineral Resources; Biological Resources (riparian habitat or other sensitive natural community, federally protected wetlands, conflicts with local policies or ordinance protecting biological resources, and conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan): Geology and Soils (rupture of a known earthquake fault within an Alquist-Priolo Earthquake Fault Zoning Map, landslides, or soils capable of supporting a septic tank or alternative wastewater disposal system); Hydrology and Water Quality (placement of housing or other structures within a 100-year flood hazard area, exposure of people or structures to significant risk of flooding, or inundation by tsunami, seiche or mudflow); Land Use (physical division of an established community or conflict with any applicable habitat conservation plan or natural community conservation plan); and Population and Housing (displacement of existing housing or people requiring housing elsewhere). See also the Initial Studies in Appendix A of this Draft EIR.

2. Notice of Preparation for Scoping Process

Pursuant to the provision of Section 15082 of the State CEQA Guidelines, the County circulated an NOP to state, regional, and local agencies, and members of the public for a 30-day scoping period commencing November 3, 2014 and ending December 2, 2014 and for a second 30-day period commencing June 29, 2015 and ending July 29, 2015. The purposes of the NOPs were to formally convey that the County was preparing

a Draft EIR for the Project, and to solicit input regarding the scope and content of the environmental information to be included in the Draft EIR. See Appendix A1, NOP and Initial Study, of this Draft EIR.

3. Public Scoping Meeting

Both NOPs included notification that public scoping meetings would be held in an open house format to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The meetings were held November 12, 2014 between 5:30 p.m. and 7:30 p.m. and on July 15, 2015, from 5:30 p.m. to 7:30 p.m. at the Parlow Library on the Harbor- UCLA Campus. The meetings provided interested individuals, groups, and public agencies the opportunity to view materials, ask questions, and provide comments to the Lead Agency regarding the scope and focus of the Draft EIR as described in the respective NOPs and Initial Studies. See Appendix A-2 of this Draft EIR for Scoping Meeting Materials from both meetings.

4. Scoping Comments Received

Seven written comment letters responding to the NOP were submitted to the County by public agencies, interested parties, and individuals. Comment letters were received from the following: State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit; State of California, Department of Transportation (Caltrans); State of California, Native American Heritage Commission; Metropolitan Transportation Authority (Metro); the Southern California Association of Governments (SCAG); South Coast Air Quality Management District (SCAQMD); Los Angeles Unified School District (LAUSD); the County of Los Angeles Fire Department; the County Sanitation Districts; the City of Carson; and two individuals. Comments were also received orally on the scope and contents of the Draft EIR at the public scoping meeting. Public comments received during the NOP circulation period are provided in Appendix A-3 of this Draft EIR and are summarized in the Executive Summary, Subsection D, Areas of Controversy/Issues to be Resolved, in this Draft EIR. These comments are also addressed in general throughout this Draft EIR where applicable.

C. FORMAT OF THE DRAFT EIR

The Draft EIR includes an Executive Summary, nine Chapters, and appendices, which are organized as follows:

Executive Summary. This section of the Draft EIR provides a brief summary of the proposed actions and environmental consequences. It briefly recaps the proposed Project location and key characteristics; summarizes the environmental review process including opportunities for public input and review; summarizes areas of controversy raised by agencies and the public; provides a summary of Project impacts and required mitigation measures that would reduce or avoid significant Project impacts; and identifies the level of impact significance following implementation of mitigation measures for each significant effect.

1.0 Introduction. This section provides a summary of the Project; describes the CEQA process undertaken for the Project to date; and summarizes the Draft EIR organization and contents and discusses opportunities for public review of the Draft EIR.

2.0 Project Description. This section describes and depicts the Project Site location; defines the Project's underlying purpose lists the specific Project objectives; provides a general description of the Project's technical, economic, and environmental characteristics; describes the intended uses of the EIR, including a list of agencies expected to use the EIR in decision making, a list of permits and other approvals required to implement the Project; and a list of environmental review and consultation requirements required.

3.0 General Description of Environmental Setting. This section presents an overview of the Project's environmental setting, including on-site and surrounding land uses. This section also provides a list and mapped locations of past, present, and probable future projects considered in the analysis of potential Project contributions to cumulative impacts.

4.0 Environmental Impact Analysis. This section provides a description of the physical conditions in the Project vicinity at the time the Notice of Preparation was published, which serves as the baseline physical conditions against which a Lead Agency determined whether an impact is significant. Each technical section within this chapter describes, for the environmental resource in question, existing conditions, the pertinent regulatory framework, the technical methodology employed to determine impacts, the applicable thresholds of significance, relevant Project characteristics for purposes of analysis, Project Design Features (PDFs) and/or regulatory compliance measures that serve to avoid potential impacts, Project and cumulative impact analyses, mitigation measures, and conclusions regarding the level of significance after mitigation.

Prior to the environmental impact analysis for each technical section in this chapter, PDFs, if applicable, are listed and numbered. PDFs are specific design elements or other requirements incorporated into the Project that are included in the Project's contractor specifications and final plans, which are implemented in accordance with County protocol to prevent the occurrence of, or reduce the significance of, potential environmental effects. Because PDFs have been incorporated into the Project, they do not constitute mitigation measures as defined by CEQA. However, PDFs are identified in the Mitigation Monitoring and Reporting Program (MMRP) for convenience of tracking to ensure compliance monitoring. In addition, various regulatory requirements, which are summarized in each section under Regulatory Framework Summary, include applicable local, State, or federal regulations that are required independently of CEQA review and also serve to prevent the occurrence of, or reduce the significance of, potential environmental effects. Typical regulatory requirements include compliance with the provisions of the California Building Code, South Coast Air Quality Management District rules, local agency requirements, and other regulations and standards. An analysis of the potential environmental impacts that may result from the Project and any related improvements follows in each section. This impact analysis assumes the implementation of PDFs and regulatory requirements. The analysis addresses each applicable impact threshold, and includes a discussion of cumulative impacts at the end.

Where a potentially significant environmental effect has been identified, Project-specific mitigation measures are included. Section 15126.4(a) of the State CEQA Guidelines requires lead agencies to consider feasible to avoid or substantially reduce a project's significant environmental impacts. A summary of the significance of environmental impacts after

compliance with the PDFs and regulatory requirements and implementation of the mitigation measures, if any, are then stated for each environmental issue.

This discussion of impacts is provided in the Draft EIR for each of the following environmental issues: (1) Aesthetics – Visual Character, Views, Light and Glare, Shading; (2) Air Quality; (3) Energy, (4) Geology and Soils; (5) Greenhouse Gas Emissions; (6) Hazards and Hazardous Materials; (7) Hydrology and Water Quality; (7) Land Use and Planning; (8) Noise and Vibration; (9) Population and Housing; (10) Public Services – Fire Protection and Emergency Services, Sheriff Protection, Parks and Recreation, Schools, Libraries; (11) Transportation and Parking; and (12) Utilities and Service Systems – Water Supply, Wastewater, Solid Waste.

5.0 Alternatives. This section describes a reasonable range of alternatives to the Project, including the No Project/No Build Alternative, Reduced Intensity Alternative A (Acute Bed and Other Plan Reductions), Reduced Intensity Alternative B (Further Acute Bed and Other Plan Reductions), and Reduced Intensity Alternative C (New Acute Bed Hospital Tower Only Alternative). This section also evaluates the environmental effects of the alternatives for each issue area analyzed in the Draft EIR.

6.0 Other CEQA Considerations. This section includes a discussion of issues required by CEQA that are not covered in other chapters or technical sections. This includes significant unavoidable impacts, reasons why the Project is being proposed notwithstanding significant unavoidable impacts, growth-inducing impacts, potential secondary effects caused by the implementation of the mitigation measures for the Project, and effects found not to be significant.

7.0 References. This section lists the references and sources used in the preparation of this Draft EIR.

8.0 List of EIR Preparers. This section lists the persons who contributed to the preparation of this Draft EIR and their professional qualifications.

9.0 Standard Terms, Definitions, and Acronyms. This section provides a listing of the common acronyms and abbreviations used throughout this document.

The Environmental Analyses in this Draft EIR are supported by the following appendices:

- Appendix A – Notice of Preparation (NOP), Initial Study, Scoping Meeting Materials, and NOP and Scoping Meeting Comments
  - A-1 November 2014 Initial Study/NOP, Scoping Materials, and Comments
  - A-2 June 2015 Initial Study/NOP, Scoping Materials, and Comments
- Appendix B – Air Quality Data Worksheets
- Appendix C – Preliminary Geotechnical Evaluation
- Appendix D – Greenhouse Gas Emissions Data Worksheets
- Appendix E – Hazardous Materials Assessments
  - E-1 Phase I Hazardous Materials Assessment

  - E-2 Hazardous Building Materials Survey Report
- Appendix F – Energy Data Worksheets
- Appendix G – Service Provider Correspondence
  - G-1 Fire Department Correspondence
  - G-2 Sheriff's Department Correspondence
  - G-3 Parks and Recreation Department Correspondence
  - G-4 School District Correspondence
  - G-5 Library Correspondence
- Appendix H – Noise Data and Reports
  - H-1 Noise Data Worksheets
  - H-2 Helicopter Noise Impact Study
  - H-3 Helistop Relocation and Operations Study
- Appendix I – Transportation and Traffic
  - I-1 Traffic Impact Analysis Report
  - I-2 Traffic Impact Analysis Report Appendices
- Appendix J – Water Supply Assessment

D. PUBLIC REVIEW OF THE DRAFT EIR

The Draft EIR is subject to a minimum 45-day public review period in which the document is made available to responsible and trustee agencies, interested parties and members of the public. In compliance with the provision of Sections 15085(a) and 15087(a)(1) of the State CEQA Guidelines, the County, serving as the Lead Agency: (1) published a Notice of Completion and Availability (NOCA) of a Draft EIR in two (2) newspapers of general circulation, including the Daily Breeze (English language) and La Opinión (Spanish language), which indicated that the Draft EIR was available for review at the Harbor-UCLA Medical Center, (2) provided copies of the NOCA and Draft EIR to seven (7) local libraries, including the Carson Library, Harbor Gateway City Library, Southeast Branch Library, Lomita Library, Dr. Martin Luther King, Jr. Library, the Katy Geissert Civic Center Library, and the Wilmington Library, (3) posted the NOCA and the Draft EIR on the County website (http://dpw.lacounty.gov/landing/publicBuildings.cfm), (4) prepared and transmitted a NOCA to the State Clearinghouse; (5) mailed a NOCA to all property owners within 500 feet of the Project Site; and (6) sent a NOCA to the last-known name and address of all organizations and individuals who previously requested such notice in writing or attended one or both of the public scoping meetings about the Project. Proof of mailing is available at the County. The public review period commenced on August 17, 2016, and will end on October 3, 2016, for a total of 48 days.

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing by mail or email to the following address prior to the end of the public review period:

Mail: Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803-1331

Email: cnash@dpw.lacounty.gov

Phone: (626) 300-2363

Upon the close of the public review period, the County will proceed to evaluate and prepare responses to all written comments received from public agencies and other interested parties during the public review period. A Final EIR will then be prepared. The Final EIR will consist of the Draft EIR, possible revisions to the Draft EIR, comments submitted by responsible agencies or reviewing parties during the public circulation period for the Draft EIR, and County responses to those comments. After the Final EIR is completed and at least 10 days prior to its presentation to the County Board of Supervisors for consideration of certification of the Final EIR and action on the Project, responses to comments made by public agencies on the Draft EIR will be provided to the commenting agencies.

2.0 PROJECT DESCRIPTION

A. INTRODUCTION

Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project (Master Plan Project or Project) to address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Harbor-UCLA or Medical Center Campus).

The existing Medical Center Campus contains approximately 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Medical Center Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The Campus-wide floor area would increase from approximately 1,279,284 square feet to approximately 2,457,355 square feet.

The redesigned Medical Center Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central portion of the Medical Center Campus. It would also engage Carson Street by orienting hospital-related services used by the community along this major thoroughfare. Courtyards, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Medical Center Campus and connect the New Hospital Tower and outpatient facilities with the other major tenants on the Medical Center Campus, including Los Angeles Biomedical Research Institute (LA BioMed) in the south-central portion of the Medical Center Campus and the Children's Institute International (CII) Burton E. Green Campus in the northwest portion of the Medical Center Campus. Patient and visitor vehicle access and parking would be realigned off Carson Street and staff vehicle access would be concentrated in the eastern and southeastern Medical Center Campus off Vermont Avenue and 220th Street.

The western side of the Medical Center Campus would be used for the development of a new 250,000-square-foot biotechnical research campus (Bioscience Tech Park). A bioscience hub at the Medical Center Campus would provide the potential to grow the bioscience industry in the County and take advantage of relationships and research opportunities between the Bioscience Tech Park, the public hospital, and LA BioMed. Implementation of the Master Plan Project is expected to meet short-term needs of the communities served by the Existing Hospital Tower, associated facilities, and other tenants of the Medical Center Campus, as well as long-term needs beyond 2030.

B. HARBOR-UCLA MEDICAL CENTER LOCATION AND SURROUNDING USES

The 72-acre Medical Center Campus is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Center Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located

one block (approximately 800 feet) east of the Medical Center Campus and the San Diego Freeway (I-405) is located approximately two miles to the north and northeast. The Harbor Freeway is accessed via Carson Street and the San Diego Freeway is accessed via Carson Street to the east and Vermont and Normandie Avenues to the north. The Harbor-UCLA Medical Center Campus location is illustrated in **Figure 2-1**, *Project Site and Regional Location Map*.

Surrounding communities include the cities of Gardena, Lawndale, and Hawthorne to the north; the city of Carson, east of the Harbor Freeway; the Harbor Gateway community, part of the city of Los Angeles, and the city of Torrance to the west; and to the south, the Harbor City community, part of the city of Los Angeles, and the city of Lomita.

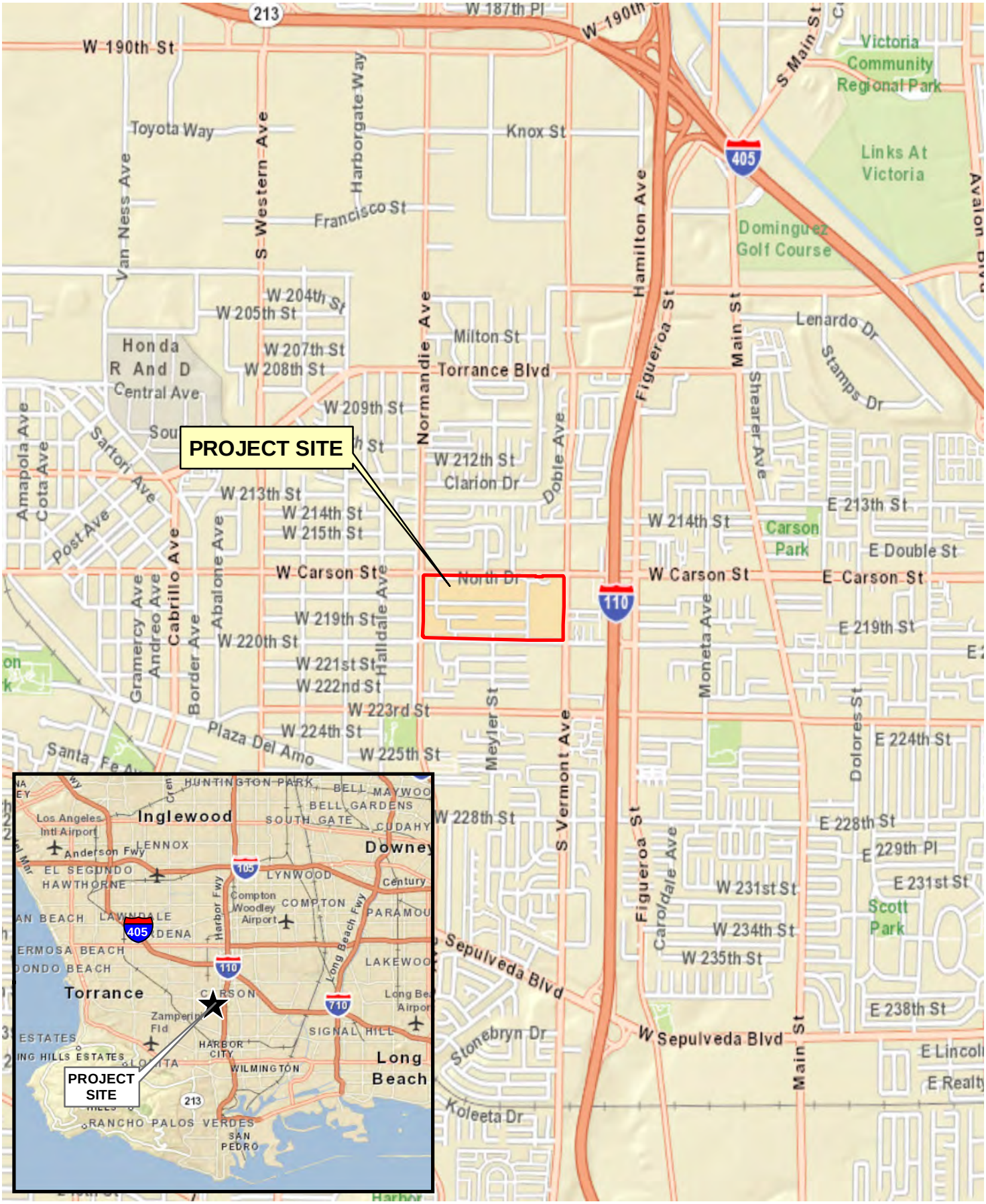
Figure 2-2, *Surrounding Land Uses*, is an aerial photograph of the Medical Center Campus and vicinity, with nearby land uses identified. Carson Street, to the north, is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located outside the Harbor-UCLA Medical Center Campus on Carson Street just west of the intersection with Vermont Avenue. The area north of Carson Street is a predominantly single-family residential neighborhood. Vermont Avenue, bordering the Harbor-UCLA Medical Center Campus to the east, is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block facing the Harbor-UCLA Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and Starlite Trailer Park and Rainbow Mobile Home Park, which back up to the Harbor Freeway on the west. Wholesale and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast along 220th Street. Single-family and multi-family residential neighborhoods border the Harbor-UCLA Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles; the abandoned Union Pacific Railroad right-of-way area along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Harbor-UCLA Medical Center Campus.

C. HARBOR-UCLA MEDICAL CENTER BACKGROUND AND EXISTING CONDITIONS

1. History and Background

(a) History of Harbor-UCLA Medical Center

The first hospital uses at the Harbor-UCLA Medical Center Campus were established in 1943 when the property was used as the U.S. Army's Port of Embarkation Station Hospital, a receiving point and hospital for servicemen returning from the Pacific during World War II (WWII). Facilities included an administration building and a collection of Army barracks and cottages; the hospital also provided medical services for servicemen and their families living in the area. By 1946, the facility was no longer needed and was sold as war surplus by the federal government to the County for the development of Los Angeles County Harbor General Hospital (Harbor General Hospital), to provide County-based medical care and hospital services to the increasingly populous southwestern part of the County.



PCR

0 2,000 4,000 Feet

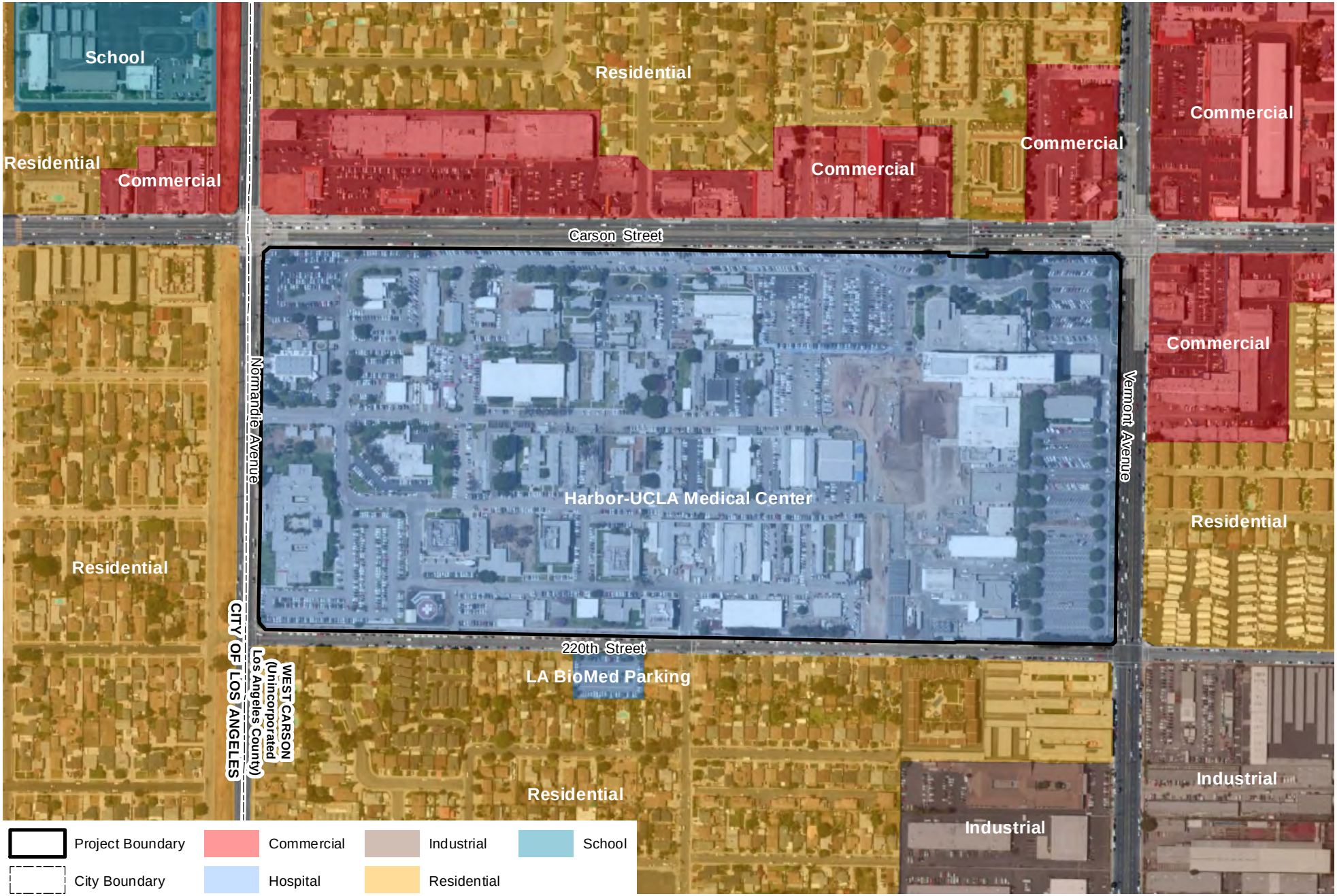
Regional and Vicinity Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, 2014.

FIGURE

2-1



PCR

Aerial Photograph with Surrounding Land Uses

Harbor-UCLA Medical Center Master Plan

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

2-2

Harbor General Hospital began its affiliation with the University of California Los Angeles (UCLA) School of Medicine in 1948 and became the southern campus of the UCLA School of Medicine in 1951. Construction of the existing eight-story, 450,000-square-foot Existing Hospital Tower was completed in 1962 in the eastern portion of the Medical Center Campus and replaced a number of the original Army facility's wooden barracks and cottages. Despite a design life of seven years, nearly one-third of the original barracks built in the 1940s still remain in use today as clinics, offices, shops, storage, laboratories and related facilities, augmented by temporary modular buildings and trailers. In 1978, the name of the hospital was changed to Los Angeles County Harbor-UCLA Medical Center to highlight its working relationship with the David Geffen School of Medicine at UCLA. An affiliation with the UCLA School of Dentistry was established in 1972.

The historical development of the Medical Center Campus is illustrated in **Figure 2-3**, *Harbor-UCLA Medical Center Campus Development History*.

(b) Harbor-UCLA Medical Center Today

Today, Harbor-UCLA Medical Center is a County-owned and operated tertiary-care medical center and one of two Level 1 Trauma Centers that the County operates, and one of five in the County. Tertiary care hospitals generally refer to major facilities with specialized facilities and personnel which can provide a comprehensive range of medical treatments, usually through referral from primary or secondary medical care providers, including general medicine, pediatrics, obstetrics, surgery, and various subspecialties. Trauma centers are equipped and staffed to provide comprehensive emergency medical services to patients suffering traumatic injuries, as opposed to illness. Level 1 centers provide the highest level of surgical trauma care and have a full range of specialist and equipment available for 24-hour coverage. Harbor-UCLA Medical Center serves southwestern Los Angeles County and plays a particularly critical role in meeting the healthcare needs of the more than 700,000 residents of the greater South Bay region within 15 miles of the Medical Center Campus, the catchment or service region for the medical center.

The Existing Hospital is licensed for 453 inpatient beds, of which 373 beds (or 82% of the licensed beds) are budgeted/staffed beds, while the larger Harbor-UCLA Medical Center Campus houses more than 70 primary and secondary care clinics. There are approximately 340,000 patient visits to the Campus annually, including admittances and discharges, diagnostics and treatment, and patient exam visits. A premiere teaching hospital with residency and fellowship programs in many medical and surgical specialties and a strong research focus, the Existing Hospital employs approximately 300 full-time faculty physicians, more than 120 part-time faculty physicians, and 360 volunteer faculty physicians, with more than 500 residents and fellows completing graduate studies at the Existing Hospital. Total employment for the entire Harbor-UCLA Medical Center Campus (including the Existing Hospital and other tenants) is approximately 5,500.

Three major tenants are co-located on the Medical Center Campus together with the Existing Hospital and outpatient clinics. LA BioMed, the largest tenant, was founded as the Harbor-UCLA Research and Education Institute in 1952. It conducts and supports research, training, and education activities, provides community services including childhood immunization and nutrition assistance, and maintains an affiliation with the Existing Hospital, with many faculty members serving as both researchers and clinicians; this affiliation helps attract top residency candidates to the Existing Hospital. The Harbor-UCLA Medical Foundation, Inc. (MFI) was founded in 1963 as a nonprofit organization dedicated to clinical patient care, the revenue from which is used to fund clinical, research, and educational activities at the Harbor-UCLA Medical Center. Children's Institute International (CII), which specializes in the treatment and prevention of child abuse and

neglect, operates its Burton E. Green Campus within the Harbor-UCLA Medical Center Campus and provides services to families throughout the South Bay and adjacent communities. CII is headquartered near downtown Los Angeles and operates several facilities throughout the region. A number of other County departments, including an outpatient mental health clinic operated by the Department of Mental Health, occupy buildings on the Medical Center Campus.

(c) Market Projections and Future Demand for Healthcare Services

Harbor-UCLA Medical Center has evaluated anticipated changes in demand for its services over the Master Plan Project buildout timeline. It expects increasing demand in its service area, which currently encompasses 10 million people and is expected to grow by an estimated 600,000, through 2030. The population served includes a large proportion of uninsured, underinsured, or those otherwise dependent on the County Department of Health Services (DHS). It is projected that the service area will include an additional 190,000 Medicare-eligible patients by the buildout horizon, an assumption based on an anticipated increase in the service area population and aging, as more baby boomers move into the age 75+ cohort. This is expected to affect demand for certain services as well as the overall volume of patient visits, which is expected to increase by an estimated 20 percent by 2030, even assuming some percentage of future patients transfer back to Martin Luther King Hospital, which reopened in July 2015, or other hospitals. Moreover, as the healthcare industry transitions to a more standardized, collaborative, and preventative care model of health care delivery, and away from reliance on acute-care inpatient treatment, there will be an increasing need for Harbor-UCLA to enhance its outpatient programs and other patient support services. In light of the expected increase in its service area population and increased demand for its services, a physician workforce shortage in Los Angeles, and the lack of plans for the new construction of other acute care hospital facilities in the region by the Master Plan Project buildout horizon, Harbor-UCLA sees a clear need to invest in its facilities and programs to continue to fulfill its role as a strategic piece of the healthcare "safety net" of Los Angeles County in general and for South Bay communities in particular.

(d) Compliance with Senate Bill 1953: The Alquist Hospital Facilities Seismic Safety Act

As a result of the 1994 Northridge earthquake, the State of California enacted Senate Bill (SB) 1953, the Alquist Hospital Facilities Seismic Safety Act, in September 1994, (California Health & Safety Code Sections 130000 et seq.) to ensure that all acute care hospitals in California built before 1973 remain operational after a major seismic event. SB 1953 directed hospitals in California to evaluate the seismic performance of their acute care facilities and perform upgrades, in accordance with standards developed by the California Office of Statewide Health Planning and Development (OSHPD), by specific deadlines.[1,2] SB 1953 established two deadlines: by 2013 (or 2015 or beyond under certain circumstances), hospitals are required to demonstrate compliance with specific seismic criteria intended to allow acute care facilities to remain standing after a major seismic event, and by 2030, hospitals are required to implement the necessary upgrades to remain fully operational after a major seismic event.

The seismic strength of hospital buildings is measured in accordance with Federal Emergency Management Agency's (FEMA's) HAZARDS U.S. (HAZUS) Assessment Program, a seismic evaluation program developed

[1] *SB 1953, Hospital Facilities Seismic Safety Act, Chapter 740, Statutes of 1994.*

[2] *Office of Statewide Health Planning & Development,* California's Hospital Seismic Safety Law: Its History, Implementation and Progress*, http://www.oshpd.ca.gov/FDD/SB1953/SeismicReport.PDF. 2005.*



LEGEND

- TEMPORARY / MODULAR
- 1940-1950
- 1960-1970
- 1980-1990
- 2000-PRESENT
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

PCR

N

0 400 Feet

Harbor-UCLA Medical Center Campus Development History

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-3**

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for hospitals to implement the seismic safety requirements of SB 1953 to determine the probability of collapse. Under the HAZUS Program, hospital buildings fall into one of five structural and nonstructural (e.g., utility infrastructure, communications systems, and emergency power supply) performance categories, with SPC 1 buildings representing those most at risk and SPC 5 buildings representing those fully compliant with structural safety requirements.

Harbor-UCLA performed a structural and nonstructural performance assessment of its Existing Hospital Tower (including the central tower, north and south wings, cafeteria, Primary Care and Diagnostics Center (PCDC), and communications building), the only acute care facility on the Medical Center Campus and therefore the only building subject to SB 1953. The survey determined that, with the exception of the recently constructed Replacement Project buildings, all of the Existing Hospital Tower components (i.e., central tower, north and south wings, cafeteria, PCDC, and communications building) required some level of seismic upgrades to comply with SB 1953 and remain operational until 2030, at which time nonconforming buildings would no longer be used for acute care service, but could instead be repurposed and renovated for other non-acute care, administrative, or support services. Seismic upgrades were carried out for the Existing Hospital Tower (including the central tower, north and south wings, cafeteria, PCDC, and communications building) such that it meets SPC 2/NPC 3 standards, meaning the Existing Hospital Tower may not be reparable or functional after a major seismic event, but would not significantly jeopardize life safety, and critical care systems are properly braced or anchored and could remain operational. Even with further upgrades, the Existing Hospital Tower would not meet SB 1953 standards for continued operation as an acute care facility after 2030, and the current compliance plan prepared for the Existing Hospital Tower indicates that it is expected to be repurposed for non-acute care activities by that date while acute care functions will be moved to a New Hospital Tower.

2. Existing Conditions

(a) Current Facilities Layout

The existing Harbor-UCLA Medical Center Campus layout is illustrated in **Figure 2-4**, *Existing Medical Center Campus Buildings*. The physical layout of the Medical Center Campus still closely follows the east–west-oriented street grid established when the property was laid out as a military installation in the 1940s. The Existing Hospital Tower, related treatment facilities, and the majority of Medical Center Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Medical Center Campus, while buildings occupied by LA BioMed take up the majority of the central Medical Center Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Medical Center Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Medical Center Campus.

Most of the facilities in the central Medical Center Campus were constructed prior to 1960, including numerous small wood-frame barracks and temporary/modular buildings that collectively occupy the majority of the Medical Center Campus land area. The first major expansion of the 1963 Existing Hospital Tower, the Surgery and Emergency Room Replacement Project, was completed in 2013. This project increased the size of the existing emergency room from 25,000 square feet with 42 emergency bays, to 75,000 square feet with 80 emergency bays and added 190,000 square feet of space containing surgery suites, adult and pediatric triage, and a new entrance lobby, and waiting area. A new helistop and 544-space parking structure were also constructed.

LA BioMed, which employs approximately 700, presently occupies a number of older World War II–era structures scattered- throughout an approximately 16.5-acre area encompassing the central portion of the Harbor-UCLA Medical Center Campus, and is proposing to consolidate its operations within a smaller 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Medical Center Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000, and LA BioMed will eventually vacate approximately 95,000 square feet of floor area within the buildings it occupies elsewhere on the larger Medical Center Campus as it consolidates.

Other newer facilities constructed on the Harbor-UCLA Medical Center Campus since the 1980s include buildings housing hospital-related outpatient services and the buildings housing major tenants MFI and CII at the western end of the Medical Center Campus. Since 1989, MFI has occupied the Harbor UCLA Professional Building (also known as the MFI Professional Building) at the west end of the Medical Center Campus, with related outpatient services housed in nearby buildings. While MFI's utilization of the MFI Professional Building and related outpatient services has decreased over the last several years, it is still considered a major tenant on the Medical Center Campus. The Harbor UCLA Professional Building houses nine clinical departments that provide a range of clinical subspecialties, a laboratory, radiology, nuclear medicine and a pharmacy. CII occupies a 23,435-square-foot facility known as its Burton E. Green Campus in the northwestern corner of the Harbor-UCLA Medical Center Campus, near the intersection of Carson Street and Normandie Avenue.

Overall, the existing layout of the Harbor-UCLA Medical Center Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. The Existing Hospital Tower (including the PCDC) and outpatient clinics are currently running at or near capacity, and existing facilities provide no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.

(b) Circulation and Parking

Vehicular access to the Harbor-UCLA Medical Center Campus is provided by a primary driveway on Carson Street, near the Existing Hospital Tower and a second driveway west of the primary driveway; two driveways on Vermont Avenue; five driveways along 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveways are signalized. Internal circulation on-site follows the original grid layout established on the property, with four east-west roadways and numerous short north-south connector roadways. Most interior intersections of two roadways or drive aisles are stop-sign controlled. To aid wayfinding, most of the internal roadways are named and display street name signs at intersections. In addition, most buildings or modular structures have a building number (consisting of a letter and a number) or a building name, or both, visible to drivers. However, few directory boards are located within the Medical Center Campus, and wayfinding for motorists as well as pedestrians can be confusing. Contributing to this confusion is the lack of distinctions between Medical Center Campus entrances and parking areas for Harbor-UCLA staff and those for the general public.



LEGEND

- LA BIOMED
- OUTPATIENT
- HOSPITAL
- TREATMENT
- DIAGNOSTICS
- ADMINISTRATION
- MATERIALS MANAGEMENT
- FACILITIES MANAGEMENT
- UTILITIES
- CHILDREN'S INSTITUTE INT.
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

PCR

N

0 400 Feet

Existing Medical Center Campus Buildings

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE 2-4

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Figure 2-5, *Existing Parking Supply*, depicts on- and off-site parking facilities. The larger parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots throughout the Medical Center Campus interior; parking is allowed on one or both sides of internal roadways, though incidental on-street parking also occurs in areas not officially designated as parking areas, as discussed below.

The on-site parking supply totals 2,905 spaces, which exceeds the County's parking code requirement of 2,709 spaces. Specifically, Los Angeles County Code, Chapter 122.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and Group Homes for Children, requires 2 spaces per bed, 1 space per 250 square feet for outpatient facilities, and 1 space per 400 square feet for research use. This supply includes 2,168 standard spaces and 124 American with Disabilities Act (ADA) spaces in designated surface parking lots and the new parking structure in the southeastern corner of the Harbor-UCLA Medical Center Campus, and 596 standard spaces and 17 ADA spaces along the internal streets. An additional 281 spaces (278 standard spaces and three ADA spaces) are provided in off-site parking facilities, and street parking is permitted along all or portions of the four public streets surrounding the Medical Center Campus. However, parking is not uniformly used, with parking for the Existing Hospital Tower and other facilities near the eastern end of the Medical Center Campus and along the northern perimeter experiencing severe localized shortfalls, while in other locations, designated parking for specific facilities is underused. A considerable number of makeshift parking spaces have been created along internal roadways to accommodate localized demand, though many of these areas are not designated for on-street parking. Moreover, most of the interior roadways do not provide sidewalks or curbs and pedestrians must share the roadways with vehicle traffic, adversely affecting access, including disabled access, to facilities throughout the Harbor-UCLA Medical Center Campus.

(c) Central Plant, Infrastructure, and Materials Management

A number of infrastructure systems on the Harbor-UCLA Medical Center Campus are at the end of their useful life or inadequate for current needs and require increasing maintenance or replacement. These include portions of the electrical system (normal and emergency power), which includes 40-year-old substations throughout the Medical Center Campus and some inadequate distribution systems; lighting systems, many of which are original and require replacement for reasons of energy-efficiency; security systems, which are lacking and needed to accommodate the different tenants on the Medical Center Campus; the domestic water supply system and periodically nonoperational backup water supply system, which will require upgrades to accommodate new construction under Master Plan Project buildout; no reclaimed water system infrastructure; unknown future capacity in the single wastewater main known to serve the Medical Center Campus; and an aging and fragile storm drain network and other infrastructure, facilities, and equipment that will require significant overhauling to accommodate planned Master Plan Project buildout. New construction would also require compliance with the County's Low Impact Development (LID) requirements for stormwater management. Additionally, Central Plant upgrades are needed to serve the newly expanded New Hospital Tower and related facilities. Finally, with respect to Information Technology (IT) services, there is no publicly available WIFI on the Harbor-UCLA Medical Center Campus; there is little or no documentation for underground cabling infrastructure that has developed over time; improvements to the current Voice over IP telephone infrastructure are needed; and additional data storage space may be needed.

Materials management throughout the Harbor-UCLA Medical Center Campus – encompassing everything from loading dock design to the handling and provision of medical supplies and equipment, technology,

linens, and food – also requires overhauling and centralization for reasons of efficiency and improved service delivery; waste management operations also require improvements in collection, staging, and processing, to allow for more efficiency and sustainable practices in compliance with increasingly stringent mandatory state and local regulations.

(d) Landscaping

Landscaping throughout the Harbor-UCLA Medical Center Campus is limited and discontinuous. There are several landscaped courtyards, predominantly at the western end of the Medical Center Campus, surrounding the MFI and CII buildings, and on the LA BioMed Campus, and in scattered locations in the north-central Medical Center Campus, but the remainder of the Medical Center Campus does not have a discernible landscape plan and there are very few places for patients or visitors to congregate outdoors. With the exception of the main entrance to the Medical Center Campus on Carson Street, which is planted with mature trees, shrubs, and a lawn setback, the perimeter of the Medical Center Campus does not have a coherent visual identity or connection to the surrounding community, and landscaping is lacking at secondary Medical Center Campus entrances and for long stretches of the perimeter. For the most part, the perimeter of the Medical Center Campus is demarcated with chain- link fences and concrete block walls, with limited landscape screening. The western half of the block fronting on Carson Street, a portion of the Normandie Avenue frontage, and the western two-thirds of the 220th Street perimeter are currently enclosed with chain link fence planted with bougainvillea vines, which serve as a low, partial buffer along the public streets. The side of the Medical Center Campus has portions of open fence and solid concrete block wall framing both sides of the entry. The Vermont Avenue frontage, adjacent to the new parking structure and Existing Hospital Tower parking lot, and the corner of the Medical Center Campus at Carson Street and Vermont Avenue, are the most heavily landscaped portions of the Medical Center Campus perimeter, with mature trees and a landscape setback from the sidewalk. There are no landscaped parkways or street trees along any of the Medical Center Campus street frontages.

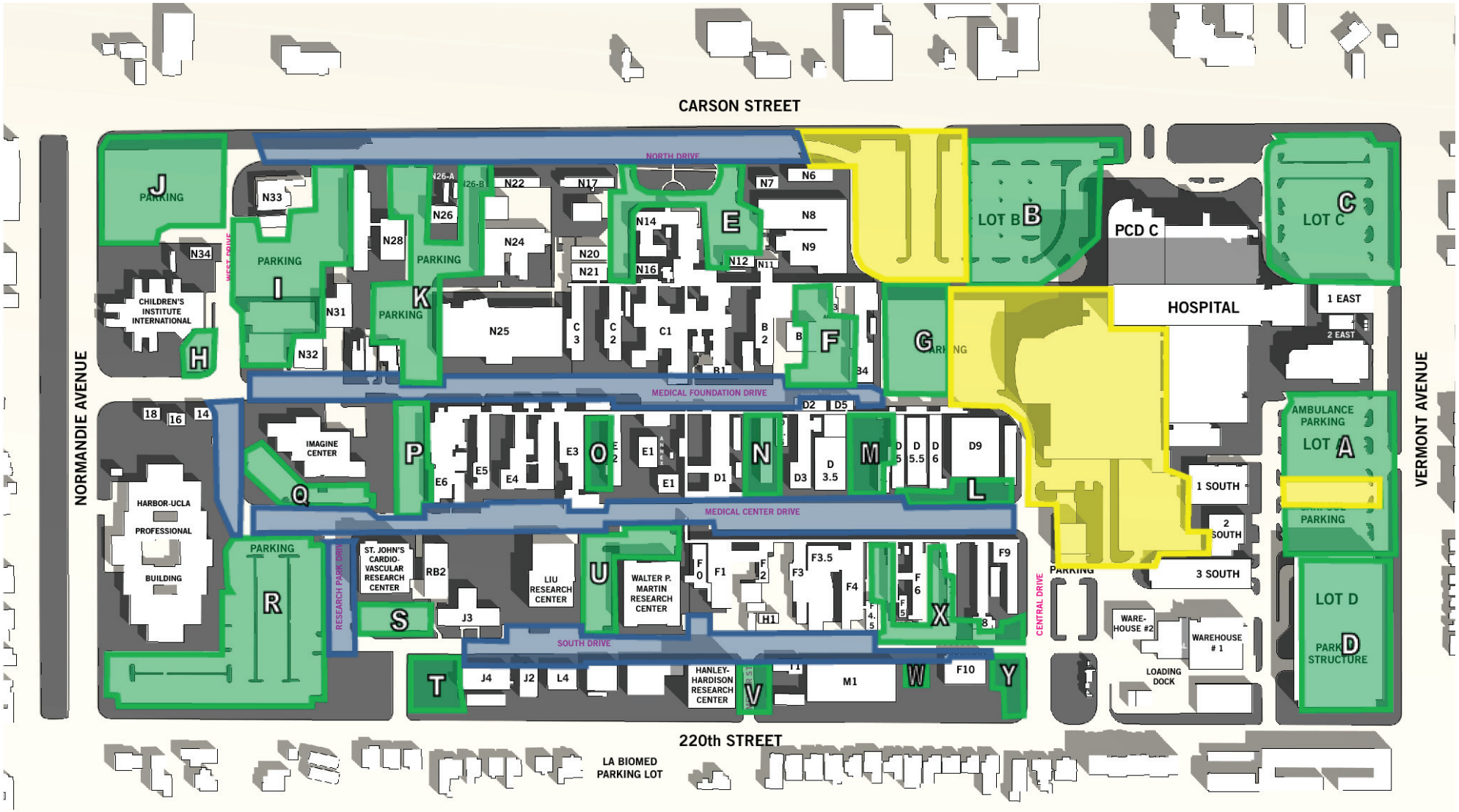
D. PLANNING AND ZONING

The Harbor-UCLA Medical Center Campus is designated for Public and Semi-Public use in the Los Angeles County General Plan, and has a zoning designation of C-3 (Unlimited Commercial). The C-3 designation allows a broad range of commercial uses and allows the maximum floor:area ratio (FAR) of 0.5:1. The Existing Hospital Tower and ancillary uses on the Medical Center Campus are consistent with the current zoning. In addition, the eastern two-thirds of the Medical Center Campus is designated as a Transit Overlay District (TOD) due to proximity to the Metro Transit Station at Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. The purpose of the TOD zone designation is to create a pedestrian-friendly and community-serving uses near transit stops that encourage walking, bicycling, and transit use.

E. STATEMENT OF PROJECT OBJECTIVES

Section 15124(b) of the State CEQA Guidelines requires that an EIR Project Description contain a statement of objectives for the proposed project and recommends that the statement of objectives include the underlying purpose of the project.

The overall goal of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system. It will provide a New Hospital Tower to replace the acute care functions in the Existing Hospital Tower before the state law deadline to meet seismic



LEGEND

- OFF-STREET PARKING
- ON-STREET PARKING
- CONSTRUCTION ZONE (PARKING UNAVAILABLE)

PCR

N

0 400 Feet

Existing Parking Supply

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE 2-5

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standards for critical trauma/tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting.

The goal is supported by the following Master Plan Project objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital Tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as up to 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

F. DESCRIPTION OF THE PROPOSED PROJECT

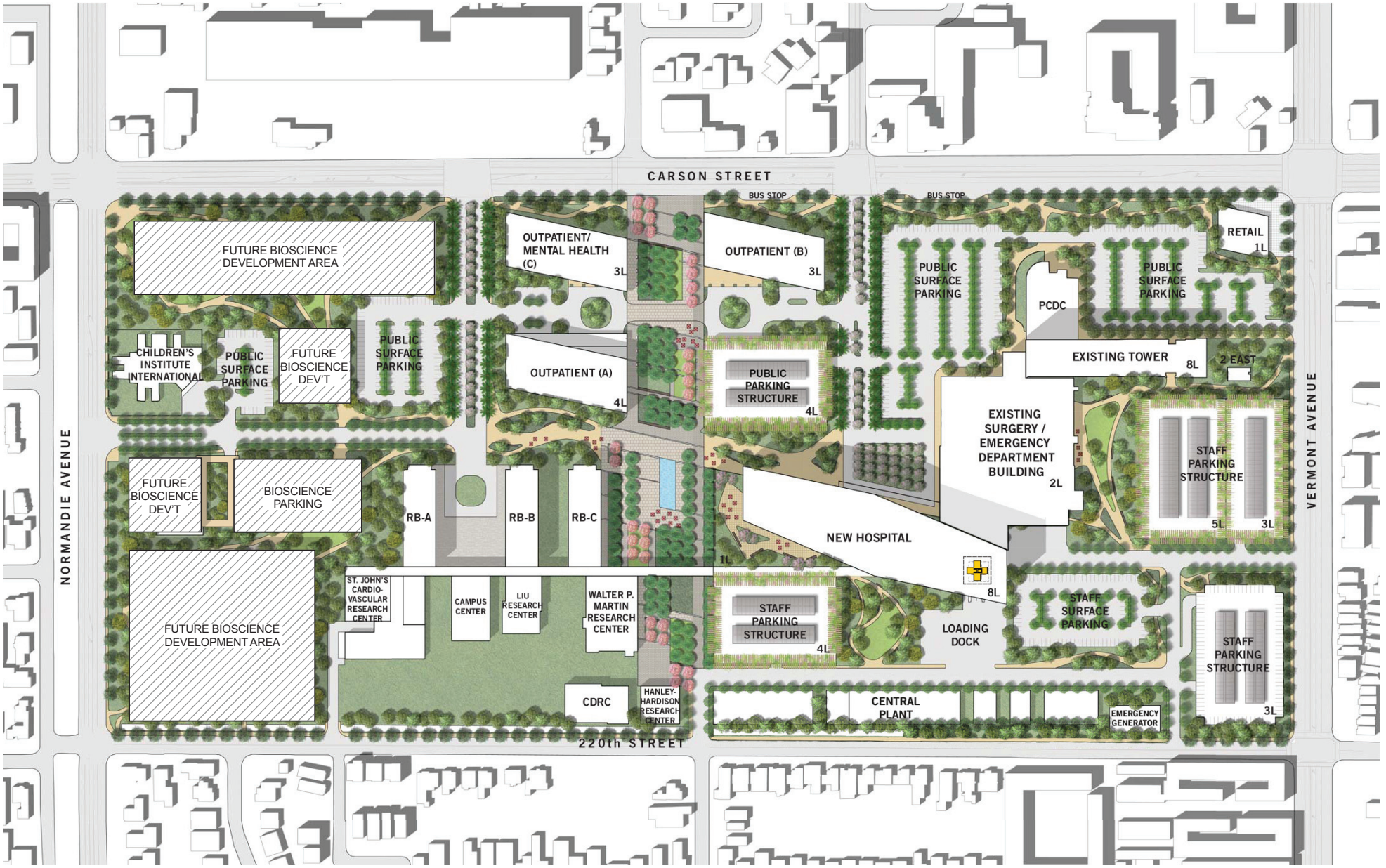
1. Project Characteristics

Proposed Master Plan Project components include the following: (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; (5) new Bioscience Tech Park; and (6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. These proposed uses are itemized in **Table 2-1**, *Harbor-UCLA Master Plan Project Existing and Proposed Land Use Summary*, below. The major design principles underlying the Master Plan Project include organizational clarity, community interaction, the creation of an iconic identity for a replacement hospital, pedestrian and wellness features, and development flexibility. **Figure 2-6**, *Harbor-UCLA Medical Center Master Plan Project Site Plan*, illustrates the proposed conceptual layout of existing buildings to be retained and proposed new development, the pedestrian circulation network, vehicular access and circulation, parking, and landscaping. **Figure 2-7**, *Master Plan Project Massing Diagram*, depicts the programmed locations of proposed uses at Master Plan Project buildout. As future buildings are developed, the distribution of programmed uses would be revised as needed.

The Project assumes a total of approximately 2,457,355 square feet of developed floor area on the Harbor-UCLA Campus, an increase of approximately 1,178,071 square feet over the existing approximately 1,279,284 square feet. This increase is due largely to the development of a new hospital tower, three new outpatient buildings, and the Bioscience Tech Park. The campus-wide floor:area ratio (FAR) would increase from 0.40:1 to 0.78:1. The number of licensed in-patient hospital beds would decrease slightly from 453 to 446. New buildings would be up to four stories in height compared to the existing buildings, which are predominantly one story; the tallest existing on-site building (the existing eight-story Hospital Tower) would be retained and a second eight-story building (New Hospital Tower) would be constructed. Campus-wide parking would increase from 3,186 spaces (including 281 spaces in an off-site parking lot) to 4,240 spaces (including spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-level parking structures. The number of Campus-wide employees would increase from approximately 5,464 to approximately 7,494.

(a) Proposed Medical Center Campus Organization

The Master Plan Project proposes to locate related uses in proximity to one another, connected by a network of walkways and landscaped areas. The most publicly accessible zones, including commercial and community-oriented services, would be located along the northern edge of the Medical Center Campus fronting on Carson Street, with staff and support services located in the southern half of the Medical Center Campus. The New Hospital Tower is intended to be the tallest, most visible building on the Medical Center Campus, and therefore its primary focal point, signaling its location to visitors and identifying the Harbor-UCLA Medical Center Campus to the community. The LA BioMed Campus would continue to occupy the southern-central part of the Medical Center Campus, fronting on 220th Street. The CII Burton E. Green Campus will remain in the northwestern corner of the Medical Center Campus at the intersection of Carson Street and Normandie Avenue, but the remainder of the western end of the Medical Center Campus would be retained for the proposed Bioscience Tech Park, potentially beyond the approximate 2030 Master Plan Project buildout horizon. Until such time as programmatic needs for that portion of the Medical Center Campus are defined, it would be developed with open space, surface parking, and other short-term uses, as needed.



Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

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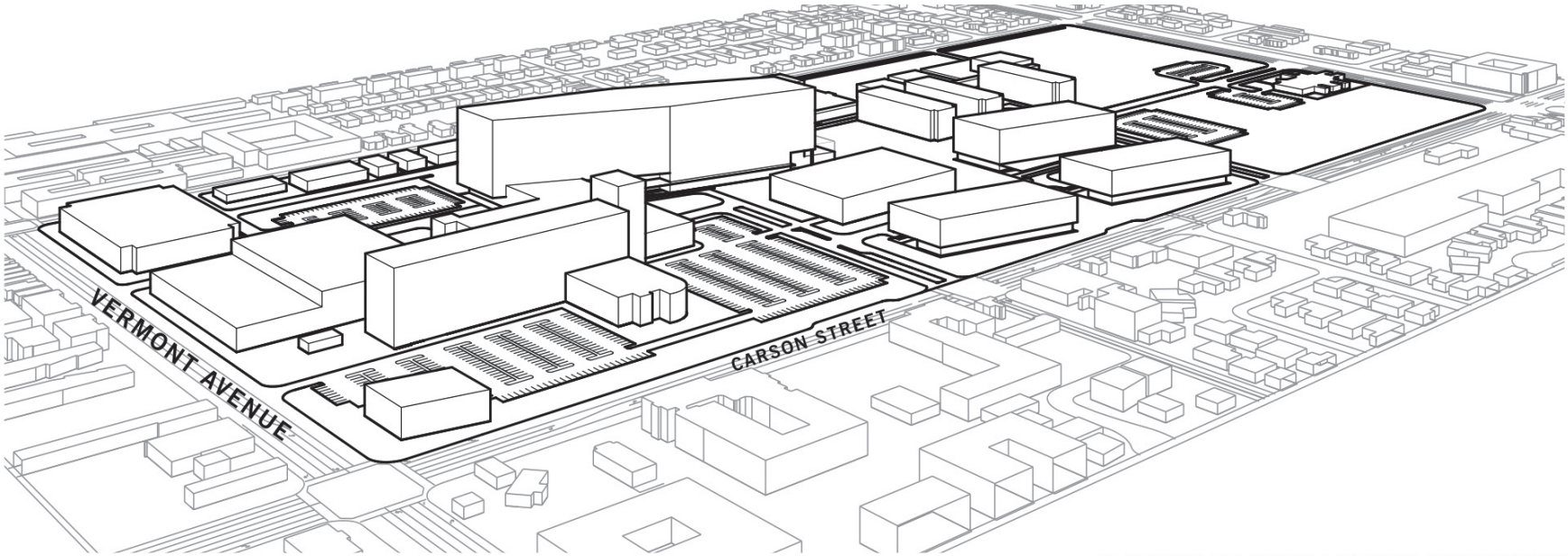
Harbor-UCLA Medical Campus Master Plan Site Plan

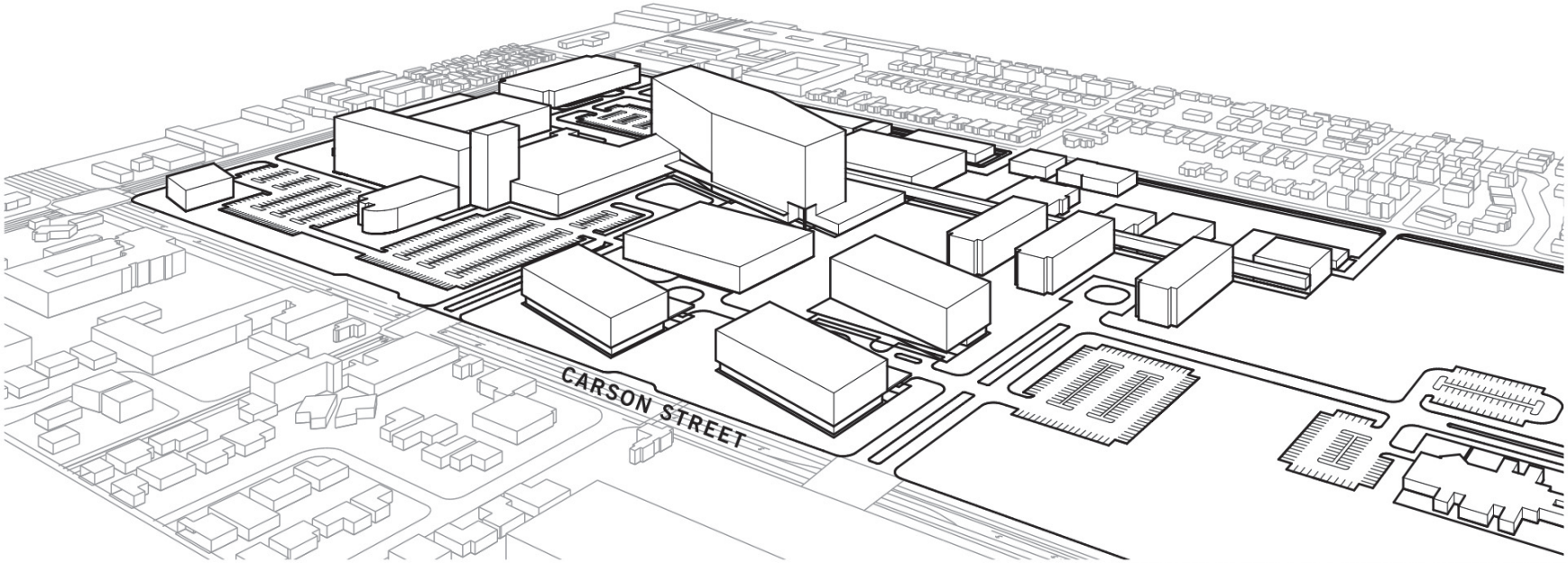
Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-6**



MASSING DIAGRAM LOOKING SOUTHWEST



MASSING DIAGRAM LOOKING SOUTHEAST

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

Master Plan Project Massing Diagram

Harbor-UCLA Medical Center Master Plan
Source: Perkins+Will, 2012.

FIGURE
2-7

Table 2-1

Harbor-UCLA Master Plan Project
Existing and Proposed Land Use Summary

Land Use [a]	Existing		To Be Demolished		Proposed New Construction			Master Plan Project at Interim Year 2023 (Existing – Demolition + New)			Master Plan Project at Buildout 2030 (Existing – Demolition + New)		
	HUCLA	LA BioMed	HUCLA	LA BioMed	HUCLA	LA BioMed [b]	Bioscience Tech Park	HUCLA	LA BioMed [b]	Bioscience Tech Park	HUCLA	LA BioMed [b]	Bioscience Tech Park
Administrative Office	23,435	-	-	-	-	-	-	52,635	-	-	130,635	-	-
Day-Care Center	4,360	-	-	-	-	-	-	4,360	-	-	4,360	-	-
Central Utilities/Industrial /Infrastructure	112,719	-	102,434	-	118,920	-	-	118,920	-	-	129,205	-	-
Hospital/Inpatient	648,810	-	167,255	-	955,100	-	-	648,810	-	-	1,202,655	-	-
Hospital Beds	453	-	453	-	446	-	-	453	-	-	446	-	-
Library	22,500	-	22,500	-	-	-	-	22,500	-	-	-	-	-
Medical Office/Outpatient	327,304	-	327,304	-	324,500	-	-	338,700 [c]	-	-	480,500 [d]	-	-
Biomedical Research & Development	-	94,754	-	94,754	-	225,000	250,000	-	112,500	125,000	-	225,000	250,000
Warehouse/Storage	45,402	-	45,402	-	-	-	-	45,402	-	-	-	-	-
Retail	-	-	-	-	35,000	-	-	-	-	-	35,000	-	-
TOTAL:		**1,279,284**		**759,649**			**1,908,520**			**1,400,425**			**2,457,355**
NET NEW										**121,141**			**1,178,071**

[a] *Square footages do not include parking structures or surface parking areas.*
[b] *The total development for the LA BioMed Campus represents net new square footage anticipated to be developed on the 11.4-acre LA BioMed Campus leasehold within the HUCLA Medical Center Campus within the timeframe of HUCLA Master Plan buildout. In addition, the development of 70,700 net new square feet of floor area on the LA BioMed Campus, intended to consolidate existing LA BioMed facilities elsewhere on the HUCLA Medical Center Campus, was approved in September 2014 through separate County environmental review.*
[c] *Total Medical Office Uses at Interim Year 2023 includes 227,500 square feet of medical office uses for the Outpatient Mental Health Building and Outpatient Building A, as well as 111,200 square feet of modular medical office space (constructed in Phase M) that would be removed from the Medical Center Campus during Phase 6 and thus is not included in the Medical Office totals at Project buildout.*
[d] *Medical Office space at Project buildout would include 227,500 square feet of medical office uses for the Outpatient Mental Health Building and Outpatient Building A, 97,000 square feet for Outpatient Building B, and 156,000 square feet of medical office, campus support and other "back of house" uses within the renovated Existing Hospital Tower, less 111,200 square feet of modular medical office space placed on-site during Phase M.*

Source: PCR Services Corporation, 2015

(b) New Hospital Tower and Inpatient Care Facilities

A New Hospital Tower will be constructed as part of the Master Plan Project and will house the acute care functions that previously existed in the Existing Hospital Tower. As shown in Table 2-1, the New Hospital Tower/inpatient facilities would contain a total floor area of approximately 1,202,655 square feet and 446 staffed patient beds, interventional services, and an inpatient imaging department at Project buildout. Similar to the Existing Hospital Tower, the total number of budgeted/staffed inpatient beds in the New Hospital Tower would be 379 beds, or approximately 85% of the 446 licensed beds. The New Hospital Tower will be constructed to meet increasing state law seismic requirements for acute care facilities as mandated by SB 1953.

The Existing Hospital Tower will be decommissioned before January 1, 2030 due to the SB 1953 mandates that acute care services can no longer be provided in buildings built before 1973. Changes for the Existing Hospital Tower will be discussed in the section below.

(c) Existing Hospital Tower and Outpatient Care Facilities

The Existing Hospital Tower and PCDC department would be retained and used for outpatient and hospital support, outpatient imaging, administrative offices, and other related uses. An additional 156,000 square feet of medical office and other outpatient services would also be accommodated in the renovated Existing Hospital tower. Renovation of the 1963 portions of the Existing Hospital tower by repurposing the building for non-acute care and other activities, including administrative office, outpatient services, storage and other Medical Center Campus support services would comply with this requirement since the Existing Hospital Tower would no longer require licensing as an acute care facility. This action would not affect the newer portions of the Existing Hospital Tower, including the PCDC and new Replacement Project facilities, which added 190,000 square feet of outpatient clinical space between 2010 and 2013.

To improve operational efficiency, proposed outpatient services would be clustered in an outpatient "zone" in up to three outpatient buildings occupying a total floor area of approximately 324,500 square feet at Project buildout, including medical offices, primary and specialty medical clinics, classrooms, labs, a library, and outpatient imaging including MRI and CT, as well as mental health and social services. Two temporary modular outpatient buildings totaling 111,200 square feet would be placed on the Medical Center Campus following demolition of various existing structures during the initial phases of Project implementation in order to allow outpatient services to continue to be provided on the Medical Center Campus until later phases when permanent outpatient buildings are completed as discussed under subsection G, Construction Phasing, of this chapter. The outpatient buildings would also have allocated space for other program uses including community support functions.

Other new facilities would total approximately 62,795 square feet and provide space, for example, for meetings, wellness training, post-medical care, nutrition classes, and similar uses. These uses could be located in a new two-story building or in the ground floors of the new outpatient building(s), the renovated lobby of the Existing Hospital Tower and/or at ground levels of the new parking structures. Medical Center Campus support facilities including a Central Plant (heat and cooling), water treatment, warehouses/material management, a new Southern California Edison (SCE) electrical substation, and loading dock would total approximately 129,205 square feet. The proposed new SCE substation would require installation of a new, approximately two-mile-long 66-kV circuit connection to an existing off-site SCE substation east of the Medical Center Campus. The new circuit would be installed on above ground

power poles along existing public street rights-of-way, starting on Grace Avenue near the existing substation and proceeding east down 223rd Street, and would be undergrounded between the intersection of Vermont Avenue and 223rd Street and the Harbor-UCLA Medical Center Campus to connect to the proposed new substation. The new circuit would result in the installation 46 replacement and new power poles along the proposed route. Trenching and other construction activities related to the new circuit would occur within the public right-of-way on the affected roadways, while construction of the new substation would occur near the new Central Plant area within the Medical Center Campus, and would take approximately 24 months to complete.

(d) Technology Systems

Medical Center Campus technology systems would be upgraded to allow for the County's migration to a County-wide Electronic Medical Record. A Technology Equipment Room (TER) would be located within the Central Plant adjacent to 220th Street. This site would have power and cooling to support the equipment in the TER. The TER would be approximately 2,000 square feet (assuming the County houses its Electronic Medical Record systems in one or more off-site enterprise Data Centers) and would be supported by dedicated generator-backed Uninterruptible Power Supplies (UPSs), specifically designed cooling, and augmented fire protection systems. Associated space for a Network Operations Center of approximately 200 square feet plus sufficient storage, burn-in/maintenance and other support spaces would be provided adjacent to the TER.

The Medical Center Campus technology system would be designed to support remaining facilities while parts of the Medical Center Campus would be demolished and/or repurposed through phasing of construction. Phasing of construction would ensure that the technology infrastructure and support spaces are constructed at the appropriate point of each stage of work, taking advantage of modular design principles to minimize investment in the full build-out of these spaces until they are needed.

(e) Materials and Waste Management

The Project would incorporate new Materials and Waste Management facilities, including (1) a Materials Management Storeroom, (2) a Loading Dock, and (3) a Waste Management Center. The new loading dock and Waste Management Center would be located at the back of the New Hospital Tower, with the new storeroom located on the lower level of the tower. This location would be in proximity to the majority of the Harbor-UCLA Medical Center Campus's inpatient operations, which require more supplies and linens and generate the greatest volume of medical waste. The new storeroom would replace the functions of the existing Warehouse #1 and #2 functions. Outgoing shipping would occur at the new storeroom and all supplies delivered to the new dock, would be received and stored in the new storeroom building. Supplies would be distributed to the New Hospital Tower, Surgery and Emergency Room Replacement Project, Outpatient buildings and all other ancillary departments from this centralized location. The storeroom would include bulk supply holding, small unit of measure supply holding, secure stores, appropriate warehouse management software, computers and work stations. The new storeroom and loading dock would support all departments and buildings. Supplies and clean linen would be distributed from the storeroom, and all waste and soiled linen would be returned to the loading dock/Waste Management Center.

(f) Biomedical Research Facilities

(1) Bioscience Tech Park

The Harbor-UCLA Medical Center Master Plan Project proposes the development of up to 250,000 square feet of new biomedical research facilities, collectively referred to as the Bioscience Tech Park, on the western end of the Medical Center Campus (refer to Figure 2-6 for the location of the Bioscience Tech Park within the larger Harbor-UCLA Medical Center Campus). Bioscience Tech Park facilities would be physically separated from, and not affiliated with, LA BioMed Campus facilities. It is assumed that development of the Bioscience Tech Park would be implemented over an approximately 10-year period between 2020 and Master Plan Project buildout in 2030, and would consist of multiple buildings and associated surface and structured parking. It is further assumed, for the purposes of the analysis presented in this Draft EIR, that approximately 50 percent of the Bioscience Tech Park, or approximately 125,000 square feet, would be constructed by the year 2023, with the remainder constructed by 2030.

(2) LA BioMed Campus

LA BioMed's programs and approximately 700 full-time and part-time employees have historically been housed in scattered buildings throughout the central portion of the Harbor-UCLA Medical Center Campus. LA BioMed is currently in the process of consolidating its operations within an 11.4-acre leasehold campus (LA BioMed Campus) encompassing the south-central portion of the larger Harbor-UCLA Medical Center Campus, fronting on 220th Street. The new LA BioMed Campus is currently developed with 20 existing buildings ranging in age, including four buildings already constructed by LA BioMed. LA BioMed is undertaking additional near-term improvements on its campus, including the construction of two new buildings, renovation of an existing building, and demolition of three existing buildings, for an overall net increase of approximately 70,700 square feet of developed floor area within the LA BioMed campus. The majority of LA BioMed employees are already housed on its campus and no net increase in the number of LA BioMed employees, research personnel, or visitors are proposed as part of the consolidation of its operations. Construction of these near-term improvements is expected to be completed in the first half of 2017, pending final County approvals. These near-term improvements were the subject of separate review by the County completed in 2014 and are not part of the Harbor-UCLA Medical Center Master Plan Project.

However, to accommodate future expansion of LA BioMed programs, the Master Plan Project anticipates construction of up to 225,000 square feet of additional floor area on the LA BioMed Campus as part of Project buildout, which is addressed in this Draft EIR. Moreover, as LA BioMed consolidates operations on its new 11.4-acre campus, it will vacate buildings it currently occupies elsewhere on the Harbor-UCLA Medical Center Campus. These buildings, totaling approximately 95,000 square feet, and their ultimate disposition (i.e., demolition and replacement with new facilities), are also considered part of the Master Plan Project and are addressed in this Draft EIR. It is assumed for the purposes of the analysis in this Draft EIR that up to 50 percent of LA BioMed's projected expansion (or approximately 112,500 square feet) would be constructed by 2023, with the remainder constructed by Master Plan Project buildout in 2030.

(g) Circulation and Parking

Master Plan Project implementation would create clear distinctions between Harbor-UCLA Medical Center Campus access and on-site circulation and parking facilities for the general public and staff. Staff entries and parking would be located in the southeastern corner of the Medical Center Campus, while access for the public would be provided on Carson Street along the northern perimeter. Vehicular access would be

improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Medical Center Campus between the main parking areas and the New Hospital Tower and Outpatient buildings. Circular pick-up/drop-off loading zones would be provided at the main entrances to each of the New Hospital Tower and Outpatient buildings. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. The Master Plan Project would provide sufficient parking to meet or exceed the County's minimum code parking requirement. Proposed access and parking are illustrated in **Figure 2-8**, *Vehicular Circulation Plan*.

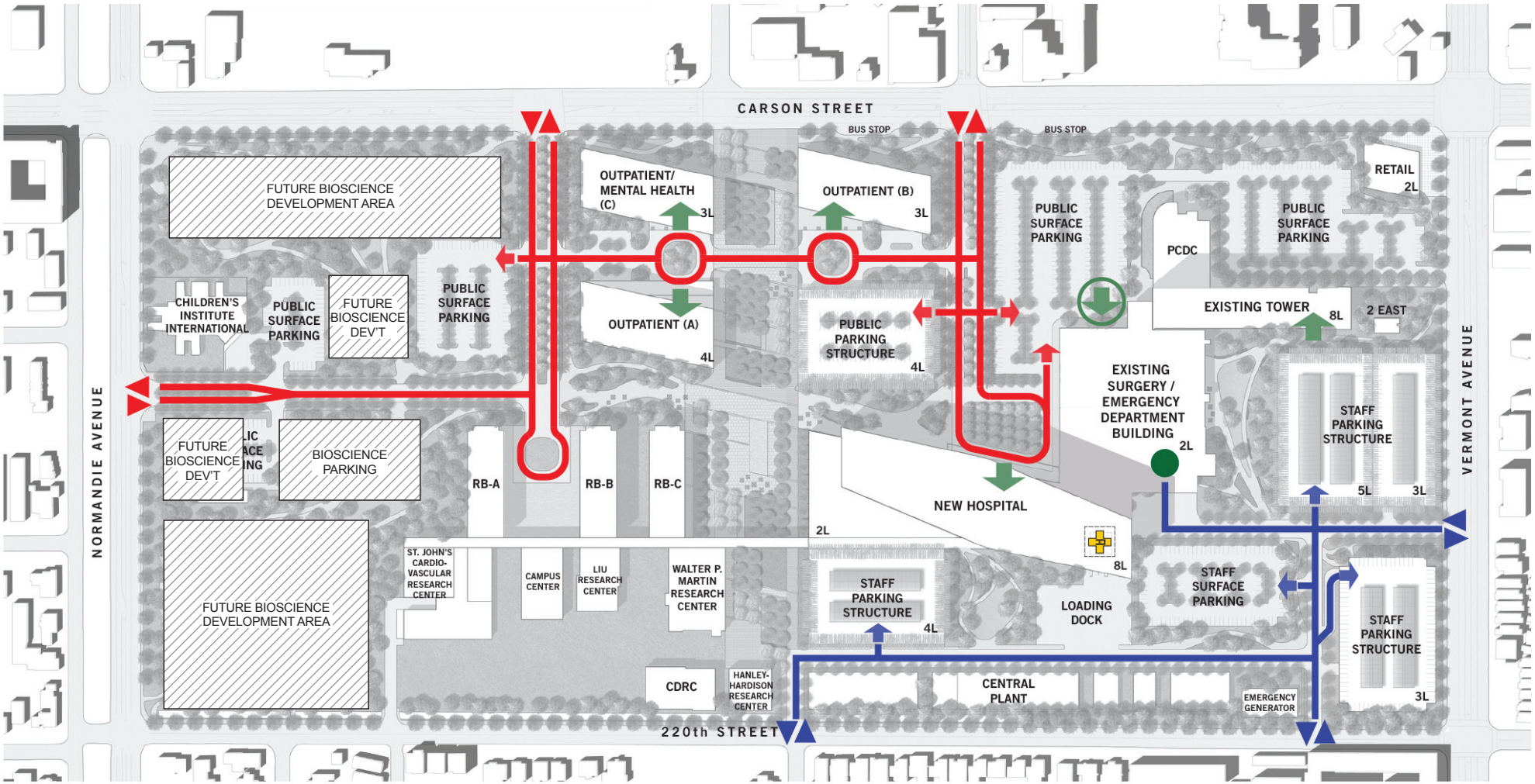
(h) Landscaping and Public Art

A continuous pedestrian circulation network is planned as part of the Master Plan Project which would provide connectivity throughout the Medical Center Campus and shared use by the general public and staff. Several north/south walks and promenades would connect the center of the Medical Center Campus with the public edge along Carson Street, while a comprehensive network of walks and trails would direct pedestrians east/west through the Medical Center Campus. The planned pedestrian circulation system would allow for direct access between parking areas and facilities, with a secondary system connecting courtyards and plazas. **Figure 2-9**, *Pedestrian Circulation Plan*, illustrates the proposed pedestrian circulation plan.

The Landscape Master Plan, which is included in the Harbor-UCLA Medical Center Campus Master Plan, would provide a campus-like setting where the use of landscape would help reduce dependency on natural resources by capturing and cleaning stormwater runoff and shading buildings to help reduce cooling demands, which is consistent with the County's Low Impact Development (LID) strategies and requirements as well as the sustainability principles of the Harbor-UCLA Medical Center Campus Master Plan. Landscaped outdoor spaces would accommodate active social gatherings and passive gardens for contemplation and relaxation. Landscaped areas for exercise would be provided to serve staff and educate the public regarding preventative healthcare.

The Landscape Master Plan recommends the planting of a landscape buffer using 35-foot to 45-foot-tall evergreen/semi-evergreen trees along the Harbor-UCLA Medical Center Campus perimeter that includes trees lining the Medical Center Campus street frontages and major landscape groupings identifying entrances to the Medical Center Campus. The two main entries off Carson Street will be highlighted using a mix of palm trees and flowering deciduous trees. Throughout the Medical Center Campus interior, the Master Plan Project proposes landscaped courtyard gardens and plazas and a network of walkways or trails that form a continuous circulation system, allowing staff and guests to reach their destinations with minimized opportunities for pedestrian/vehicular conflicts. A number of existing mature ornamental (non-native) specimen trees are proposed to be salvaged and relocated within the Medical Center Campus, as visual accents and to provide shade in the western portion of the Campus and within new courtyards and garden areas east and west of the proposed new central spine. **Figure 2-10**, *Landscape Master Plan*, depicts the proposed landscape program.

Master Plan Project implementation would include a public art program in accordance with the County's art policy that provides for civic art in capital improvement projects. Visitors can benefit from the role of art in the creation of successful and engaging public spaces, wayfinding, and providing opportunities for education and learning.



LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

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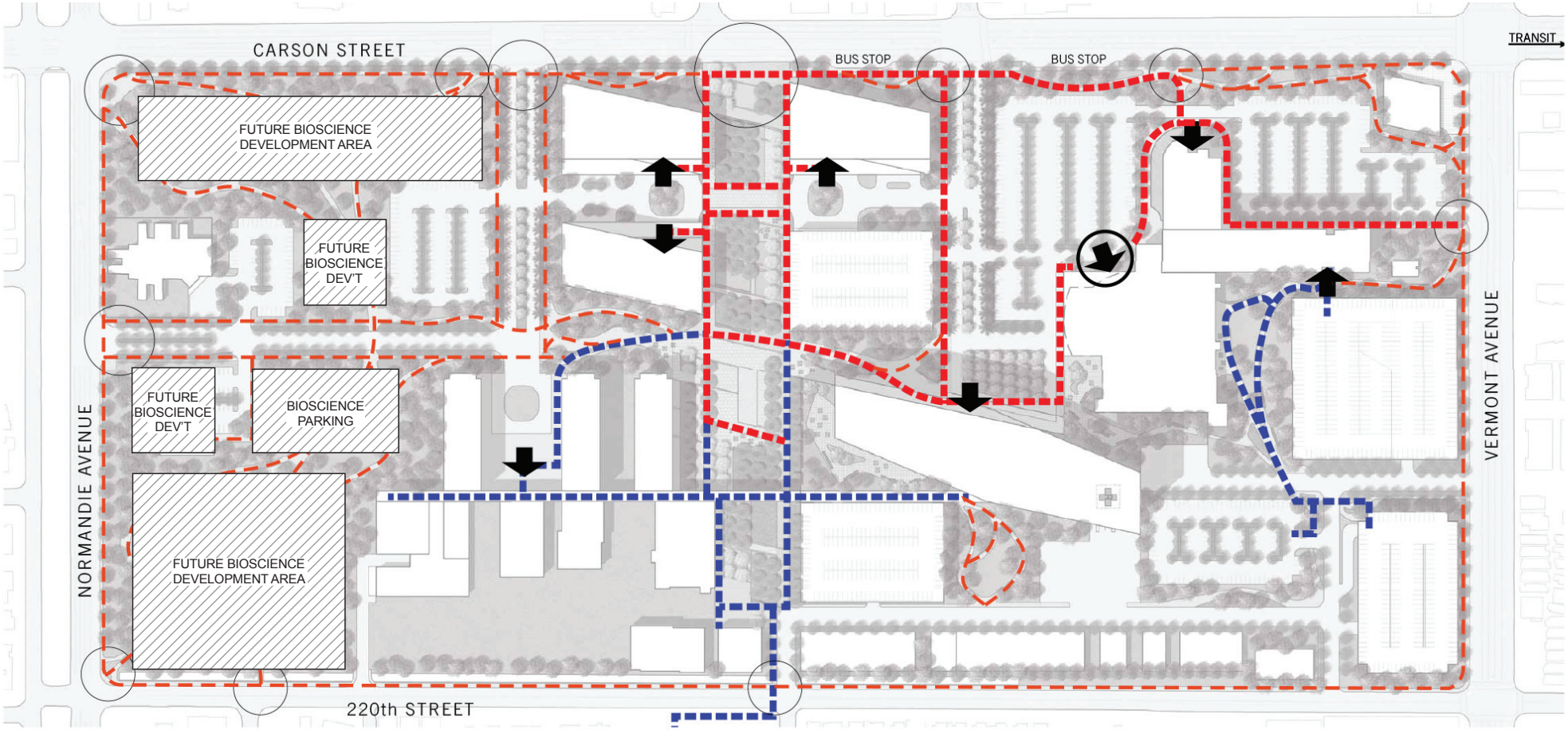
0 400 Feet

Vehicular Circulation Plan

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-8**



LEGEND

- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- CAMPUS ENTRIES
- PRIMARY PUBLIC PEDESTRIAN CIRCULATION
- PUBLIC PEDESTRIAN CIRCULATION
- PRIMARY STAFF PEDESTRIAN CIRCULATION

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

Pedestrian Circulation

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE 2-9



Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

Landscape Master Plan

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE **2-10**

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(i) Sustainability

Long-term sustainability is an important principle guiding the Master Plan Project. The current County policy requires LEED Silver-level certification, or the equivalent, for any public facility over 10,000 square feet in floor area. Green building practices would be integrated into all building design, construction, and operation and would be integrated with Medical Center Campus infrastructure and include integrated stormwater and wastewater treatment. Sustainability criteria include: (1) green building metrics, (2) reduction of energy demand, (3) reduction of thermal energy needs, (4) water balance, and (5) use of healthy building materials. As the Master Plan Project is implemented, one or more of the following systems would be used for environmental performance certification.

- LEED for Healthcare Rating System/Green Guide for Healthcare: Medical Center Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare, Silver certification and incorporates LEED Pilot credits on healthy materials selection.
- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to exploit economies of scale and the unique challenges and opportunities inherent in Medical Center Campus projects.
- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.
- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.
- Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the Medical Center Campus.

2. Existing Building Disposition

In order to accommodate the proposed new facilities, circulation, and open space, many of the existing original and older buildings would be removed. This includes all of the original WWII barracks and modular structures. However, several existing buildings would remain, including the Existing Hospital Tower, which would be renovated and repurposed for outpatient services and support and administrative functions, and would also contain the renovated lobby. Other major facilities to remain include the PCDC and the CII Burton E. Green Campus building at the western end of the Medical Center Campus. The Medical Center Campus' emergency generator would also remain in its current location.

Additional buildings to be removed include the Harbor-UCLA Professional Building and the Imaging Center at the western end of the Medical Center Campus, Parlow Library, Warehouses #1 and #2, the Central Plant, and smaller support buildings located throughout the Harbor-UCLA Medical Center Campus. A summary of the existing buildings to remain and to be removed is provided in **Table 2-2**, *Disposition of Existing Buildings*.

G. CONSTRUCTION PHASING

Although the actual timing and phasing of construction projects comprising the Master Plan Project has not been precisely determined, it is reasonably anticipated that buildout would occur in eight main phases (Phases M, C, and 1 through 6), culminating in approximately 2030. In order to make space for new development and to upgrade existing buildings, Master Plan Project implementation would

Table 2-2

Disposition of Existing Buildings

Existing Buildings to Remain	Square Feet
Existing Hospital Tower (to be re-used for outpatient support and administration)	234,000 square feet
Primary Care and Diagnostics Center	57,555 square feet
Surgery and Emergency Room Replacement Project	190,000 square feet
Children's Institute International	23,435 square feet
Cooling Towers	3,750 square feet
Emergency Generator	6,535 square feet
Child Care Center (off-site)	4,360 square feet
Existing Buildings to Be Removed	**Square Feet**
Phase M: Buildings N6, N7, N8, N9, N11, N12	11,578 square feet
Phase M: Buildings F4.5 Trailer, F5, F5 Trailer, F6, F7, F8, F9, F9 Annex	23,452 square feet
Phase 1: Buildings B1, B2, B2 West, B3, B3 Annex, B4, B4 Annex, C1, C1 Annex, C2, C3, N14, N16, N17, N18, N20, N21	75,828 square feet
Phase 1: D2 Annex, D5 Annex	2,962 square feet
Phase C: Buildings F10, M1, T1	8,007 square feet
Phase C: Buildings D2.5, D3, F2, H1	9,661 square feet
Phase C: Storage Containers	3,200 square feet
Phase 3: Buildings D3.5, D4, D4.5, D5, D5.5, D6, D6 Ramp Office, D9, F3, F3.5, F4, F9, F9 Annex	44,128 square feet
Phase 5: Existing Hospital Tower North and South Wings	167,255 square feet
Phase 5: Parlow Library	22,500 square feet
Phase 5: Building 1 East	6,600 square feet
Phase 5: Building 2 East	1,500 square feet
Phase 5: Building 1 South	9,850 square feet
Phase 5: Building 2 South	5,385 square feet
Phase 5: Building 3 South	12,240 square feet
Phase 5: Building Warehouse 1/Central Plant	37,075 square feet
Phase 5: Building Warehouse 2	5,127 square feet
Phase 6: Hazardous Materials Storage, Paint Shop, Buildings N22, N24, N25, N26, N26A Trailer, N26B Trailer, N26C, N28, N31, N32, N33, N34, 14, 16, 18, Imaging Center, Storage Containers	102,434 square feet
Phase 6: Harbor-UCLA Professional Building	54,087 square feet

Source: PCR Services Corporation, 2016.

result in the demolition of existing buildings as set forth in Table 2-2. Construction activities associated with each Project phase would include demolition, excavation and/or grading, construction, and building finishing. Material storage and equipment staging areas would be located on-site, while permitted. Shuttle service for construction workers for transportation between off-site parking areas and the Medical Center Campus temporary construction worker parking would be provided either on-site or at one or more off-site facilities, the specific location(s) of which would be determined prior to the start of individual construction phases. The location of off-site parking areas would be limited to off-street lots or parking structures in the Project vicinity with adequate capacity to accommodate the parking demands of both the existing uses at each respective location and the demands of construction worker vehicles such that parking shortages do not occur. No on-street construction worker parking, material storage, or equipment staging outside the Medical Center Campus would be would be provided by Harbor-UCLA during construction activities.

The following discussion defines the anticipated phases and associated durations of Master Plan Project implementation. Although specific Master Plan Project components to be constructed in each phase are subject to change over time as circumstances dictate, the proposed phasing serves to define the maximum acreage that can be disturbed and the maximum developed floor area that can be constructed at one time, for purposes of properly evaluating the associated impacts on air quality, noise, traffic and parking, and other resources. This allows flexibility in the construction of specific facilities over time while still ensuring that all associated impacts are adequately evaluated pursuant to CEQA.

Phase M

A preliminary phase of the Master Plan Project would involve the demolition of existing medical office buildings, as previously noted in Table 2-2 for Phase M. In addition, this phase would also entail the placement of two temporary, modular medical office buildings on the Medical Center Campus in order to maintain outpatient services while permanent buildings are being constructed during subsequent phases. These temporary buildings would be removed from the Medical Center Campus during Phase 6 of Project implementation (see discussion on the following pages) following completion of Outpatient Building B. Phase M is anticipated to be implemented over the course of a single year beginning in approximately 2017.

Phase C

Demolition of existing medical office uses and storage containers would occur during Phase C as shown above in Table 2-2 for Phase C, followed by construction of the Central Plant, Central Information Technology (IT) Building, SCE service yard, utility tunnel, and related surface parking areas. Phase C is anticipated to be implemented over approximately four years between late 2018 and early 2023.

Phase 1

A new Staff Parking Structure and associated infrastructure would be constructed during Phase 1 of Project implementation, which would require the demolition and temporary relocation of various existing buildings on the proposed site of the structure as previously noted in Table 2-2 for Phase 1. Some of the buildings to be demolished are currently vacant, but occupants of some buildings would need to be temporarily relocated to other buildings within the Medical Center Campus. Two new buildings would be constructed on the LA BioMed Campus. Phase 1 is anticipated to be implemented over approximately three years between 2018 and 2021.

Phase 2

During Phase 2 of Project implementation, the Outpatient Mental Health Building, Outpatient Building A, and a bridge connecting the two buildings, as well as associated infrastructure, some of which is expected to be rerouted from the buildings to be demolished in this area, would be constructed on the north side of the Medical Center Campus. No demolition would occur as part of Phase 2 of the Project. Phase 2 of the Master Plan Project is anticipated to be constructed over approximately three years between 2021 and 2023.

Phase 3

Under Phase 3 of Master Plan Project buildout, the remaining buildings in the proposed New Outpatient Zone that are currently occupied by LA BioMed would be demolished as shown in Table 2-2 for Phase 3, and these LA BioMed programs would be relocated to the LA BioMed Campus. The remaining medical clinics in the new Outpatient Zone would be demolished and their programs relocated into the new Outpatient Clinical Building A constructed as part of Phase 2. Phase 3 improvements would involve the construction of a new staff parking structure immediately north of the proposed new Central Plan location and a temporary helistop in one of two locations near the southwest corner of the Medical Center Campus to allow for continued patient air transport throughout construction activities near the existing Emergency Department helistop. It is also assumed that up to 50 percent of biomedical research uses within both the proposed Bioscience Tech Park and LA BioMed Campus would be constructed during Phase 3, which would represent approximately 125,000 square feet for Bioscience Tech Park uses and 112,500 square feet of new LA BioMed Campus uses. Phase 3 of Master Plan Project buildout is anticipated to be constructed over approximately two years between early 2021 and early 2023.

Phase 4

Under Phase 4, no demolition would occur and both the New Hospital Tower and Diagnostic and Treatment Center would be constructed near the center of the Harbor-UCLA Medical Center Campus, and the main entry plaza would be re-configured along with the adjacent surface parking lot. The second half of the new Central Plant and Cooling Towers (which were begun in Phase C) would be constructed to meet the demand of the New Hospital Tower and Diagnostic and Treatment Center. The remainder of necessary infrastructure west of the existing Surgery/Emergency Department Building to support the New Hospital Tower would be constructed, which would also complete the new infrastructure network for buildings constructed during previous phases. In addition, a new permanent helistop would be constructed on the roof of the New Hospital Tower, and thus the temporary helistop in the southwestern portion of the Medical Center Campus would be removed. As the New Hospital Tower would need to be occupied prior to the year 2030, it is anticipated that it would be constructed over approximately four years between 2023 and 2027, overlapping with construction of some Phase C, Phase 3, and Phase 6 (Bioscience Tech Park) improvements. Vacant land in the northwest portion of the Harbor-UCLA Medical Center Campus not occupied by Bioscience Tech Park improvements would be used as interim staff/public parking as needed.

Phase 5

The South Wing attached to the Existing Hospital Tower would be demolished to accommodate the new Staff Parking Structure. The North Wing would be demolished after the Existing Hospital Tower is renovated, and Parlow Library and existing warehouse space within the Central Plant would also be demolished.

The final Staff Parking Structure at the east end of the Medical Center Campus would be constructed along with a staff surface parking lot, and internal roadways in this area of the Medical Center Campus would be reconfigured. The Existing Hospital Tower would be remodeled floor by floor, and the public parking lot on the north side of the Medical Center Campus reconfigured to accommodate limited commercial uses near the intersection of Carson Street and Vermont Avenue. The renovated Existing Hospital Tower could contain up to 156,000 square feet of medical office and other outpatient services as well as up to approximately 78,000 square feet of administrative office or other campus support facilities. The final Medical Center Campus Support buildings would be completed in the southeastern portion of the Medical Center Campus, and new infrastructure would be constructed off Vermont Avenue to support development of the eastern Medical Center Campus. Phase 5 is anticipated to be constructed over approximately six years between late 2024 and early 2030. The remainder of biomedical research uses within both the proposed Bioscience Tech Park and the LA BioMed Campus would be constructed during Phase 5 and built out by approximately 2030, for a total of approximately 250,000 square feet and 225,000 square feet, respectively, of net new floor area.

Phase 6

During Phase 6 of the Master Plan Project, the existing Harbor-UCLA Professional Building on the western side of the Harbor-UCLA Medical Center Campus would be demolished after the New Hospital Tower is built and the Existing Hospital Tower is remodeled, and the associated operations would be relocated to the existing renovated and repurposed Existing Hospital Tower. Phase 6 would also include demolition of remaining existing medical office buildings, storage containers, and the Imaging Center, as well as removal of temporary modular medical office buildings place on-site during Phase M, surface parking lot, and temporary helistop. Construction of Outpatient Building B, as well as associated roadway/access and landscape/hardscape improvements, would occur under this Phase. Phase 6 implementation is expected to occur over an approximately 2.5-year period between late 2021 and mid-2024.

H. REQUIRED APPROVALS

Implementation of the Master Plan Project would include but not be limited to the following approvals:

1. State of California

- California Office of Statewide Health Planning and Development
- Caltrans Division of Aeronautics Helistop Permit Approval

2. County of Los Angeles

- Certification of the Final EIR
- Project approval
- Approval of permits as may be required for component buildings and other structures
- Funding approval

3. Other Approvals

- Approval of permits for temporary construction activities associated with off-site infrastructure and/or traffic system improvements within other jurisdictions (if such improvements are ultimately necessary), including the cities of Los Angeles, Carson, and Torrance.

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3.0 GENERAL DESCRIPTION OF ENVIRONMENTAL SETTING

Section 15125 of the State *CEQA Guidelines* requires that an EIR include a description of the existing environment. This chapter provides a general overview of the environmental setting for the Project, however, detailed information on existing conditions is provided for each environmental topic studied in Chapter 4.0, Environmental Impact Analysis. This chapter also provides an overview of related projects that are considered in evaluating cumulative impacts.

A. OVERVIEW OF ENVIRONMENTAL SETTING

1. On-Site Conditions

The Harbor-UCLA Medical Center Campus is located on a 72-acre property at 1000 West Carson Street in Torrance, California. The Medical Center Campus is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Center Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block (approximately 800 feet) east of the Medical Center Campus and the San Diego Freeway (I-405) is located approximately two miles to the north and northeast. The Site is located within a network of regional transportation facilities providing connectivity to the larger region. The Metro Transit Station at Carson Street is located approximately 0.1 miles to the east, adjacent to the Harbor Freeway.

Surrounding communities include the cities of Gardena, Lawndale, and Hawthorne to the north; the City of Carson, east of the Harbor Freeway; the Harbor Gateway community, part of the City of Los Angeles, and the City of Torrance to the west; and to the south, the Harbor City community, part of the City of Los Angeles, and the City of Lomita. The Existing Hospital, related treatment facilities, and the majority of Medical Center Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Medical Center Campus, while buildings occupied by LA BioMed take up the majority of the central Medical Center Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Medical Center Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Medical Center Campus.

2. Surrounding Uses

The Project vicinity is highly urbanized and generally built-out. Carson Street, to the north, is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located outside the Harbor-UCLA Medical Center Campus on Carson Street just west of the intersection with Vermont Avenue. The area north of Carson Street is a predominantly single-family residential neighborhood. Vermont Avenue, bordering the Harbor-UCLA Medical Center Campus to the east, is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block facing the Harbor-UCLA Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and Starlite Trailer Park and Rainbow Mobile Home Park, which back up to the Harbor Freeway on the west. Wholesale

and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast along 220th Street. Single-family and multi-family residential neighborhoods border the Harbor-UCLA Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles; the abandoned Union Pacific Railroad right-of-way along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Harbor-UCLA Medical Center Campus.

3. Existing Conditions

The existing Harbor-UCLA Medical Center Campus was originally laid out as a military installation in the 1940s. The Existing Hospital Tower, related treatment facilities, and the majority of Medical Center Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Medical Center Campus, while LA BioMed takes up the majority of the central Medical Center Campus, and outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Medical Center Campus. Patient diagnostic facilities, administration offices, and additional facilities management functions are scattered throughout the Medical Center Campus. The facilities on the Medical Center Campus total approximately 1,279,284 square feet.

LA BioMed presently occupies a number of older buildings (World War II-era structures) scattered throughout the central portion of the Harbor-UCLA Medical Center Campus and is proposing to consolidate its operations within a 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Medical Center Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000 and LA BioMed will eventually vacate approximately 94,754 square feet of floor area it occupies elsewhere on the larger Medical Center Campus as it consolidates.

The Harbor-UCLA Professional Building houses nine clinical departments that provide a range of clinical subspecialties, a laboratory, radiology, nuclear medicine and a pharmacy.

CII occupies a 23,435-square-foot facility known as its Burton E. Green Campus in the northwestern corner of the Harbor-UCLA Medical Center Campus, near the intersection of Carson Street and Normandie Avenue.

The existing layout of the Harbor-UCLA Medical Center Campus reflects its piecemeal growth over time, and the aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. The Existing Hospital Tower (including the PCDC) and outpatient clinics are currently running at or near capacity, with no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.

Detailed descriptions of the environmental settings have been prepared for each of the environmental topics in this Draft EIR. For more detailed descriptions of existing conditions that are specific to each of the environmental issues analyzed in this Draft EIR, see Chapter 4.0, Sections 4.A. through 4.M.3.

B. RELATED PROJECTS

CEQA requires that EIRs analyze cumulative impacts. As defined in the State CEQA Guidelines Section 15355, a cumulative impact refers to "two or moreindicidua effects which, when considered together, are considerable or which compound or increase other environmental impacts." State CEQA Guidelines Section 15130(a) states that an EIR must discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant.

In addition, State CEQA Guidelines Section 15130(b) states that the analysis of cumulative impacts shall reflect the severity of the impacts and the likelihood of occurrence, but the discussion need not provide as great of detail as provided for the effects attributable to the project alone. Instead, the discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of the other projects which do not contribute to the cumulative impact.

A project has "cumulatively considerable" or significant cumulative impacts, when its incremental effects "are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

For an adequate discussion of significant cumulative impacts, the State *CEQA Guidelines* (Section 15130(b)(1)(A) and (B)) allow an EIR to determine cumulative impacts and reasonably foreseeable growth based on either of the following methods:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, projects outside of the County's jurisdiction or control;
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental planning document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

For the purposes of the cumulative impacts analysis for the proposed Master Plan Project, the County has incorporated into its analyses the method of a list of related projects for evaluating cumulative effects. Based on information provided by the County of Los Angeles Department of Public Works, Traffic and Lighting Division (LACDPW Traffic and Lighting Division) and the neighboring jurisdictions of Los Angeles, Carson, and Torrance, a list of past, present and probable future projects in the Project vicinity has been prepared for this Draft EIR. Specifically, data describing cumulative projects in the area was developed using information obtained from Los Angeles County Department of Regional Planning (LACDRP), City of Los Angeles Department of Transportation (LADOT), City of Carson Department of Planning and City of Torrance Department of Planning. The list of identified related projects is provided in **Table 3-1**, *Related Projects List*, with the locations of each of the related projects listed in **Figure 3-1**, *Related Projects Map*. The radius was

developed by the Project traffic engineer in consultation with the LACDPW Traffic and Lighting Division in the course of preparing the Memorandum of Understanding that defines the traffic analysis procedures. Although the projects listed in Table 3-1 serve as the primary bases for evaluation of cumulative impacts, the approach to these analyses vary for certain environmental issues. The cumulative analyses for each environmental issue are provided in their applicable sections in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

Table 3-1

Related Projects List

ID	JURISDICTION	PROJECT LOCATION	LAND USE	SIZE
1	County	24500 Normandie Ave	Apartments Retail	112 du 3.900 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
5	Carson	440 Sepulveda Blvd	Apartments	11 du
6	Carson	628 Lincoln St	Single Family	3 du
7	Carson	616 E Carson	Apartments Retail	152 du 13.000 ksf
8	Carson	19220 S Main St	Driver Training Facility	65.000 ksf
9	Carson	402 E Sepulveda Blvd	Apartments Retail	65 du 3.000 ksf
10	Carson	21521 S Avalon Blvd	Apartments Retail	357 du 32.000 ksf
11	Carson	23401 S Avalon Blvd	Retail	6.300 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
13	Carson	20920 Chico St	Medical	11.340 ksf
14	Carson	22303 Avalon	Automated Car Wash Office Space	4.673 ksf 0.480 ksf
15	Carson	Carson Marketplace	Regional Retail Neighborhood Retail Residential Hotel Restaurants Commercial Recreational	1,370.000 ksf 130.000 ksf 1550 du 300 rooms 81.125 ksf 214.000 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments Retail	352 du 17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments Retail	44 du 3.700 ksf
20	Torrance	1752 Border Ave	Warehouse Automobile Care Center	10.000 ksf 3.000 ksf
21	Torrance	570 Alaska Ave	Warehouse	31.015 ksf
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center	2.525 ksf

Table 3-1 (Continued)

Related Projects List

ID	JURISDICTION	PROJECT LOCATION	LAND USE	SIZE
23	Torrance	465 Crenshaw Blvd	Transit Center	17.800 ksf
24	Torrance	23625 Arlington Ave	Apartments	14 du
25	Torrance	20405 Gramercy Place	Light Industrial	17.000 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse Manufacturing	30.000 ksf 13.000 ksf

Source: Fehr and Peers Traffic Study, 2016

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Related Projects Map

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers Traffic Study, 2016.

FIGURE
3-1

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4. ENVIRONMENTAL IMPACT ANALYSIS
A. AESTHETICS

1. INTRODUCTION

This section addresses the potential aesthetic and visual resource impacts that could result from the Project with regard to visual quality, views, light/glare, and shading. This section is based, in part, on information provided in the Harbor-UCLA Master Plan (Perkins+Will, 2012) and also incorporates relevant information from the Los County 2035 General Plan Update and associated EIR (2015).

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Visual Character and Views

(a) Visual Character of the Medical Center Campus

(i) General Medical Center Campus Character

The Medical Center Campus is fully developed with the range of uses illustrated in Figure 2-4, *Existing Medical Center Campus Buildings*, in Chapter 2.0, Project Description, of this Draft EIR. Taller buildings, including the existing eight-story Hospital Tower, surface parking lots, and street edge landscaping, walls, and fences are visible from adjacent streets and properties. Existing landscaping within the Medical Center Campus is illustrated in **Figure 4.A-1**, *Existing Landscaping*.

The Medical Center Campus extends approximately one-half mile along its Carson Street and 220th Street frontages and, as such, has the aspect of a very large property related by common, medical-related uses and continuous hedges, walls, and fences. The street-facing landscaping features and walls are largely uninterrupted along the majority of the street frontages. The Medical Center Campus is characterized by generally flat topography, varying approximately one foot from north to south between Carson and 220th Streets, and less than 10 feet from east to west, between Vermont and Normandie Avenues. This topography, lack of elevated vantage points, and density of existing development, as is also characteristic of the surrounding community, prevents panoramic views within the Project area from adjacent and surrounding streets.

Medical Center Campus as Viewed from Carson Street

The visual character of the Site derives from views from adjacent public streets and low-rise land uses. As viewed from Carson Street approaching from the east, the eight-story Existing Hospital Tower is visible above street landscaping to pedestrians and vehicles approaching from the east. Three low monument signs identifying the Harbor-UCLA Medical Center are located at the intersection of Carson Street and Vermont Avenue. Landscaping including mature pine trees and lawn line the Carson Street frontage from the intersection to the Medical Center Campus' landscaped entrance area (a distance of approximately 600 feet). Surface parking lots B and C are visible behind the exiting large pine trees and landscaped strip. The street frontage from the Medical Center Campus entrance beyond Parking Lot B, to past Berendo Avenue (also a distance of approximately 600 feet) is characterized by a landscaped strip of lawn and recently planted

street trees and flower beds. Parking lot B and the single-story Building N6 are visible beyond the landscaping. Although one of the original 1943 barracks, Building N6 is in poor physical condition and does not constitute a distinctive visual resource. A bougainvillea hedge intended for screening surface parking is planted along the south side of the Carson Street frontage extending from beyond Building N6 to approximately 540 feet from the corner of Carson Street and Normandie Avenue (a distance of approximately 800 feet). Several breaks for entrance gates or that were caused by plant die-back occur within this hedge, and a surface parking strip fronting the street are intermittently visible. Mature trees within the grounds are also visible beyond the surface parking area. Landscaping from the west edge of the hedge to the corner of Carson Street and Normandie Avenue (approximately 540 feet) consists of sparser bougainvillea shrubs that allow a full view into the site and the adjacent parking lot at the northwest corner of the Medical Center Campus. A few mature trees are located in the parking lot.

Medical Center Campus as Viewed from Normandie Avenue

Landscaping along the Normandie Avenue frontage (the west edge of the Medical Center Campus) includes a general continuation of the sporadic bougainvillea hedge, beyond which the corner parking lot at the Normandie Avenue and Carson Street intersection is highly visible. In the approximate location of the Children's Institute International building, a concrete block wall and hedge is present along the frontage. The landscaping extends to the west entrance of the Medical Center Campus. To the south of the west entrance, the street edge is lined with an open (not landscaped) eight-foot-high chain link fence that extends to the southwest corner of the Medical Center Campus at Normandie Avenue and 220th Street. The loading area for the single-story Harbor-UCLA Professional Building is visible through the fencing. To the south of the loading area, the configuration of the Harbor-UCLA Professional Building allows an approximately 50-foot deep landscaped setback (lawn) at the edge of the building. A surface parking lot with a minimal, ten-foot lawn setback is located along the street edge to 220th Street. The surface parking lot and buildings within the Medical Center Campus are visible from Normandie Avenue and residential neighborhoods to the east; however, the eight-story Existing Hospital Tower is minimally visible from this area.

Medical Center Campus as Viewed from 220th Street

The street frontage along 220th Street is lined with a bougainvillea hedge, which obscures views of the open drainage channel that runs along the street frontage to the Medical Center Campus entrance driveway. A stand of mature trees is located to in the easterly sector of this frontage. The main driveway is landscaped with lawns and flower beds. A segment of screened construction fencing is located to the east of the driveway and, to the east of the fencing, landscaping consists of mature eucalyptus trees that extend to the corner of 220th Street and Vermont Avenue. The Lot D parking structure is located near the sidewalk and is partially visible through the lower levels of the trees. The eight-story Existing Hospital Tower is visible from 220th Street and residential neighborhoods to the south.

Medical Center Campus as Viewed from Vermont Avenue

The street frontage along Vermont Avenue is landscaped with street trees on approximately 100-foot centers and low evergreen shrubs. The Medical Center Campus is also bordered by an approximately three-foot-high masonry wall, topped by approximately three feet of chain link fencing. The Lot D parking structure and surface parking lots are visible from the street. The eight-story Existing Hospital Tower is also visible from



LEGEND

- EXISTING TURF AREA - 260,095 SF
- EXISTING TREE
  - 1 - FLOSS SILK TREE
  - 2 - NAKED CORAL TREE
  - 3 - WEEPING FIG
  - 4 - EVERGREEN ASH
  - 5 - JACARANDA
  - 6 - AMERICAN SWEET GUM
  - 7 - CANARY ISLAND PINE
  - 8 - LONDON PLANE TREE
  - 9 - BALD CYPRESS
  - 10 - CHINESE ELM

EXISTING LANDSCAPE PLAN

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0 400 Feet

Existing Landscaping

Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE

4.A-1

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street, although it is partially obscured by the A.F. Parlow Library when viewed from the south. The latter is located closer to the street front.

Overall, existing open landscaping and chain link fencing allow views into the site from the surrounding streets and neighborhoods. The visible aspect of the Medical Center Campus is mixed, varying from loading areas, older warehousing and service buildings to modern and architecturally notable buildings such as the A.F. Parlow Library. As viewed from surrounding streets and neighborhoods, the mixture of building types, visible parking lots and vehicles, and variations in the amount and type of landscaping, creates an overall visual discontinuity.

(b) Visual Character of the Project Vicinity

The visual character of the Medical Center Campus vicinity is defined by the mix of land uses along the street front in the Medical Center Campus vicinity. The Harbor (I-110) Freeway is located less than 1/8th mile to the east. Because the freeway is primarily below grade, it is not a prominent feature of the local landscape. A mix of gas stations, restaurants, fast food restaurants, retail uses and small professional services are located between Vermont Avenue and the freeway. Two gas stations and a fast food restaurant occupy the corners of Carson Street and Vermont Avenue, opposite the Medical Center Campus. The street front along Vermont Avenue across from the Medical Center Campus contains restaurants, mini-malls with shops and services, three-story multi-family residences and a mobile home park. Uses along Carson Street across from the Medical Center Campus include a three-story multi-family residential complex, several small grocery stores, retail stores, services, and restaurants. A large mall with a broad surface parking lot and very limited landscaping is located along the north side of Carson Street and at the northeast corner of Carson Street and Normandie Avenue across from the Medical Center Campus. The overall commercial district (Carson Street and Vermont Avenue) is low-rise and contains no distinctive plazas, parks, public art, or distinctive landscaped features. Signage consists largely of pole and pylon signs, and a few billboards (large advertising signs) are present. Although utilities are underground, landscaping is minimal. A few palm trees are randomly located near the streets, but no street tree program has been implemented along the respective frontages.

Residential neighborhoods that combine single- and multi-family homes are located to the west and south of the Medical Center Campus. A large three-story multi-family building is located near the southwest corner of Carson Street and Normandie Avenue and single-story duplex units are located between this building and single-family residences to the south along Normandie Avenue. Normandie Avenue comprises a four-lane segment, which is separated by an approximately 60-foot-wide grassy, but otherwise barren, strip of land from a parallel access road used by the residential neighborhood to the west. The strip was created by the removal of the former Union Pacific Railroad tracks that formerly ran along Normandie Avenue. The homes along Normandie Avenue have no access to Normandie Avenue's four-lane component and take access along the parallel access road to the west of the 60-foot-wide separation strip. The residences face the residential streets intersecting the access road and are not directly facing the Medical Center Campus. Normandie Avenue's four-lane road component and access road do not contains trees or other landscape features. Landscaping, such as trees, in the residential neighborhoods to the west is also minimal. The four-lane road component is characterized by a row of tall utility poles lining both sides of the roadway. With the combined four-lane component, grassy strip, and access road, the setback between the residential neighborhood (at property lines) and the Medical Center Campus is approximately 160 feet.

Residential neighborhoods to the south of the Medical Center Campus along 220th Street are a combination of single-family residences, condominium uses, and two- and three-story multi-family complexes. The older, and larger, multi-family complexes are two story and located nearer the Vermont Avenue and 220th intersection. Most of the residences along 220th Street directly face the Medical Center. The setback between the Medical Center Campus and the residential properties to the south is approximately 45 feet. Because of greater proximity to the Medical Center Campus, residences along 220th Street have broader views of the existing eight-story Hospital Tower and other buildings in the Medical Center Campus. More landscaping, lawn trees, and street trees occur along the south side of 220th Street than in the Normandie Avenue area; however, there are no consistent types or character of landscaping, or program of uniform street trees. Above-ground utility lines are located along the south edge of the street.

(2) Views

The Medical Center Campus is located within a highly urbanized area surrounded by residential uses and commercial development. As with the blocks and communities immediately surrounding the site, the 72-acre Medical Center Campus varies very little in elevation from approximately 46 feet to 50 feet site above mean sea level (AMSL). Because of the flat topography and density of development on the Medical Center Campus and in the area, panoramic views across the Medical Center Campus are unavailable. The nearby Harbor Freeway, which is less than one-eighth of a mile to the east, is generally below-grade and also has no views across the Medical Center Campus The commercial and residential neighborhoods surrounding the Medical Center Campus are primarily low-rise. New development is generally multi-family or larger strip malls, such as the strip mall at the northeast corner of Normandie Avenue and Carson Street. There are no distinctive taller buildings or groups of buildings that would create a unique skyline and, because of the flat terrain in the area, no distinctive long-range views are available in the area. The Medical Center Campus would be a minor element in the view field of distant buildings or viewing areas that would have long-range views of the site.

(3) Light and Glare

Existing nighttime lighting within the Project vicinity consists of light from commercial buildings, illuminated building identification signs, streetlights, vehicle lights, illuminated billboards, and surface parking lot lights that occur within commercial areas along Carson Street to the east and west of the Medical Center Campus and Vermont Avenue to the north and south of the Medical Center Campus. Nighttime illumination is lowest in the area's residential neighborhoods to the west and south of the Medical Center Campus. Residential uses located on Vermont Avenue and Carson Street would have higher light exposure because of greater traffic activity and commercial uses with illuminated signs on these streets.

The Medical Center Campus also features light fixtures and poles in parking areas and security lighting. Light spillage from the windows of taller buildings would be visible from adjacent residential areas, particularly along 220th Street. The Medical Center Campus would also generate low-level lighting from identification signs at the intersection of Carson Street and Vermont Avenue. However, this light source is minimal at this intersection compared to the existing illuminated pole lights and on-site lighting at the Shell gas station, Union 76 gas station, and Jack-in-the-Box restaurant at the other three corners of the intersection. Residential neighborhoods on all four streets bordering the Medical Center Campus have varying levels of light exposure from the commercial streets because of intervening development from the Medical Center Campus. However, the Medical Center Campus's parking lot lights are visible to all adjacent residential neighborhoods.

Daytime glare is generally associated with sunlight reflected from mobile and parked vehicles and building walls. Activities that would be sensitive to daytime glare from reflected sunlight include motorists traveling north, east, or west on the adjacent roadways. Free standing, illuminated signage also has the potential to generate glare. Because of the east/west orientation of Carson Street and 220th Street, the potential exists during some seasons for reflected glare from the east, west, and south façades of buildings along these streets. However, no notable highly reflective glare is evident in the area.

b. Regulatory Framework Summary

No federal or regional agency regulations are applicable to aesthetics and visual resources.

(1) State

(a) Senate Bill No. 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under CEQA for several categories of development projects including the development of infill projects in transit priority areas. The bill adds to the CEQA Statute, California Public Resources Code Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, Section 21099. Pursuant to Section 21099(d)(1) "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."[1] The provisions of SB 743 apply to projects located on a "lot within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by, an improved public right-of-way from, parcels that are developed with qualified urban uses….and it is located within one-half mile of a major transit stop."[2] The Project would meet the criteria set forth in SB 743 because it (1) is located within a transit priority area less than one-half mile from the Harbor Freeway/Carson Station TOD (connection to Metro Silver Line) and (2) comprises an employment center within an established urban area. Under SB 743, the Project would be exempt from findings of significance related to aesthetic effects, including view, visual quality, and light and glare that exceed CEQA Guidelines, Appendix G, criteria. However, for the purpose of this EIR, aesthetic effects are evaluated with respect to the County's impact thresholds.

(2) Local

(a) County of Los Angeles General Plan 2035

Guiding principles of the Los Angeles County General Plan include promoting smart growth through strategies that are tailored to each community. According to General Plan, strategies, such as transit-oriented development, will create vibrant centers around transit stations that promote neighborhoods where people can live, work, and shop without the need to drive to each destination. Another smart growth strategy is to facilitate the creation of vibrant and active corridors that connect major centers and destinations, and thriving neighborhood centers within the unincorporated areas. The General Plan states that these work in conjunction with other smart growth strategies to "green" streets and buildings, and

[1] *Section 21009(2)(B) clarifies that "For the purposes of this subdivision, aesthetic impacts do not include impacts on historical or cultural resources."*

[2] *Per definitions included in Section 21099(a).*

protect and conserve the County's natural resources. A Guiding Principal latter is to design communities that incorporate their cultural and historic surroundings, are not overburdened by nuisance and negative environmental factors. The General Plan also promotes the creation of communities that foster physical activity and create pedestrian-friendly environments and complete streets that are accessible to all users to produce positive outcomes from a land use and public health perspective.[3]

The Land Use Element of the General Plan (Chapter 6) sets forth policies that support aesthetic goals. These include Goal LU 7 to provide compatible land uses that complement neighborhood character and the natural environment. Goal LU 10 is to provide well-designed and healthy places that support a diversity of built environments. Policies to support Goal LU 10 include Policy LU 10.3 to consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.

Other policies supporting Policy LU 10 include Policy LU 10.4 to promote environmentally-sensitive and sustainable design and Policy LU 10.10 to promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces. Policy LU 10.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction. Policy LU 10.6: Encourage pedestrian activity through the following: (i) Designing the main entrance of buildings to front the street; (ii) Incorporating landscaping features; (iii) Limiting masonry walls and parking lots along commercial corridors and other public spaces; (iv) Incorporating street furniture, signage, and public events and activities; and (v) Using wayfinding strategies to highlight community points of interest.

Policy LU 10.8 is to promote public art and cultural amenities that support community values and enhance community context; and Policy LU 10.9 is to encourage land uses and design that stimulate positive and productive human relations and foster the achievement of community goals; and Policy LU 10.10: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces. The Project is compared to the applicable policies of the Land Use Element in Subsection 3.d, Project Impacts, below.

The Conservation and Natural Resources Element of the General Plan (Chapter 9) also sets forth policies related to aesthetic values. The primary focus of this chapter, however, is the County's role in the protection, conservation and preservation of natural resources and open space areas. Because the Project is located within an area that is entirely urbanized, the goals and policies of the Conservation and Natural Resources Element would not be applicable.

(b) County of Los Angeles Code

(i) Title 26 – Sign Regulations

Title 26, Chapter 65 of the LACC further establishes development standards for signs within unincorporated communities of Los Angeles County. The LACC sign regulations, apply to all types of commercial signs,

[3] *Los Angeles County Department of Regional Planning, County of Los Angeles General Plan, Chapter 3, Guiding Principles, adopted October 6, 2015, pages 16 and 17.*

including ground signs, projecting signs, roof signs, wall signs. The LACC defines wall signs as a sign attached to or erected against a wall of a building, with the plane of the sign parallel to the plane of the building. Projecting signs are defined as signs suspended from or supported by a building (but not a wall sign). Roof signs are defined as a sign erected upon or above a roof or parapet wall of a building. Ground signs are defined as signs detached from the building and supported by the ground. Under LACC Section 6502.2, a building permit is required for every sign and sign structure regulated under the LACC. Under Section 6502.7, no sign shall be erected that would interfere with, mislead or confuse traffic. Section 6502.10 requires that signs and sign structures be maintained at all times in a state of good repair and be able to withstand wind pressure.

(ii) Title 31 – Green Building Standards

Title 31 sets forth County regulations pertinent to landscape design. LACC Section 4.106.5 of the LACC for post-construction landscape design requires that a project shall not provide more than 25 percent turf within the total landscaped area; non-invasive drought-tolerant plant and tree species appropriate for the climate zone shall be utilized in at least 75 percent of the total landscaped area; and hydrozoning irrigation techniques shall be incorporated into the landscape design. Title 31 also requires energy efficiency, which applies to the design of interior and exterior lighting fixtures.

(iii) Title 12 – Environmental Protection Pertinent to Lighting

Title 12 of the LACC establishes certain controls on exterior lighting. In particular, the regulations require that display lighting (defined as the use of artificial light for decorative purposes or to direct attention to the providers of goods or services or to illuminate direct attention to signs advertising goods or services, display of goods, objects or designs symbolic of commercial enterprises or trademarks, or landscaping or other exterior effect) shall not be permitted during an electrical power shortage pursuant to Section 12.40.030 of the LACC. The aesthetic policies of the LACC applicable to the Project (as well as an analysis of project consistency) are presented in Subsection 3.d, Project Impacts, below.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Visual Character

The evaluation of visual character pertains to the degree and nature of contrast between the Master Plan Project and its surroundings. In the analysis of visual character, the existing visual properties of the Medical Center Campus are compared to the expected appearance of the Medical Center Campus under the Master Plan Project and the surrounding area to determine whether the visual character of the area would be degraded. Factors such as changes in the appearance of the Medical Center Campus, building height and massing, setbacks, landscape buffers, and other features are taken into account. The evaluation, therefore, considers the amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered or demolished. It takes into consideration the degree of contrast between proposed features and existing features that represent the area's valued aesthetic image, the degree to which the Project would contribute to the area's aesthetic value, and applicable guidelines and regulations.

(2) Views

The analysis of view impacts is based on the evaluation of field surveys and topography of the Medical Center Campus, surrounding area, and region to determine any broad views of visual resources that would be available across the Medical Center Campus. The intent of the evaluation of views is to determine if valued visual resources exist across the site and whether valued visual resources would be blocked or diminished as a result of Project development. The evaluation further considers whether the Master Plan Project would enhance viewing conditions through the creation of new resources and whether the Project includes design characteristics that would offset or mitigate specific impacts.

(3) Light and Glare

The effects of a project's artificial light sources are contextual and depend upon the existing lighting environment, light intensity, and proximity to light sources. Light impacts may include visual prominence, decrease of available views, alterations to the nature of a community or neighborhood character, or illumination of a sensitive land use. The analysis of light and glare identifies the location of light-sensitive land uses and describes the existing ambient conditions on the Medical Center Campus and in the Project vicinity. The analysis describes the Master Plan Project's proposed light and glare sources, and the extent to which Project lighting, including illuminated signage, would spill off the Medical Center Campus onto light-sensitive areas. The analysis also describes the affected street frontages, the direction in which the light would be focused, and the extent to which the Project would illuminate sensitive land uses. The analysis also considers the potential for sunlight to reflect off building surfaces (glare) and the extent to which such glare would interfere with the operation of motor vehicles or other activities.

b. Thresholds of Significance

The potential for aesthetic impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(I) Aesthetics. Would the project:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings or other locally recognized desirable aesthetic natural feature within a state-designated scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The County determined in the NOP/IS (see Appendix A of this Draft EIR) that the proposed Project would result in a less than significant impact with respect to checklist question b). Accordingly, this environmental topic is not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Aesthetics if it would:

AES-1 Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features.

AES-2 Substantially obstruct or alter an existing, recognized valued public view or scenic vista.

AES-3 Create a new source of substantial light, or glare which would adversely affect day or nighttime views in the area.

c. Project Characteristics or Design Features

(1) Project Characteristics

(a) Construction Activities

Construction activities associated with each proposed new component would entail the phased demolition of existing buildings or facilities and excavation, grading, construction, and finishing of new buildings or facilities. Construction is expected to occur in at least six main phases, some of which are anticipated to overlap, culminating in 2030. During construction, material storage and equipment staging areas would be located on-site. Temporary construction worker parking would be provided either on-site or at one or more off-site parking facilities. No on-street construction worker parking, material storage, or equipment staging would be permitted.

The actual timing, phasing, and scheduling of future construction projects has not been precisely determined; however, the proposed phasing discussed in Chapter 2.0, Project Description, of this Draft EIR, describes the affected portions of the Medical Center Campus that would be disturbed at one time. With the exception of the initial construction phase, as noted above, several phases have the potential to overlap.

As discussed in Chapter 2.0, the preliminary phase (Phase M) would involve the demolition of existing medical office buildings, and locating two temporary, modular medical office buildings. Phase M is expected to be implemented over approximately one year between late 2016 and late 2017. Phase 1 would involve demolition or temporary relocation of buildings and construction of a new Staff Parking Structure and associated infrastructure. Phase 1 is expected to be implemented over three years between 2018 and 2021.

Phase C would require the demolition of existing medical office buildings and storage containers, followed by construction of the Central Utility Plant, IT Building, SCE service yard, utility tunnel, and related surface parking areas. Phase C is expected to be completed over approximately four years between late 2018 and early 2023.

Phase 2 involves the construction of the Outpatient Mental Health Building, Outpatient Building A, and a bridge connecting the two buildings, as well as associated infrastructure on the north side of the Medical Center Campus. Phase 2 of the Master Plan is expected to occur over three years between 2021 and 2023. Phase 3 would require the completion of demolition of existing LA BioMed buildings and relocation of the LA BioMed programs to the LA BioMed Campus. The remaining medical clinics in the new Outpatient Zone would be demolished and their programs relocated into the new Outpatient Clinical Building A constructed as part of Phase 2.

Phase 3 improvements include the construction of a new staff parking structure immediately north of the proposed new Central Plant location and a temporary helistop. Half of new LA BioMed research uses would be constructed in the proposed Bioscience Tech Park and LA BioMed Campus. Phase 3 of Master Plan buildout is expected to be completed in approximately two years between early 2021 and early 2023.

Under Phase 4, the New Hospital Tower and Diagnostic and Treatment Center would be constructed near the center of the Medical Center Campus. The main entry plaza would be re-configured along with the adjacent surface parking lot. The second half of the new Central Plant and Cooling Towers would be completed the New Hospital Tower would need to be occupied prior to the year 2030, and it is expected to be constructed over approximately four years between 2023 and 2027, overlapping with construction of some Phase C, Phase 3, and Phase 6 (Bioscience Tech Park) improvements.

During Phase 5, the South Wing of the existing Hospital would be demolished for the new Staff Parking Structure. The North Wing would be demolished after the existing Hospital is renovated, and Parlow Library and existing warehouse space within the Central Plant area would also be demolished. The final Staff Parking Structure would be constructed at the east end of the Medical Center Campus along with a staff surface parking lot, and configuration of internal roadways. The existing Hospital would be remodeled floor by floor, and the public parking lot on the north side of the Medical Center Campus would be reconfigured to accommodate a new retail anchor at the intersection of Carson Street and Vermont Avenue. The final Campus Support buildings would be completed in the southeastern portion of the Medical Center Campus, and new infrastructure would be constructed off Vermont Avenue. Phase 5 is expected to be constructed over approximately six years between late 2024 and early 2030.

During Phase 6, the existing Harbor-UCLA Professional Building and remaining existing medical office buildings, storage containers, Imaging Center, temporary modular medical office buildings place, surface parking lot, and temporary helistop would be demolished. Construction of Outpatient Building B, as well as associated roadway/access and landscape/hardscape improvements, would occur under this Phase. Phase 6 implementation is expected to occur over an approximately 2.5-year period between late 2021 and mid-2024.

In addition to the on-site improvements under the Master Plan Project, several off-site utility and/or other infrastructure improvements may also be necessary to serve future uses on the Medical Center Campus, including water, sewer, electrical, or other such facilities. Such off-site improvements would be implemented, as necessary, along affected portions of street rights-of-way, particularly along the Medical Center Campus street frontages, or other areas as determined by affected agencies and service providers. Such improvements would result in limited construction activities that would be temporary in nature and are not expected to affect a substantial number of people, disturb a large portion of land, or result in notable changes in visual resources in the Project area.

(b) Project Characteristics

The Master Plan Project includes the construction of a New Hospital Tower for 446 beds, the re-use of the Existing Hospital Tower, detached structures consisting of three Outpatient Clinical Buildings and retail space, as well as planned improvements on the LA BioMed Campus, and incremental development of biomedical research uses within the proposed Bioscience Tech Park portion of the Medical Center Campus. The proposed conceptual Site Plan provided in Figure 2-6 in Chapter 2.0 of this Draft EIR illustrates the

expected location of new and remaining buildings and facilities under the eventual build-out of the Master Plan Project. The proposed conceptual massing diagram presented in Figure 2-7 in Chapter 2.0 illustrates the approximate organization of the programing. As shown in Figure 2-7, the New Hospital Tower and Outpatient facilities would be rotated off the north/south grid to better align with the appropriate solar orientation and to maximize the amount of natural daylight that penetrates the buildings. The New Hospital Tower would be the tallest and most distinctive structure in the Master Plan Project and the visual focus of the site. Although larger in floor area, the new buildings would be scaled for the existing site, and would be consistent with height of the Existing Hospital Tower. Approximate building heights according to uses (but not relative locations) are represented in **Figure 4.A-2**, *Stacking Diagram*, below.

Design Principles set forth in Master Plan Project would apply to individual building projects within the Medical Center Campus and must be taken into consideration during development of architectural plans. These include the following:

- Potential to complement the character of surrounding spaces, streets, and walks;
- View corridors, both to and from buildings;
- Alignment of axis, cornice lines, and features of neighboring buildings and spaces;
- Overall heights, massing, styles, and materials of neighboring buildings;
- Overall scale, styles, and materials of existing buildings;
- Screening of unsightly views of service areas and mechanical equipment located both on grade and on building roofs;
- Campus circulation;
- Solar orientation and other environmental influences.

Under the design guidelines set forth in the Master Plan Project, the New Hospital would become the dominant architectural element in the center of the Medical Center Campus. It is expected to convey the openness, accessibility, and human scale inherent on a campus, as well as an underlying progressive medical theme.

One purpose of the Master Plan Project is to consolidate the scattering of programs across the site, while also softening the built environment through the addition of gardens and plazas for patients, staff and public. Within the Medical Center Campus, building mass would be articulated through ground floor arcades and covered pathways, which would offer a pedestrian scale to the site. A continuous pedestrian circulation network would provide connectivity throughout the Medical Center Campus and shared use by the general public and staff. Several north/south walks and promenades would connect the center of the Medical Center Campus with the public edge along Carson Street, while a comprehensive network of walks and trails would direct pedestrians east/west through the Medical Center Campus. The planned pedestrian circulation system would allow for direct access between parking areas and facilities, with a secondary system connecting courtyards and plazas. Shaded pathways would also allow pedestrian connection between buildings without interruption by automobile traffic.

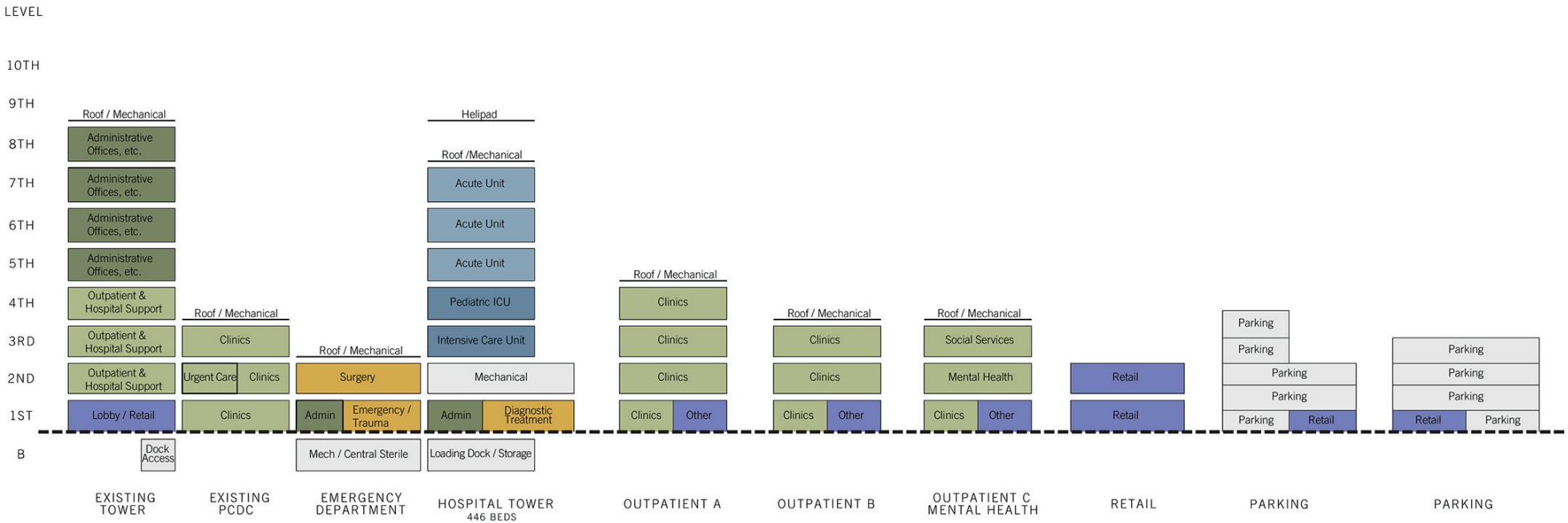
The Master Plan Project would create outdoor spaces that can accommodate both active social gatherings and passive gardens. These spaces would serve as a unique amenity that would maximize the opportunity

for meeting, while also providing more intimate areas for contemplation and relaxation. For instance, the garden benches, café tables, shaded tree bosques, and large open plazas in the Central Garden Spine would allow staff, patients, and visitors to relax and socialize in a garden setting. The conceptual planting zones comprising the park and trail, perimeter, demonstration garden, parking lot, entry, and rooftop planting zones are illustrated in **Figure 4.A-3**, *Planting Zones*, below. **Figure 4.A-4,** *Landscape Program*, illustrates specific locations of recommended landscaping features, such as the Carson Street Landscape Edge, Central Spine Gardens, and other features presented in the Figure 4.A-3. The Pedestrian Circulation and Landscape Master Plans for the Master Plan Project are presented in Figure 2-9, Pedestrian Circulation Plan, and Figure 2-10, Landscape Master Plan, in Chapter 2.0 of this Draft EIR. Utilizing a strong landscape framework and pedestrian circulation system, the Landscape Master Plan would provide a variety of open space courtyards, gardens, and plazas that would collectively define Master Plan Project. It is also anticipated that roof gardens, where implemented, would feature flowering canopy trees with perennial shrubs and planter pots with annual color that would be visible from surrounding streets.

The Landscape Master Plan, as shown in Figure 2-10, recommends consistent 35-foot to 45-foot high evergreen/semi-evergreen trees along the Medical Center Campus periphery. These would have an upright formal character that maintains views into the Medical Center Campus from surrounding streets. The next landscaping layer would consist of highlighting the two main entries off Carson Street by using a mix of palm trees and flowering deciduous trees. The palm trees would be the tallest trees on the Medical Center Campus and establish a clear visual gateway while the flowering canopy trees would provide a pedestrian scale. The final layer of landscaping would consist of courtyard gardens and plazas that provide a diverse spatial quality throughout the site. The use of medium sized trees along the perimeter, which would be highlighted by taller trees at the entry, would visually integrate the Medical Center Campus into the surrounding residential community while maintaining the Medical Center Campus's identity. Along Carson Street the perimeter tree would be centered in a hedged parkway with a second hedge at the back of walk. The low hedge in the parkway along Carson Street would buffer vehicle traffic to further improve the pedestrian experience. Along Normandie and Vermont Avenues, the perimeter tree would be planted in landscaped tree wells within the perimeter walk with the perimeter hedge occurring at the back of walk. Any perimeter hedges would be maintained below three and one-half feet in height to allow for sight lines into the Medical Center Campus. Along 220th Street, the narrow sidewalk (public right-of-way) would require the use of in-sidewalk tree grates. **Figure 4.A-5**, *Perimeter Streetscape*, illustrates the configuration of landscaping with respect to public sidewalks.

The single row of trees along Carson Street would be planted in a ten-foot-wide planter at the curb edge which buffer pedestrians from the busy traffic street. The existing chain link fence around the perimeter of the Medical Center Campus would be removed to help create a sense of openness and accessibility for nearby residents. The new ornamental fence planted with vines will be placed around the perimeter of the Project Site with breaks for pedestrian and vehicular access. The fencing along 220th Street would help ensure pedestrian safety adjacent to the existing open drainage channel. There will be prime aesthetic fencing along Carson Street, secondary fencing along Normandie and Vermont Avenues, and tertiary fencing along 220th Street.

The two Medical Center Campus entry drives would be easily recognizable and would visually connect to the main hospital and adjacent parking areas, helping to simplify wayfinding within the Medical Center Campus. The tallest trees on Medical Center Campus, Hybrid Fan Palms, would be spaced 30 feet on center and would create an iconic entry experience. To ensure spatial scale as the palm trees grow to over 60 feet high,



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Stacking Diagram

Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE

4.A-2



LEGEND

- PARK AND TRAIL LANDSCAPE
- PERIMETER LANDSCAPE
- DEMONSTRATION GARDEN
- PARKING LOT LANDSCAPE
- ENTRY LANDSCAPE
- CENTRAL SPINE LANDSCAPE
- ROOF TOP GARDENS

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N

0 400 Feet

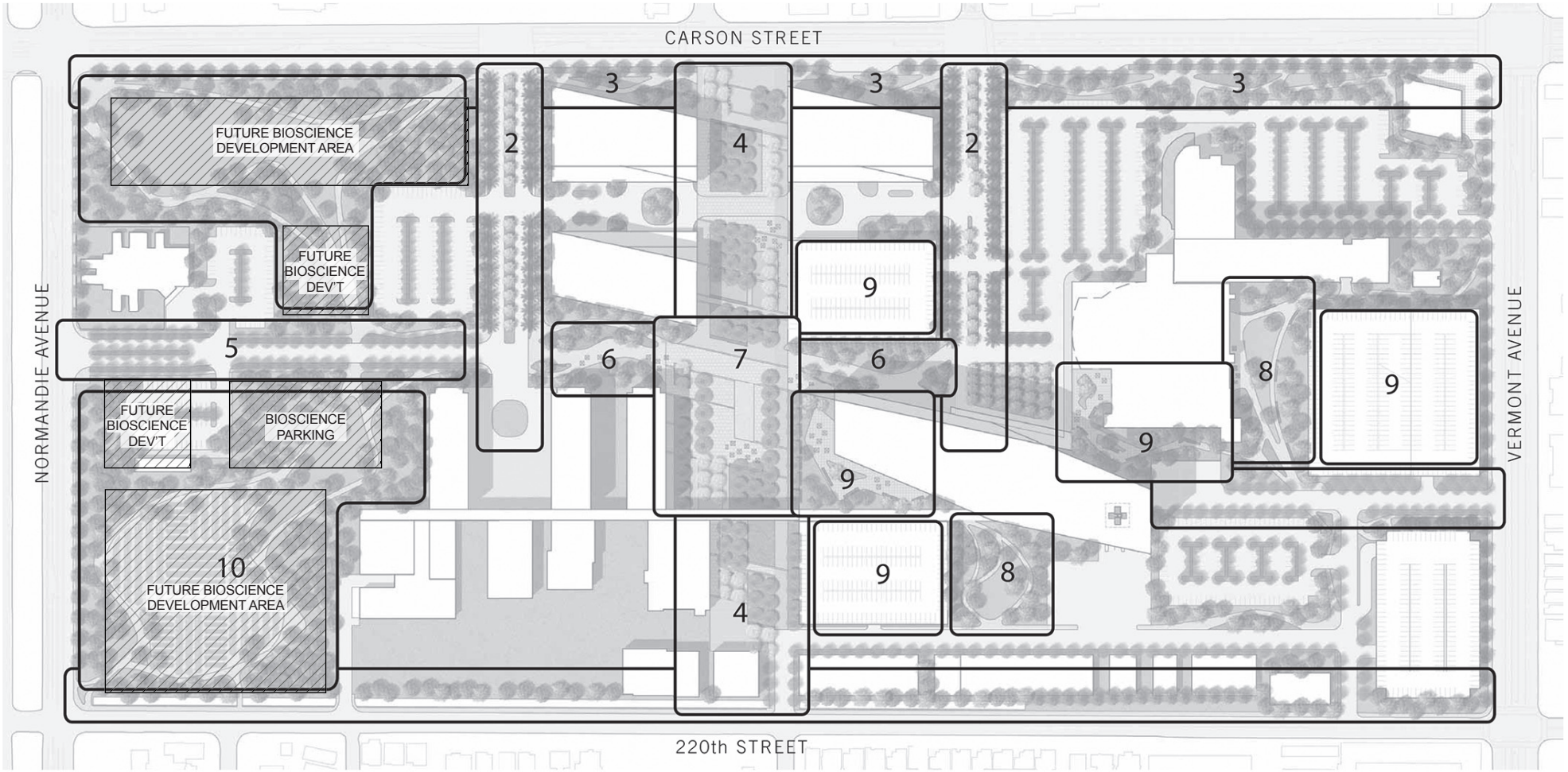
Planting Zone

Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE

4.A-3



1. WEST PARK
2. MAIN CAMPUS ENTRY
3. CARSON STREET LANDSCAPE EDGE
4. CENTRAL SPINE GARDENS
5. LA BIOMED ENTRY
6. PARK PLAZA
7. CENTRAL PLAZA
8. COURTYARD GARDENS
9. ROOF TOP GARDENS
10. EDUCATIONAL GARDEN

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N

0 400 Feet

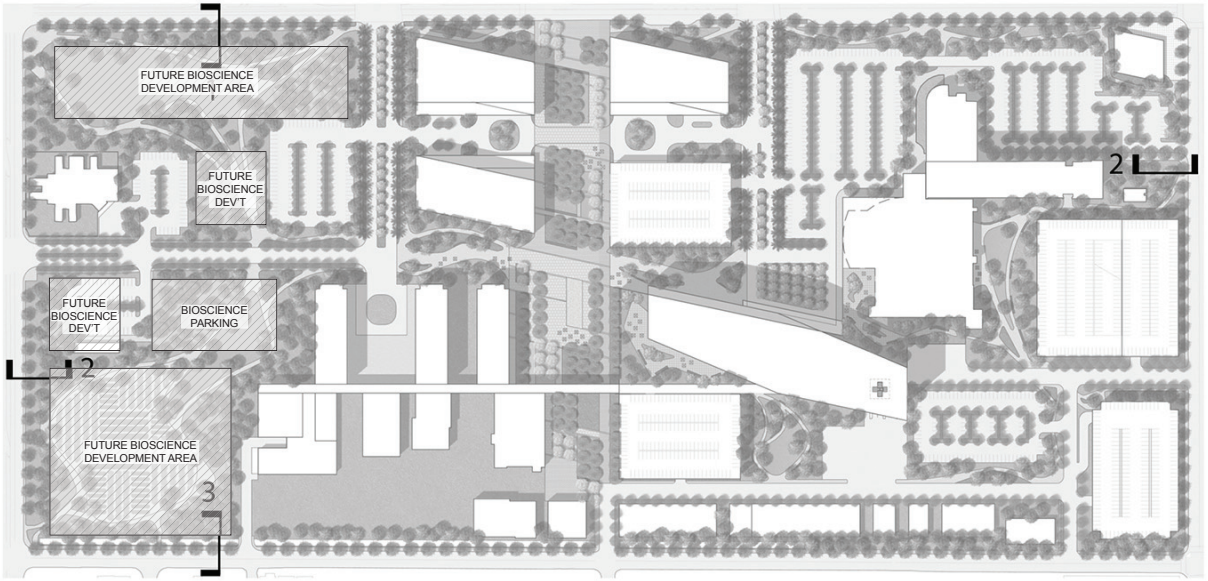
Landscape Program

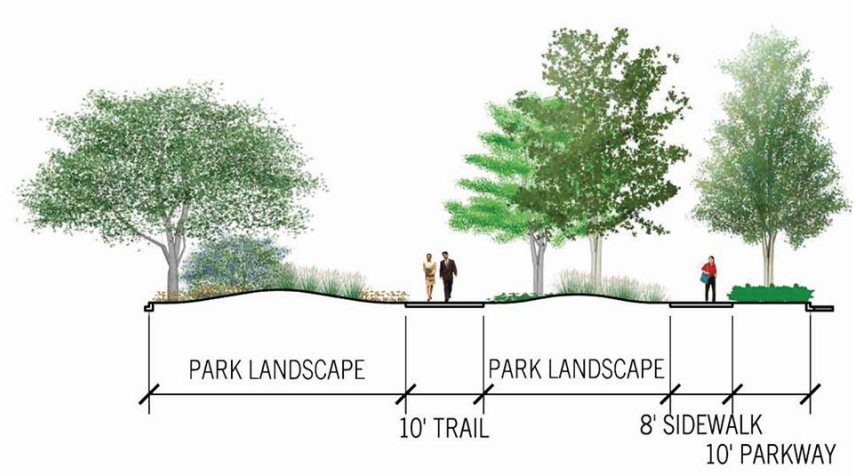
Harbor-UCLA Medical Center Master Plan

Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

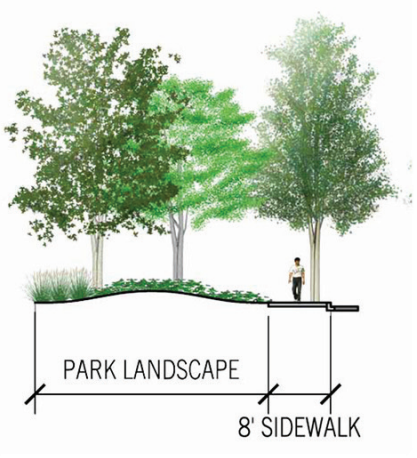
FIGURE

4.A-4

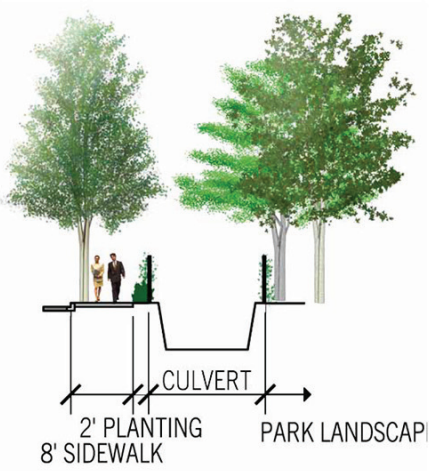




SECTION 1 -
CARSON STREET



SECTION 2 -
NORMANDIE &
VERMONT STREETS



SECTION 3 -
220th STREET

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Perimeter Streetscape

Harbor-UCLA Medical Center Master Plan
Source: Harbor-UCLA Medical Center Campus Master Plan, 2012.

FIGURE
4.A-5

flowering canopy trees are planted in the median and 30 feet on center between each palm tree. As these trees mature, the canopies would grow over the entry drive and create a unique gateway experience.

The combination of trees would also create seasonal color and the formality of the entries would be broken up by informal placement of deciduous and evergreen trees throughout the Medical Center Campus.

Under the proposed Landscape Master Plan, parking lot landscaping would consist of two planting types: a bio-swale planting and a perimeter planting. Both of which consist of plants that are native or climate appropriate and adaptable to the unique conditions found in each of the planting area. The bio-swale planting areas would occur at the interior of each lot. All parking lot runoff should be directed to the planting areas which act as a detention basin for storm run-off. Due to seasonal conditions the trees, shrubs, and groundcover selected for these areas would be selected to accommodate periodic submersions and long periods of saturated soil. The perimeter planting would consist of a single hedge species that wraps the parking lot and screens parked cars from the adjacent areas. The trees in each parking lot should consist of a single tree species that is adaptable to the parking lot conditions (swale or no swale). Trees would be planted at a size and spacing that minimizes the heat island effect creating by the parking lots.

As recommended under the Landscape Master Plan, species will be predominately native or culturally native (adapted) that help further create a unique campus setting. These plants would require less water and routine maintenance than the existing landscape. The Medical Center Campus has several mature tree specimens that were cataloged during early site analysis studies for the Harbor-UCLA Medical Center Master Plan with recommendations to salvage and relocate for future use. Most of the trees selected are suitable for helping to establish the western open space area landscape, in those portions of this area not developed with Bioscience Tech Park uses, which calls for a rich variety of tree types. This area would be used as a staging ground until other areas on the Medical Center Campus become available for relocations. Other areas on the Medical Center Campus suitable for relocating existing trees are the courtyards and garden areas to the east and west of the central spine. Evergreen Ash is selected as a preferred street tree species; however, many of the existing Evergreen Ash Trees could be located along the periphery of the Central Spine to extend the garden character to the public edge. Other existing accent specimens such as the Jacaranda, Coral Tree, and Silk Tree are suitable for relocation to the courtyard gardens. **Figure 4.A-6**, *Salvaged and Relocated Trees*, illustrates the locations of existing trees and recommended relocation sites.

Most of the exterior improvements on the Medical Center Campus would use cast-in-place concrete paving, including perimeter sidewalks, entries, and major east/west sidewalks. Integral color, hand seeded aggregate and sand blast finishes that would create variety in the paving type and define different areas of the Medical Center Campus, such as the east/west/ plazas that feed off the Central Garden Spine are recommended. Precast concrete unit pavers area recommended as the predominant paving type with the Central Garden Spine. Decomposed granite paths are recommended along the west side of the Medical Center Campus and support a park-like setting. As these trails extend east along Carson Street, recommended paving material would be cast-in-place concrete.

With consolidation of larger buildings, the west side of the Medical Center Campus would become available for future hospital expansion and development. The Master Plan Project proposes interim uses that would provide aesthetic benefits. Under the interim plan, the west side of the Medical Center Campus would be divided by the west entry road into two parcels which collectively contain a 14 acre urban park. The

northwest parcel would feature a diverse network of paths and trails through undulating landforms planted with an eclectic mix of trees and shrubs. The large central lawn space could stage both Medical Center Campus-related and other community events creating a medium for better engagement with the local community. The southwest parcel would continue the open landscape space quality and a fitness trail around a smaller turf area and demonstration garden could showcase native plants or small agricultural plots.

The Master Plan Project also recommends a public art program in accordance with the County's art policy, which provides for civic art in capital improvement projects. For the purposes of the Master Plan Project, art would include, but would not be limited to, sculpture, murals, portable paintings, earth works and water works, neon, mosaics, photographs, prints, film, sound, video, and combinations or forms of media and new genres, plus Medical Center Campus fixtures such as grates, street lights, seating, and other design enhancements. Several sites have been identified as potential locations for permanent public artworks including major commissions of outdoor sculpture. The main pedestrian plaza area in the center of the Medical Center Campus can also be utilized for temporary installations and performances. **Figure 4.A-7**, *Public Art Plan*, below, illustrates the potential locations for installations of public art.

(2) Project Design Features

The Master Plan Project does not include any specific Project Design Features (PDFs) that would apply to aesthetics and visual resources.

d. Project Impacts

(1) Visual Character

Threshold AES-1: Would the Project substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?

Impact Statement AES-1: *The Master Plan Project would generate adverse visual character impacts resulting from construction and landscaping activities, as well as off-site infrastructure improvements. Construction would occur in specified phases that would be temporary in nature and not encompass the site at any one time, construction is not considered to substantially degrade the existing visual character of the site and surrounding area. During operation, the visual character of the Medical Center Campus would be enhanced by high quality architecture and landscaping, including landscaping improvements along the public sidewalks. The Project would also be consistent with aesthetic policies of the Los Angeles County General Plan. Because of improvements in the public realm and consistency with the General Plan, operation is not considered to substantially degrade the existing visual character of the site and surrounding area. Therefore, impacts related to visual character would be less than significant.*

(a) Construction

Construction activities, which would entail the demolition of the existing buildings, surface parking lots, and sidewalks, would give an unfinished or disturbed appearance to areas within the Medical Center Campus subject to these activities. Demolition would involve clearance of existing vegetation, hauling of debris, and grading of the development sites. Excavation would be required for some building foundations. During building construction, the use of cranes would be required for the construction of the Project's multi-story

Existing



Existing tree exhibit illustrating which trees on campus should be protected and preserved prior to new construction work

Proposed



PCR

N

0 400 Feet

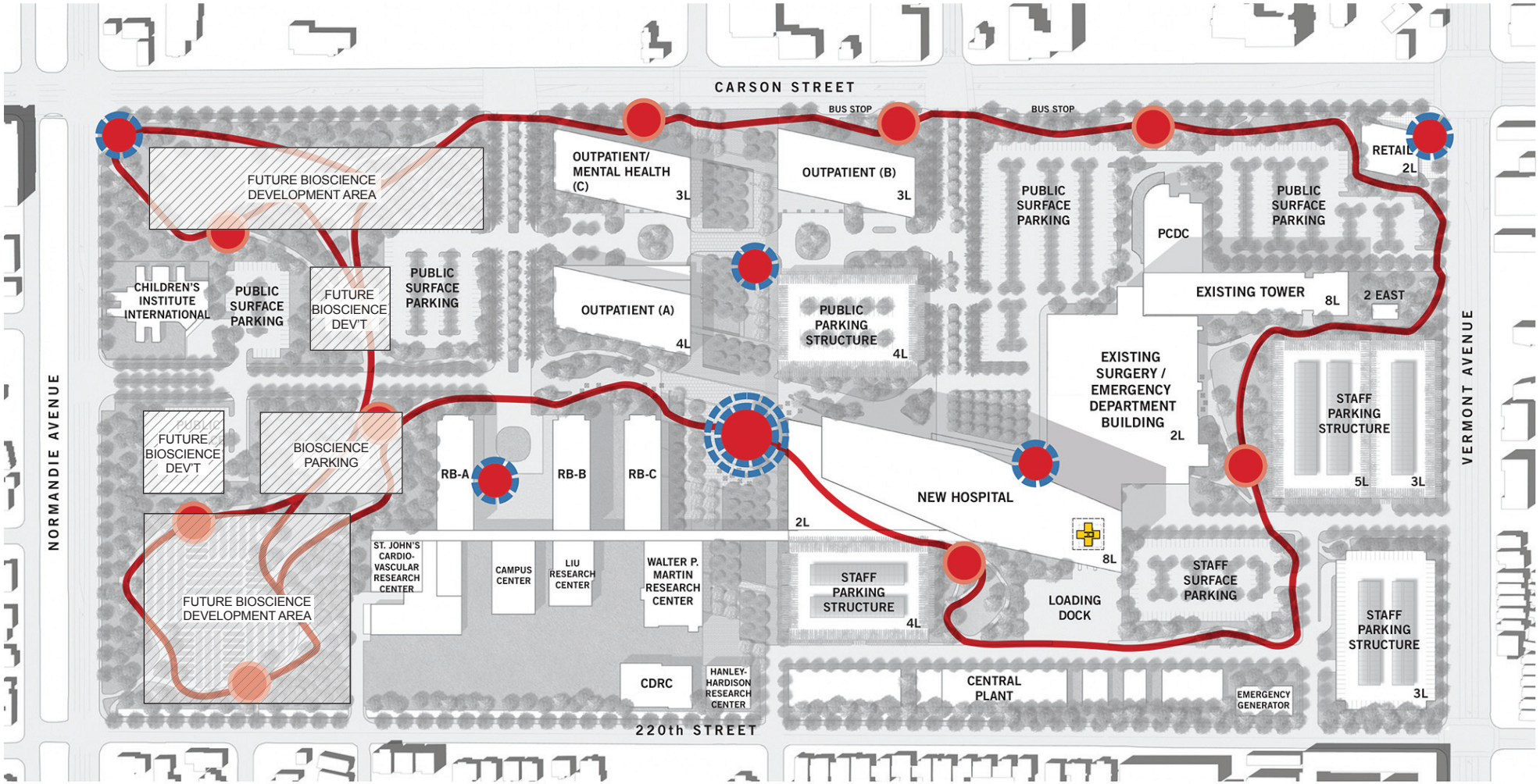
Salvaged and Relocated Trees

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE

4.A-6



LANDMARK ART INSTALLATION

IDENTITY ART INSTALLATION

DISCOVERY ART INSTALLATION

PCR

N

0 400 Feet

Public Art Plan

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE

4.A-7

components. The activity caused by excavators, dump trucks, and other hauling has the potential to impact the visual character of the area. Demolition and construction activities, however, would occur within defined areas of the Medical Center Campus and would be generally shielded by existing walls, buildings, peripheral landscaping, and other features.

Construction would also involve construction of new sidewalks, curbs, and any new utility line connections in the street rights-of-way, and planting of formal landscaping along Carson Street, Vermont Avenue, 220th Street, and Normandie Avenue. Utility poles within the Medical Center Campus would be removed and new lines would be located underground. Where construction projects would occur along the edges of the Medical Center Campus and result in the removal of landscaping and other amenities during specific construction phases, these areas would have an unfinished appearance. Because of proximity to the Medical Center Campus, residents along 220th Street would be the most visually affected by construction activity, particularly construction within the south sector of the Medical Center Campus. Construction projects in the south portion of the Medical Center Campus, including the construction of the Staff Parking Structure, the LA BioMed Campus buildings, and the New Central Plant would have the greatest visual effect on the adjacent residential neighborhood to the south. Installation of new sidewalks and peripheral landscaping, which would take place from approximately late 2021 and mid-2024 (during Phase 6), would be the most visible from adjacent streets and surrounding uses and would have the greatest effect on the overall surrounding streets and neighborhoods.

Construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve the Master Plan Project. As such, visual character impacts experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of the Master Plan Project, and further, because construction activities would not be dissimilar to building projects that have occurred within the Medical Center Campus in recent years (i.e., the Surgery and Emergency Room Replacement Project), visual impacts would not be considered to substantially alter, degrade, or eliminate the visual character of the area. Therefore, construction activities would have a less than significant effect with respect to visual character.

The effects of demolition on on-site historical buildings are discussed in Chapter 6.0, Other CEQA Considerations, of this Draft EIR. As discussed therein and in the Initial Study prepared for this Project (provided in Appendix A), Project impacts on historic resources would be less than significant. As such, this construction activity would not adversely affect the visual character of the Harbor-UCLA Campus.

(b) Project Operation

The development of the Master Plan Project would substantially alter the existing visual character of the Medical Center Campus. The Master Plan Project would result in denser and taller development than currently exists on the Medical Center Campus. The area as a whole, which is located within the Harbor Freeway/Carson Station TOD, is undergoing a transition to greater urbanization. This is characterized by the recent development of higher density multi-family residential uses immediately to the west of the Medical Center Campus and the construction of the Carson Street/Normandie Avenue Mall to the north of the Medical Center Campus. The Medical Center Campus, itself, has been developed, including the prior

construction of the eight-story Existing Hospital Tower, other medical uses, and surface parking lots, for several decades. The transition of the Medical Center Campus to greater densification would be consistent with growth trends and buildout in the surrounding area. In addition, the Master Plan Project would be contained within the existing Medical Center Campus, aside from temporary off-site improvements, as noted above, and would not directly adjoin any other existing neighborhood or community uses.

New buildings under the Master Plan Project would be required to implement the Harbor-UCLA Master Plan Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community.

The existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street would be improved by landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. These new streetscape components were illustrated in Figure 4.A-5, Perimeter Streetscape, above. Under the recommended streetscape program, perimeter trees would be centered in a hedged parkway with a second hedge at the back of walk. The low hedge in the parkway along Carson Street would buffer vehicle traffic to further improve pedestrian comfort. At present, no sidewalk trees are present along the four street frontages.

The Medical Center Campus currently features many high-quality tree specimens that contribute to the visual character of the area. Figure 4.A-6, above, illustrates on-site trees that would be relocated to allow for development. As shown in Figure 4.A-6, relocated trees would be primarily replanted in the western sector of the Medical Center Campus. Also, as shown in the Landscape Master Plan, Figure 2-10 in Chapter 2.0 of this Draft EIR, the western sector and southwest edge of the Medical Center Campus would be more lushly landscaped than under existing conditions, even when accounting for the potential development of Bioscience Tech Park uses within this area. The improvements in perimeter landscaping and locations of gardens in the western portion of the Medical Center Campus, where not displaced in distinct locations by future Bioscience Tech Park improvements, would improve the visual character of the Medical Center Campus as experienced by adjacent residential neighborhoods to the south and west.

Sidewalk and landscape improvements along Carson Street would also enhance the pedestrian experience between the transit station and multi-family residential uses to the west and, thus, promote greater pedestrian activity. Lower hedges along the Medical Center Campus periphery would provide visibility into the Medical Center Campus' gardens, specimen trees, and new, high-quality architecture. Gardens and other open space areas within the Medical Center Campus would provide for public access. The removal of surface parking facing Carson Street would also enhance the visual character of the Medical Center Campus. The Master Plan Project's public art program, much of which would near and visible from Carson Street frontage would also provide an aesthetic benefit to pedestrians and site visitors.

Overall, the Master Plan Project would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Impacts with respect to visual character would be less than significant.

(c) Policy Consistency

(i) County of Los Angeles General Plan

Table 4.A-1, *Comparison of the Project to Applicable Aesthetic Policies of the Los Angeles County General Plan,* compares the Project to applicable implementation policies contained in the Land Use Element of the General Plan. As shown in Table 4.A-1, the Master Plan Project would be substantially consistent with the goals of the General Plan related to aesthetic values. Because the Project would densify development within an existing developed site and area, it would be consistent with General Plan General Plan Policy LU 10.3 to consider the surrounding urban environment and its own existing and proposed built environment through the implementation of the Master Plan Design Guidelines, which require that individual buildings be compatible with each other in relation to massing, materials, design, building orientation, detailing, and other features. The Master Plan Project would be consistent with Policy LU 10.5 to encourage the use of distinctive landscaping, signage and other features to define the unique character of the area and would encourage pedestrian activity by orienting the main entrance to Carson Street, incorporating an extensive landscaping program, including street trees and low hedges along public sidewalks, and providing gardens and walkways for public access. The Project would be consistent with Policy LU 10.8 to promote public art by providing for public art installations throughout the Medical Center Campus along pathways, in gardens, and at building entrances and interiors to enhance the community context of the Medical Center Campus. The Project would also be consistent with Policy LU 10.10 to promote architecturally distinctive buildings and focal points in an area served by the Harbor Freeway/Carson Transit Station TOD (West Carson TOD Specific Plan). Because of improvements in the public realm and consistency with the General Plan, operation of the Master Plan Project is not considered to substantially degrade the existing visual character of the site and surrounding area.

Table 4.A-1

Consistency of the Project with Applicable Aesthetics Policies of the Los Angeles General Plan

Policy	Evaluation of Consistency
Goal LU 3: A development pattern that discourages sprawl and protects and conserves greenfield areas, natural resources, and SEAs.	**Consistent**: The Master Plan Project would densify development within an existing developed site. The concentration of uses within an area that is already urbanized would reduce pressure to extend urban uses to natural or other open areas.
Policy LU 9.3: Consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color,	**Consistent**: The built environment surrounding the Medical Center Campus is currently urbanized and located within the Harbor Freeway/Carson Station TOD. Densification of the area is evident in recently constructed retail malls and multi-family housing in proximity to the

Table 4.A-1 (Continued)

Consistency of the Project with Applicable Aesthetics Policies of the Los Angeles General Plan

Policy	Evaluation of Consistency
detailing or ornament.	Medical Center Campus. Because the Medical Center Campus is already developed and contains a high-rise element (existing eight-story Hospital Tower), and is located within an existing urbanized area, it would be consistent with the character of the existing, surrounding built environment. The Medical Center Campus is an approximately one-half-mile-long block, abutting three major roadways (Carson Street, and Normandie and Vermont Avenues) and is self-contained with respect to building design and interface with on-site structures. Under the Master Plan Design Guidelines, individual buildings must be compatible with each other in relation to massing, materials, design, building orientation, detailing, and other features.
Policy LU 9.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction.	**Consistent**: The Master Plan Project would implement an extensive landscaping and public art program that would provide for public access, which would encourage community interaction. The Project's architectural guidelines, which would result in high-quality building design, and recommended improvements, such as canopy trees along public sidewalks, distinguished plantings at the primary gateways, removal of street-facing surface parking lots, and other features would further define the unique character of the site.
Policy LU 9.6: Encourage pedestrian activity through the following: ▪ Designing the main entrance of buildings to front the street; ▪ Incorporating landscaping features; ▪ Limiting masonry walls and parking lots along commercial corridors and other public spaces; ▪ Incorporating street furniture, signage, and public events and activities; and ▪ Using wayfinding strategies to highlight community points of interest.	**Consistent**: ▪ The main visitor entrance to the Medical Center Campus would be located on Carson Street, a major highway serving the Harbor Freeway/Carson transit station (approximately 0.25-mile to the east). Carson Street, which would provide primary vehicle access to the Medical Center Campus would also serve as the primary pedestrian route. ▪ The Master Plan Project incorporates an extensive landscaping program, including street trees and low hedges along public sidewalks. Gardens and walkways within the Medical Center Campus would allow for public access. ▪ All existing masonry walls along public streets, including masonry walls along Normandie Avenue would be removed and replaced with street trees and low hedges. ▪ Garden areas within the Medical Center Campus would accommodate and, in part, are intended for public events and activities. ▪ The design of the main visitor entrance would be distinguished by distinctive trees, lighting, art, and other features to enhance wayfinding and to create

Table 4.A-1(Continued)

Consistency of the Project with Applicable Aesthetics Policies of the Los Angeles General Plan

Policy	Evaluation of Consistency
	a point of interest.
Policy LU 9.8: Promote public art and cultural amenities that support community values and enhance community context.	**Consistent**: The Master Plan Project would provide for public art installations throughout the Medical Center Campus along pathways, in gardens, and at building entrances and interiors to enhance the community context of the Medical Center Campus.
Policy LU 9.10: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces.	**Consistent**: The implementation of the Master Plan Design Guidelines would provide for high architectural quality and compatibility between the new buildings, in which the New Hospital Tower would be the Medical Center Campus' focal point. The compatibility between buildings would create a visually distinctive cluster that would be visible from Harbor Freeway/Carson transit station, approximately ¼ mile to the east.

Source: PCR Services Corporation, 2016.

(ii) County of Los Angeles Code

The LACC contains regulations regarding visual character, sign regulations, landscape design, and lighting. **Table 4.A-2**, *Comparison of the Project to Applicable Aesthetic Policies of the Los Angeles County Code*, compares the Project to applicable policies. As shown in Table 4.A-2, the Project would comply with applicable regulations related to signs, landscaping, and display lighting. Because the Project would be in compliance with applicable aesthetic requirements of the LACC, visual character impacts related to LACC requirements would be less than significant.

(2) Views

Threshold AES-2: Would the Project substantially obstruct or alter an existing, recognized valued public view or scenic vista?

Impact Statement AES-2: *The Master Plan Project would not substantially obstruct focal or panoramic views across the Medical Center Campus or substantially alter an existing recognized scenic vista or valued publicly available view as a result of view obstruction. The Project's tallest building would be visible from 220th Street. However, the deep setback of more than 200 feet from the nearest building corner to the street, the northwest orientation of the building, and new perimeter streetscape along 220th Street would reduce the visual effect to a less than significant level. Impacts related to views and view resources would be less than significant.*

Table 4.A-2

Comparison of the Project to Applicable Aesthetic Policies of the Los Angeles County Code

Policy	Analysis of Consistency
Title 26. - Sign Regulations:	
Section 6502.2. A building permit is required for every sign and sign structure regulated under the LACC. Where signs are illuminated by electricity, a separate electrical permit shall be obtained as required by the Electrical Code, Title 27 of the Los Angeles County Code.	**Consistent:** The Master Plan Project would increase wayfinding signs and other potential signage. Any sign program would be would be submitted for approval to the Department of Public Works for compliance with Section 6502.2. Permits would be obtained for signs and electrical permits for lighting in accordance with the Code.
Section 6502.7: No sign shall be erected that would interfere with, mislead or confuse traffic.	**Consistent:** All signs would be reviewed by the Department of Public Works to ensure that signs would not interfere with, mislead, or confuse traffic.
Section 6502.10. Signs and sign structures shall be maintained at all times in a state of good repair and be able to withstand wind pressure.	**Consistent:** The development must abide by County building and maintenance codes, including maintenance of facilities and signs. The enforcement of this code requirement by the County would ensure that signs would be maintained in a state of good repair.
Title 31. Green Code	
Section 4.106.5. A project shall not provide more than 25 percent turf within the total landscaped area; non-invasive drought-tolerant plant and tree species appropriate for the climate zone shall be utilized in at least 75 percent of the total landscaped area; and hydrozoning irrigation techniques shall be incorporated into the landscape design. Title 31 also requires energy efficiency, which applies to the design of interior and exterior lighting fixtures.	**Consistent:** The Master Plan Project would reduce turf compared to existing conditions. As illustrated in Figure 2-10, Landscape Master Plan, in Chapter 2.0 of this Draft EIR, turf would comprise a small portion of total landscaping. Under the Landscape Master Plan, three acres of existing turf areas would be converted to low water use plants. The Master Plan Project must also abide by Title 31 energy efficiency requirements enforced by the Los Angeles County Department of Public Works for all building designs and enforced by the County Department of Health Services for ongoing operation. County policy requires LEED Silver-level certification or the equivalent, larger projects, including green practices for landscaped areas. Respectively, hydrozoning irrigation techniques and stormwater treatment would be integrated into the proposed development.
Title 12. Environmental Protection	
Section 12.40.040. In an electrical power shortage emergency, no display lighting, including landscaping or the outside of a building shall be permitted.	**Consistent:** The Project would abide by County requirements to cease landscaping and building lighting during an electrical power shortage, as enforced by the County Department of Public Works and/or Department of Health Services, as appropriate. Non-essential lighting will be shut off, but the emergency entrance sign and essential building lighting will remain on.

Source: PCR Services Corporation, 2016.

View resources in the region include long-distance views of the Los Angeles Basin from the San Gabriel Mountains, and Santa Monica Mountains, and Palos Verdes Hills. Views of distant mountains and hills from some street corridors in the area would also be considered view resources. Other common view resources in the Los Angeles Basin, such as views of the Downtown Los Angeles skyline, or high-rise clusters in Westwood or Santa Monica are generally too far from the Project vicinity to constitute view resources. Because of the flat terrain in the local area, views of aesthetic resources, such as the Pacific Ocean, are not available. Also because of the area's relatively flat topography, other view locations, such as the nearest

public park to the Medical Center Campus, do not have views of, or across, the Medical Center Campus. The only public park within a one mile radius of the Medical Center Campus is the Normandale Recreation Center, located approximately 0.33 mile to the southwest. Therefore, no panoramic views of scenic resources are available across the existing Medical Center Campus from surrounding streets and parks.

The Medical Center Campus is, however, visible from the Carson Street overcrossing over the Harbor Freeway and adjacent streets, including Carson Street, Normandie and Vermont Avenues, and 220th Street. The Harbor Freeway is recessed in the Project area and provides no views of the Medical Center Campus.

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources.

The new buildings of the Master Plan Project would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. However, development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets. The views of the Medical Center Campus from Carson Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots facing Carson Street, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program, shown in Figure 4.A-10, Perimeter Streetscape, above. The recommended streetscape includes trees within a parkway between the sidewalk and the street and along the edge of the Medical Center Campus. Views of the main entrance areas would be upgraded by the recommended landscape program, which suggests tall palm trees to establish a clear visual gateway with the flowering canopy trees to provide a pedestrian scale.

Views of the Medical Center Campus from Normandie Avenue and 220th Street would be improved with the installation of perimeter landscaping, development of lusher gardens and landscaping in the west and south edges of the Medical Center Campus and removal of walls and chain link fencing. The perimeter trees would be spaced to allow views into the garden areas of the Medical Center Campus. The construction of the Master Plan Project's tallest component in the eastern sector of the Medical Center Campus would be more visible from 220th Street because of proximity. Although visible, the new building would not block views of any scenic vistas across the Medical Center Campus. Also, perimeter landscaping in the foreground (along the sidewalk and south edge of the Medical Center Campus), in combination with the building's deep setback of more than 200 feet from 220th Street at its closest point and the northwest orientation of the building would soften the character of the view. As such, the effect of the view of the Medical Center Campus from 220th Street would be less than significant.

Along the Vermont Avenue frontage several trees would be removed to allow for construction of a parking structure in the current location of Parking Lot A. Many of these trees would be relocated, as shown above in Figure 4.A-6, Salvaged and Relocated Trees. The existing A.F. Parlow Library and the Existing Hospital Tower, which impart an attractive aspect to the Vermont Avenue frontage, would remain. With the implementation of the Perimeter Streetscape Plan, which recommends double rows of trees on the inside of a sidewalk and a third row of trees in the parkway between the sidewalk and the roadway; the removal of

the existing wall and chain link fencing; and the removal of the existing surface parking lot would upgrade the existing views of the Medical Center Campus from this street.

Under existing conditions, no recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus and, as such, the Master Plan Project would not block views of existing scenic resources. In addition, the Project would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. Therefore, the Project would not substantially obstruct or alter an existing, recognized valued public view or scenic vista, and impacts related to views would be less than significant.

(3) Light and Glare

Threshold AES-3: Would the Project create a new source of substantial light, or glare which would adversely affect day or nighttime views in the area?

Impact Statement AES-3: *New light sources associated primarily with any new entrance/wayfinding signs, light spill from taller buildings, landscape lighting, and security lighting. All light sources would be low-level and directed downward to maintain ambient and point source lighting consistent with the on-site hospital use. As such, the Master Plan Project would not substantially alter the character of off-site areas surrounding the Medical Center Campus or result in substantial light spill and/or glare onto adjacent light-sensitive residential uses. The Harbor-UCLA Master Plan Design Guidelines would require that buildings be compatible with the style, materials, and massing of other Project buildings, the function of which are to serve as a medical campus. It is not anticipated that expanses of reflective glass and metals would be implemented in building design. As such, the Project would not cause adverse glare impacts. Therefore, potential impacts associated with nighttime illumination and/or glare from reflected sunlight would be less than significant.*

(a) Construction

Lighting needed during Project construction would generate minor light spillover in the vicinity of the Medical Center Campus including residential uses to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. Construction lighting would take place in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would limited and directed onto specific locations within construction sites to avoid impacting on-site medical patients. Similarly, with regard to off-site construction activities that may be necessary to address infrastructure improvements, such activities would be temporary, would only occur in one given location for a limited time, and would occur during daylight hours. Because artificial light associated with construction activities would be limited to security lighting and specific construction tasks, it would not be expected to cause any significant off-site spillage or glare, particularly in the context of the highly urbanized nature of the surrounding area and associated existing light sources. As such, construction lighting would not adversely impact off-site sensitive receptors. Such lighting would not substantially alter the character of off-site areas surrounding the Medical Center Campus. Therefore, artificial light impacts associated with construction would be less than significant. Construction activities are not anticipated to result in flat, shiny surfaces that would reflect sunlight or cause other natural glare. As such, construction glare impacts would be considered less than significant.

(b) Operation

(i) Artificial Light

Light-sensitive land uses in the area include residential uses to the west of Normandie Avenue, to the east of Vermont Avenue, and to the south of 220th Street. The Project has the potential to introduce new point source lighting, including architectural lighting, security and way-finding lights, landscape lighting, and visible interior light emanating from the windows of the Project's new multi-story buildings. Emergency service locations would be interior to the Medical Center Campus and shielded by intervening buildings and landscaping from adjacent residential neighborhoods. Any illuminated identification or wayfinding signs would be located on Carson Street near the main entry areas and would not be visible from the residential neighborhoods. These signs are not expected to be as bright as existing commercial signs that are located along Carson Street, at the northeast corner of Normandie Avenue and Carson Street; at the northeast, northwest, and southeast corners of Carson Street and Vermont Avenue (the Project is located at the southwest corner of Carson Street and Vermont Avenue); and along the east side of Vermont Avenue to the south of Carson Street.

Security lighting and landscape lighting would be located at ground level, low-level, and generally shielded from adjacent uses by landscaping. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Any illumination associated with rooftop gardens, illustrated in Figure 4.A-3 above, would be located in the center of the Medical Center Campus and shielded from off-site residential areas by intervening buildings. Light spillage from the Project's multi-story components would not be dissimilar from existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower.

The Project would contain no signage, flood lighting, or other strong point source lighting on the south side of the building interfacing residential uses to the south of 220th Street. The Project's lighting would not significantly intensify ambient or point source lighting that currently occurs during the evening hours along 220th Street

The removal of surface parking lots, including Parking Lot A, which is visible from residential uses to the east and the surface parking lot in the southwest corner of the Medical Center Campus, which is visible to uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. Direct headlight glare from vehicles leaving the new parking structures would not be visible from residential neighborhoods or adjacent residential uses. Therefore, the Project's new lighting sources are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. The Master Plan Project would not substantially alter the character of the off-site areas surrounding the Medical Center Campus and artificial lighting impacts would be considered less than significant.

(ii) Glare

Daytime glare can result from sunlight reflecting from a shiny surface that would interfere with the performance of an off-site activity, such as the operation of a motor vehicle or cause glare at nearby uses. Sun reflection occurs when the sun is behind the viewer and reflected back. The proposed development

(new buildings) would be visible from Carson Street, 220th Street, and Vermont Avenue and, to a lesser degree, from Normandie Avenue (due to lower-scale development in this area which would generally be up to two stories in height, included future Bioscience Tech Park uses). During the morning and afternoon hours, the sun would be located behind drivers and pedestrians on Carson Street and 220th Street and from northbound drivers on Vermont Avenue and could reflect off the façades of the multi-story buildings. The buildings would not be visible from the northbound or southbound Harbor Freeway. Reflective surfaces can be associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. Under the Master Plan Design Guidelines, building materials, massing, and styles must be consistent with neighboring buildings, including the Existing Hospital Tower, and to complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Project Site as a medical campus. As such, it is not anticipated that the Project would generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Therefore, glare impacts would be considered less than significant.

e. Cumulative Impacts

Table 3-1, *Related Projects List*, in Chapter 3.0, General Description of Environmental Setting, of this Draft EIR identifies related projects that are planned or are under construction in the Project study area. The related projects reflect infill development within the larger, built out community. As such they contribute to a variety of local settings with varied aesthetic characteristics. The majority of the related projects are located in different viewsheds from the Master Plan Project when viewed at the pedestrian level within the area's flatter, urban areas of Hollywood. From distant locations at higher elevations, especially hillside areas, the related projects and proposed Project would be too minor in the view field to contribute cumulatively to effects on the form of the viewshed, including the Los Angeles Basin. The cumulative effects of related projects with the Project are discussed below for each of the aesthetic categories addressed above.

(1) Visual Character

The analysis of visual character addresses the impact of development on the appearance of new buildings and their relationship to changes in the nearby settings in which they are located. Because of the flat topography of the area, related projects that would be visible in the same view field or along a similar roadway, would in combination with the project have the greatest effect on cumulative visual character impacts. As shown in Figure 3-1 in Chapter 3.0 of this Draft EIR, no related projects are in the immediate vicinity of the Medical Center Campus. The nearest related project along the Carson Street frontage is Related Project No. 7, which consists of 152 apartment units and retail mixed use at 616 East Carson Street. This project is located approximately 0.7 mile to the east, east of the Harbor Freeway. As with many related projects listed in Table 3-1, Related Project No. 7 is a residential mixed use that would contribute to the urbanized landscape already exemplified by multi-family residential uses and retail centers along Carson Street and other major thoroughfares in the area. The largest of the related projects is Related Project No. 15, the Carson Marketplace, which comprises regional and neighborhood retail, 1,550 residential units, a 300-room hotel, restaurants, and commercial recreational uses. This related project is located approximately two miles to the northeast of the Project Site in the vicinity of Del Amo Boulevard. Although the scale of the Carson Marketplace in combination with the Project would be the largest component in changing the visual character of the region, because of the distance of the Carson Marketplace from the Project, it would not occur within the same view field or along the same street frontage and, thus, would not

cumulatively contribute to a strong change in the visual character as experienced by residents or visitors to the area. Because related projects in combination with the Project would not degrade the existing visual character or quality of the site and its surroundings, visual character impacts would not be cumulatively significant.

(2) Views

As discussed above and illustrated in Figure 3-1, related projects do not lie within the same view field as the Project and, therefore, would not cumulative contribute to any view blockages. Also, because of the built-out character of the region and the flat topography, public views of broad vistas are generally unavailable. Because related projects, in combination with the Project, would not obstruct or alter an existing, recognized valued public view or scenic vista, view impacts would not be cumulatively significant.

(3) Light and Glare

The West Carson area is urbanized and within the proximity of the Harbor Freeway. The retail development, including gas stations, restaurant, and malls along major streets, such as Carson Street, generates a relatively high level of ambient light. Related projects listed in Table 3-1, are typical of the residential and commercial development that currently occurs in the area and, as such, would not cause light and glare that would be excessive or inappropriate for the setting. The combination of related projects and the Project has the potential to increase ambient lighting. However, because the area is already highly urbanized, it would not be a discernable increase. Because the Project in combination with related projects would not create a new source of light or glare that would substantially alter the character of the area, or result in substantial light spill/or glare, impacts with respect to light and glare would not be cumulatively significant.

4. MITIGATION MEASURES

With the implementation of the Master Plan Project's architectural and landscape designs recommendations, impacts related to aesthetics, including visual character, views, and light and glare, would be less than significant and no mitigation measures are required. In addition, no significant impacts with respect to cumulative impacts are anticipated that would require mitigation.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project-specific and cumulative impacts regarding visual character, views, and light and glare would be less than significant. Therefore, no mitigation measures would be implemented or required.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

1. INTRODUCTION

This section addresses potential effects on air quality associated with air emissions generated by the construction and operation of the proposed uses pursuant to the Harbor-UCLA Medical Campus Master Plan. The analysis also addresses the consistency of the Project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan and the County of Los Angeles General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B of this Draft EIR.

2. ENVIRONMENTAL SETTING

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified as criteria air pollutants and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following criteria pollutants are regulated by the U.S. Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO_X) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Volatile Organic Compounds (VOCs): These are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings. Emissions of VOCs themselves are not "criteria" pollutants; however, they contribute to formation of O_3 and are regulated as O_3 precursor emissions.

Nitrogen Dioxide (NO_2): Nitrogen dioxide is a reddish-brown, reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). The principle form of NO_2 produced by combustion is NO, but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 referred to as nitrogen oxides (NO_X). Major sources of NO_X include power plants, large industrial facilities, and motor vehicles. Emissions of NO_X can potentially irritate the nose and throat and may increase susceptibility to respiratory infections, especially in people with asthma. According to the California Air Resources Control Board (CARB), "NO_2 is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to NO_2 along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung

functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children."[1]

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Sulfur Dioxide (SO_2): Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM_{10} and $PM_{2.5}$): The human body naturally prevents the entry of larger particles into the body. However, small particles including fugitive dust, with an aerodynamic diameter equal to or less than ten microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

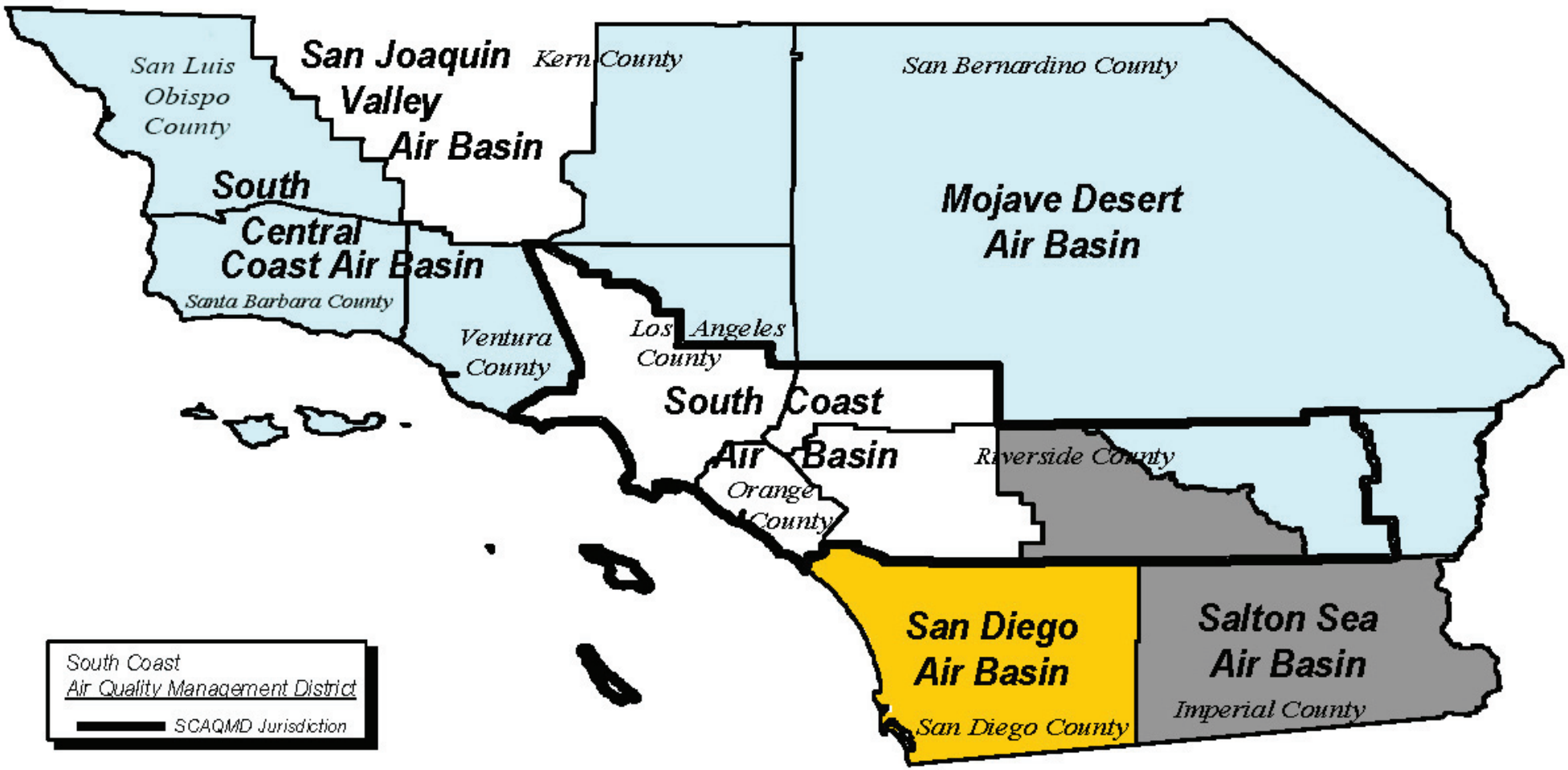
a. Existing Conditions

(1) Regional Conditions

(a) Criteria Pollutants

The Project Site is located within the South Coast Air Basin (Air Basin), which is shown in **Figure 4.B-1**, *Boundaries of the South Coast Air Quality Management District and Federal Planning Areas*. The Air Basin is

[1] *California Air Resources Board, "Nitrogen Dioxide – Overview," July 21, 2011, http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm. Accessed March 2015.*



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Boundaries of the South Coast Air Quality Management District and Federal Planning Areas

Harbor-UCLA Medical Center Master Plan

Source: South Coast Air Quality Management District, 2014.

FIGURE

4.B-1

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an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Air Basin, as it is a coastal plain with connecting broad valleys and low hills.

The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The usually mild climatological pattern is interrupted by periods of hot weather, winter storms, or Santa Ana winds. The extent and severity of criteria pollutant concentrations in the Air Basin is a function of the area's natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential. The Air Basin's meteorological conditions, in combination with regional topography, are particularly conducive to the formation and retention of O_3, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of O_3, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.

(b) Air Toxics

In addition to criteria pollutants, the SCAQMD periodically assesses levels of toxic air contaminants (TACs) in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655:

> *"Toxic air contaminant" means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.*

During July 2012 and June 2013, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES IV), which is a follow-up to previous air toxics studies conducted in the Air Basin. The MATES IV Final Report was issued in October 2014. The study, based on actual monitored data throughout the Air Basin, consisted of several elements a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize carcinogenic risk across the Air Basin from exposure to TACs. The study applied a two-kilometer (1.24-mile) grid over the Air Basin and reported carcinogenic risk within each grid space (covering an area of four square kilometers or 1.54 square miles). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Air Basin equates to a background cancer risk of approximately 418 in 1,000,000 primarily due to diesel exhaust, which is about 65 percent lower than the previous MATES III cancer risk.[2] The California Environmental Protection Agency

[2] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) ES-2.*

Office of Environmental Health Hazard Assessment (OEHHA) is in the process of updating the methods for estimating cancer risks.[3] The proposed new method utilized higher estimates of cancer potency during early life exposures and uses different assumptions for breathing rates and length of residential exposures. When combined together, SCAQMD staff estimates that risks for the same inhalation exposure level will be about 2.7 times higher using the proposed updated methods.[4] This would be reflected in the average lifetime air toxics cancer risk estimated from the monitoring sites data going from 418 per million to 1,128 per million. The updated OEHHA methodology has not yet been formally adopted for use in risk assessments; therefore, discussion of risk utilizes the approved methodology from the 2003 OEHHA guidance.[5] However, even under the updated methodology, the relative reduction in risk from the MATES IV results compared to MATES III would be the same (about 65 percent).

Approximately 68 percent of the risk is attributed to diesel particulate emissions, approximately 22 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 10 percent of all airborne carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome plating operations).[6] The study also found lower ambient concentrations of most of the measured air toxics compared to the levels measured in the previous study conducted during 2004 and 2006. Specifically, benzene and 1,3-butadiene, pollutants generated mainly from vehicles, were down 35 percent and 11 percent, respectively.[7] The reductions were attributed to air quality control regulations and improved emission control technologies. In addition to air toxics, MATES IV included continuous measurements of black carbon and ultrafine particles (particles smaller than 0.1 microns in size), which are emitted by combustion of diesel fuels. Sampling sites located near heavily-trafficked freeways or near industrial areas were characterized by increased levels of black carbon and ultrafine particles compared to more rural sites.

As part of MATES IV, the SCAQMD prepared maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The Project site spans across portions of two MATES IV grid spaces. The grids, in which the Project site is located, are shown in **Figure 4.B-2**, *Background Inhalation Cancer Risk for Project Site Area*. As shown, the potential cancers per million people for the two grids are estimated at 1,033 to 1,210 per million (the majority of the Project site is in the grid with a risk of

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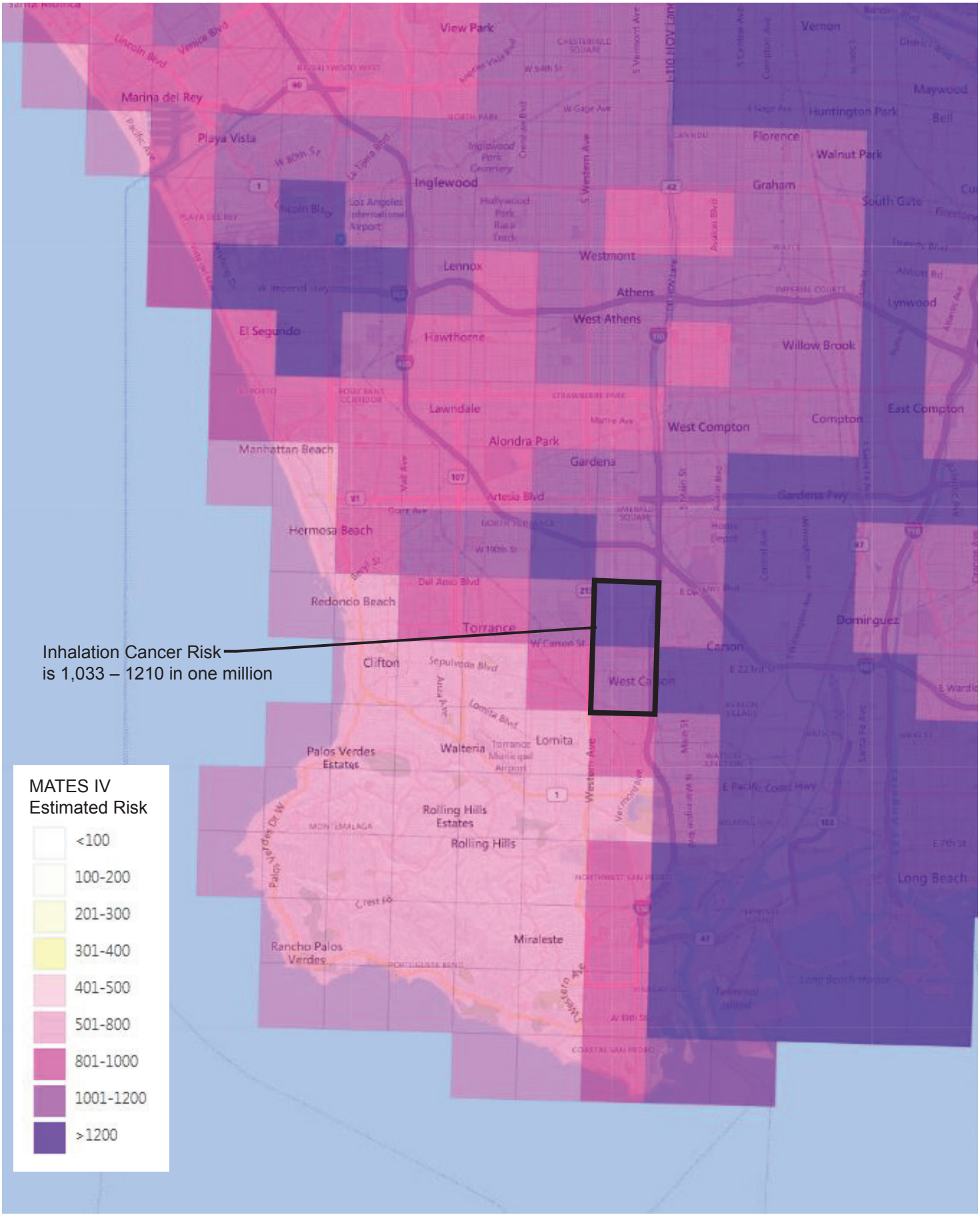
[3] *California Environmental Protection Agency, Office of Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, June Review Draft, (June 2014).*

[4] *South Coast Air Quality Management District, Agenda No. 8b, Potential Impacts of New OEHHA Risk Guidelines on SCAQMD Programs, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/may-specsess-8b.pdf?sfvrsn=4. Accessed March 2015.*

[5] *California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2003).*

[6] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) ES-2.*

[7] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) 6-1.*



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Background Inhalation Cancer Risk for Project Site Area

Harbor-UCLA Medical Center Master Plan
Source: South Coast Air Quality Management District, 2016.

FIGURE
4.B-2

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1,033 per million).[8] This is in the general range of the Basin average of 1,128 in a million. Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

(2) Local Conditions

(a) Existing Pollutants Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the Project site is the Southwest Los Angeles County Coastal Monitoring Station. Criteria pollutants monitored at this station include O_3, NO_2, CO, and PM_{10}. The next most representative station is the South Los Angeles County Coastal Monitoring Station. Criteria pollutants monitored at this station include SO_2 and $PM_{2.5}$. The most recent data available from the SCAQMD for these monitoring stations are from years 2010 to 2014.[9] The pollutant concentration data for these years are summarized in **Table 4.B-1**, *Ambient Air Quality Data*.

Table 4.B-1

Ambient Air Quality Data

Pollutant/Standard	2010	2011	2012	2013	2014
O_3 (1-hour)					
Maximum Concentration (ppm)	0.089	0.078	0.106	0.105	0.114
Days > CAAQS (0.09 ppm)	0	0	1	1	1
O_3 (8-hour)					
Maximum Concentration (ppm)	0.070	0.067	0.075	0.081	0.080
4th High 8-hour Concentration (ppm)	0.059	0.062	0.059	0.060	0.075
Days > CAAQS (0.070 ppm)	1	0	1	1	6
Days > NAAQS (0.075 ppm)	0	0	0	0	3
NO_2 (1-hour)					
Maximum Concentration (ppm)	0.076	0.098	0.062	0.078	0.087
98th Percentile Concentration (ppm)	0.061	0.065	0.055	0.058	0.066
Days > CAAQS (0.18 ppm)	0	0	0	0	0
NO_2 (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.012	0.013	0.010	0.012	0.012

[8] *South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map, http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv. Accessed March 2015.*

[9] *South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2016.*

Table 4.B-1 (Continued)

Ambient Air Quality Data

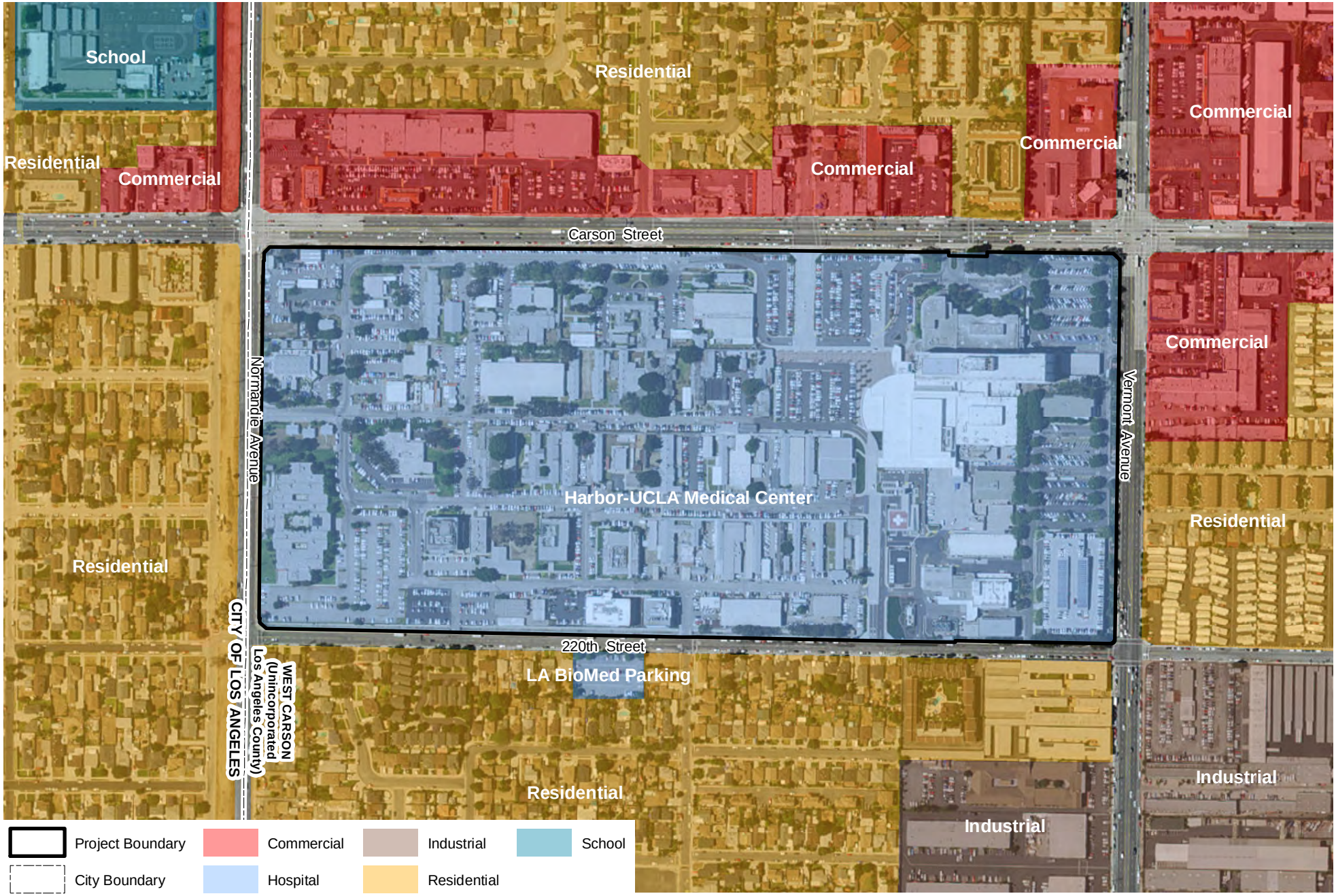
Pollutant/Standard	2010	2011	2012	2013	2014
CO (1-hour)					
Maximum Concentration (ppm)	3	2.3	2.8	3.1	3
Days > CAAQS (20 ppm)	0	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0	0
CO (8-hour)					
Maximum Concentration (ppm)	2.2	1.8	2.5	2.5	1.9
Days > CAAQS (9 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.026	0.012	0.005	0.010	0.015
99th Percentile Concentration (ppm)	–	0.008	0.005	0.007	0.009
Days > CAAQS (0.25 ppm)	0	0	0	0	0
Days > NAAQS (0.075 ppm)	–	0	0	0	0
PM_{10} (24-hour)					
Maximum Concentration (µg/m³)	37	41	31	38	46
Samples > CAAQS (50 µg/m³)	0	0	0	0	0
Samples > NAAQS (150 µg/m³)	0	0	0	0	0
PM_{10} (Annual Average)					
Annual Arithmetic Mean (20 µg/m³)	20.6	21.7	19.8	20.8	22
$PM_{2.5}$ (24-hour)					
Maximum Concentration (µg/m³)	33.7	42	46.7	42.9	52.2
98th Percentile Concentration (µg/m³)	26.5	26.6	25.1	24.6	27.2
Samples > NAAQS (35 µg/m³)	0	3	4	1	2
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (12 µg/m³)	10.4	10.7	10.57	10.97	10.72
Lead					
Maximum 30-day average (µg/m³)	0.01	0.008	0.005	0.005	0.012
Samples > CAAQS (1.5 µg/m³)	0	0	0	0	0

Notes: ppm = parts per million; µg/m3 = micrograms per cubic meter

Sources: South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2016.

(b) Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. Sensitive land uses in close proximity to the Project site are shown in **Figure 4.B-3**, *Sensitive Receptor Locations Nearest to the Project Site*, and include the following:



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Sensitive Receptor Locations Nearest to the Project Site

Harbor-UCLA Medical Center Master Plan
Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2016.

FIGURE
4.B-3

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- The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of the intersection with Vermont Avenue.

- The area north of Carson Street is a predominantly single-family residential neighborhood.

- Vermont Avenue, the southern half of the block facing the Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and mobile home parks, Starlite Trailer Park and Rainbow Mobile Home Park.

- Single-Family and multi-family residential neighborhoods border the Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles.

- Halldale Avenue Elementary School is located to the northwest of the Medical Center Campus west of Normandie Avenue and north of 216th Street.

- White Middle School is located to the southeast of the Medical Center Campus east of Interstate 110 and Figueroa Street and south of 220th Street.

(c) Existing Site Emissions

The Project site is currently developed with approximately 1,279,284 square feet of differentiated buildings including the Existing Hospital Tower and the recent hospital expansion in the east sector of the site; LA Biomed facilities in the central portion of the site; administration and facilities management buildings in various locations of the site; and large tenants, such as the Children's Institute International and MFI's Harbor-UCLA Professional Building (outpatient care) and Imaging Center, in the west sector of the site. The existing site generates mobile source emissions from vehicle trips to and from the site and from the operation of medical helicopters. The existing site generates on-site stationary source emissions from the combustion of natural gas from the existing Central Plant for building cooling and heating. The Central Plant consists of a Boiler Plant and Chiller Plant. The site also maintains six two-megawatt (MW) emergency generators that would result in stationary source emissions from the combustion of fuel oil when required to operate. Other existing emissions include on-site combustion and evaporative area source emissions from fossil-fueled landscaping equipment and evaporative losses associated with cleaning and maintenance activities (consumer product usage, solvents, adhesives, coatings, etc.). The Project would not result in changes in emissions associated with the operation of the Central Plant or emergency generators. In addition, the operation of medical helicopters under existing conditions is expected to be similar under the Project on a daily basis. In order to compare the change in emissions from the existing site to Project implementation, this analysis estimates emissions from existing uses that would be demolished, replaced, or renovated under the Project. Mobile source emissions from visitors and employees traveling to and from the site are also included in the emissions estimate.

The existing operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) (Version 2013.2.2) software, an emissions inventory model recommended by the SCAQMD for land use development projects. CalEEMod was used to forecast the daily regional emissions from mobile and area sources. In calculating mobile source emissions, an operational year of 2015 was used and the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on standard Institute of Transportation Engineers (ITE) trip generation

rates, for each existing land use provided by the Project traffic study[10] to estimate the total vehicle miles traveled (VMT). Area source emissions from landscaping equipment and evaporative losses associated with cleaning and maintenance activities are based on usage rates and emission factors specific to the Air Basin as provided in CalEEMod. Helicopter emissions from take-offs and landings are generated by the existing Emergency Department helistop. The helistop would remain operational after the Project build-out and be temporarily relocated during construction of Phases 3 through 6. Patient air transport is not predicted to increase due to the similar capacity of the Project compared to existing. The maximum daily air lifts would continue to be one helicopter take-off and landing, thus helicopter emissions were not evaluated due to there being no net change in helistop usage.

The estimated existing site emissions from uses and elements that would be demolished, replaced, or renovated under the Project are summarized in **Table 4.B-2**, *Existing Site Emissions*. Detailed emissions calculations are provided in Appendix B of this Draft EIR.

Table 4.B-2

Existing Site Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Coating, Consumer Products, Landscaping)	23	<1	0.1	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	1	1
Motor Vehicles	77	211	834	2	127	36
Total Existing Emissions	**102**	**219**	**841**	**2**	**128**	**37**

[a] *Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B.*

Source: PCR Services Corporation, 2016

b. Regulatory Framework

A number of statutes, regulations, plans, and policies have been adopted that address air quality issues. The Project is subject to air quality regulations developed and implemented at the federal, state, and local levels. This section provides a summary of pertinent air quality regulations affecting the Project at the federal, state, and local levels.

(1) Federal

The federal Clean Air Act of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, the USEPA is responsible for implementation of certain portions of the Clean Air Act including mobile source requirements. Other portions of the Clean Air Act, such as stationary source requirements, are implemented by state and local agencies.

[10] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, (2016).*

The Clean Air Act establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The Clean Air Act also mandates that the state submit and implement a State Implementation Plan for areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the Clean Air Act which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions). Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: (1) O_3; (2) NO_2; (3) CO; (4) SO_2; (5) PM_{10}; and (6) lead. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. The NAAQS were last amended in September 2006 to include an established methodology for calculating $PM_{2.5}$ as well as revoking the annual PM_{10} threshold. **Table 4.B-3**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant.

Table 4.B-3

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
O_3 [h]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
NO_2 [i]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m³)		9 ppm (10 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
SO_2 [j]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [j]	—	
PM_{10} [k]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		

Table 4.B-3 (Continued)

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
$PM_{2.5}$ [k]	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³ [k]	15 µg/m³	
Lead [l,m]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[m]	Same as Primary Standard	
	Rolling 3-Month Average [m]	--		0.15 µg/m³		
Visibility Reducing Particles [n]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates (SO_4)	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [l]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

[a] *California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

[b] *National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m³) is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.*

[c] *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

[d] *Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.*

[e] *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.*

[f] *National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*

[g] *Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.*

[h] *On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.*

Table 4.B-3 (Continued)

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]

[i] *To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.*

[j] *On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.*

[k] *On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3.*

[l] *The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*

[m] *The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.*

[n] *In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.*

Source: California Air Resources Board, Ambient Air Quality Standards (10/1/15), http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed January 2016.

The Project is located within the South Coast Air Basin, which is an area designated as non-attainment because it does not currently meet NAAQS for certain pollutants regulated under the Clean Air Act according to the February 2016 designations[11]. The Clean Air Act sets certain deadlines for meeting the NAAQS within the Air Basin including the following: (1) 1-hour O_3 by the year 2010 (however, this deadline was not attained, the new deadline is 2023); (2) 8-hour O_3 by the year 2024;[12] (3) PM_{10} by the year 2006[13]; and (4) $PM_{2.5}$ by the year 2019[14]. Nonattainment designations are categorized into seven levels of severity: (1) basic, (2) marginal, (3) moderate, (4) serious, (5) severe-15, (6) severe-17, and (7) extreme.[15] On June 11, 2007, the USEPA reclassified the Air Basin as a federal "attainment" area for CO and approved the CO maintenance

[11] *South Coast Air Quality Management District, National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status for South Coast Air Basin, February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2016.*

[12] *The 8-hour ozone attainment deadline for the 1997 standard of 80 parts per billion is 2024. The 8-hour ozone attainment deadline for the 2008 standard of 75 parts per billion is 2032 and the 8-hour ozone attainment deadline for the 2015 standard of 70 parts per billion is 2037.*

[13] *Annual PM_{10} standard was revoked, effective December 18, 2006; 24-hour PM_{10} NAAQS deadline was December 31, 2006; SCAQMD request for attainment redesignation and PM_{10} maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.*

[14] *Attainment deadline for the 2006 24-hour $PM_{2.5}$ NAAQS (designation effective December 14, 2009) is December 31, 2019 (end of the 10th calendar year after effective date of designations for Serious nonattainment areas). Annual $PM_{2.5}$ standard was revised on January 15, 2013, effective March 18, 2013, from 15 to 12 µg/m^3. Designations effective April 15, 2015, so Serious area attainment deadline is December 31, 2025.*

[15] *The "-15" and "-17" designations reflect the number of years within which attainment must be achieved.*

plan for the Air Basin.[16] The Air Basin previously exceeded the NAAQS for PM_{10}, but has met the NAAQS at all monitoring stations and the USEPA approved the request for re-designation to attainment effective July 26, 2013.[17] The Air Basin does not meet the NAAQS for O_3 and $PM_{2.5}$ and is classified as being in non-attainment for these pollutants. The Los Angeles County portion of the Air Basin is designated as non-attainment for lead under the NAAQS; however, this is due to localized emissions from one source-specific lead monitoring station in Vernon.[18] However, this lead battery recycling facility has agreed to shut down as of March 2015.[19] The attainment status of the Los Angeles County portion of the Air Basin with respect to the NAAQS is summarized in **Table 4.B-4**, *South Coast Air Basin Attainment Status (Los Angeles County)*.

Table 4.B-4

South Coast Air Basin Attainment Status (Los Angeles County)

Pollutant	National Standards	California Standards
O_3 (1-hour standard)	Non-attainment - Extreme [a]	Non-attainment
O_3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment (Maintenance)	Attainment
NO_2	Attainment (Maintenance)	Attainment
SO_2	Unclassifiable/Attainment	Attainment
PM_{10}	Attainment (Maintenance)	Non-attainment
$PM_{2.5}$	Non-attainment (Serious)	Non-attainment
Lead	Non-attainment (Partial)	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	Attainment

N/A = not applicable

[a] *The NAAQS for 1-hour ozone was revoked on June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements.*

[b]

Source: South Coast Air Quality Management District, National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status for South Coast Air Basin, February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2016. United States Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, http://www.epa.gov/oaqps001/greenbk/index.html. Accessed February 2016; California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed February 2016.

Title II of the federal Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a

[16] *"Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule." Federal Register 72 (11 May 2007):26718-26721*

[17] *Federal Register, Vol. 78, No. 123, June 26, 2013, 38223-38226.*

[18] *South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.*

[19] *Los Angeles Times, Regulators detail Exide battery plant closure after decades of pollution, http://www.latimes.com/local/lanow/la-me-ln-exide-plant-closure-20150312-story.html#page=1 , Accessed August 2015*

few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

(2) State

(a) California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act,[20] responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 4.B-3 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 4.B-3, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 4.B-4 provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates, hydrogen sulfide, and vinyl chloride and unclassified for visibility-reducing particles.

(b) California Air Resources Board Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit toxic air contaminant (TAC) emissions.[21] The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

(c) California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled

[20] *Chapter 1568 of the Statutes of 1988.*

[21] *California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, (2005).*

commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_X and PM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

(3) Local

(a) South Coast Air Quality Management District

The SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a subregion within SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

(i) Air Quality Management Plan

The SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. In December 2012, the SCAQMD adopted the *2012 Air Quality Management Plan*, which incorporates the latest scientific and

technological information and planning assumptions, including growth projections from the Southern California Association of Government's (SCAG) *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy*, and updated emission inventory methodologies for various source categories.[22] The 2012 AQMP is the most recent plan to achieve air quality attainment within the region and builds upon other agencies' plans to achieve federal standards for air quality in the Air Basin. It incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. The 2012 AQMP builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act.

The key undertaking of the 2012 AQMP is to bring the Air Basin into attainment with the NAAQS for the 24-hour $PM_{2.5}$ standard by 2014. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour O_3 standard deadline with new measures designed to reduce reliance on the federal Clean Air Act Section 182(e)(5) long-term measures for NO_X and VOC reductions. The SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2012 AQMP consist of four components: (1) Air Basin-wide and Episodic Short-term $PM_{2.5}$ Measures; (2) Contingency Measures; (3) 8-hour O_3 Implementation Measures; and (4) Transportation and Control Measures provided by the SCAG. The 2012 AQMP includes eight short-term $PM_{2.5}$ control measures, 16 stationary source 8-hour O_3 measures, 10 early action measures for mobile sources and seven early action measures proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the SCAQMD's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of zero- near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources.

The SCAQMD is currently working on the 2016 AQMP and expects to have a draft available by Spring 2016. The upcoming 2016 AQMP will develop integrated strategies and measures to meet the following NAAQS: 8-hour Ozone (75 ppb) by 2032, Annual PM2.5 (12 µg/m3) by 2021-2025, 8-hour Ozone (80 ppb) by 2024, 1-hour Ozone (120 ppb) by 2023, and 24-hour PM2.5 (35 µg/m3) by 2019. The 2016 AQMP will also take an initial look at the new 2015 federal 8-hour ozone standard (70 ppb), as well as incorporate energy, climate, transportation, goods movement, infrastructure and other planning efforts that affect future air quality.

(ii) SCAQMD Air Quality Guidance Documents

The *CEQA Air Quality Handbook* was published by the SCAQMD in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in

[22] *South Coast Air Quality Management District, 2012 Air Quality Management Plan, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan. Accessed March 2015.*

EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a Project) of the *CEQA Air Quality Handbook*, because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristics of the land uses identified in these screening tables were based on the fifth edition of the Institute of Transportation Engineer's *Trip Generation Manual*, instead of the most current edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L (EMFAC7EP Emission Factors for Passenger Vehicles and Trucks, Emission Factors for Estimating Material Hauling, and Emission Factors for Oxides of Sulfur and Lead).[23]

The SCAQMD has published a guidance document called the *Localized Significance Threshold Methodology* for CEQA Evaluations that is intended to provide guidance in evaluating localized effects from mass emissions during construction.[24] The SCAQMD adopted additional guidance regarding $PM_{2.5}$ in a document called *Final Methodology to Calculate Particulate Matter ($PM_{2.5}$) and $PM_{2.5}$ Significance Thresholds*.[25] This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Localized Significance Threshold Methodology*.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TACs.[26] The SCAQMD's distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The guidance document introduces land use related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. The SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

(iii) SCAQMD Rules and Regulations

Several SCAQMD rules adopted to implement portions of the AQMP may apply to the proposed Project. For example, SCAQMD Rule 403 requires implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. The Project may be subject to the following SCAQMD rules and regulations:

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[23] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993), http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). Accessed March 2015.*

[24] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

[25] *South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds, (2006).*

[26] *South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, (2005).*

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the Project:

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule (greater than 2 million British thermal units [Btu] per hour and less than 5 million Btu per hour).
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule (less than or equal to 2 million Btu per hour).
- **Rule 1186 – PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XI sets emissions standards for TACs and other non-criteria pollutant emissions. The following is a list of rules which may apply to the Project:

- **Rule 1402 – Control of Toxic Air Contaminants from Existing Sources:** This rule sets standards for health risk associated with emissions of TACs from existing sources by specifying limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard index (HI) applicable to total facility emissions and by requiring facilities to implement risk reduction plans to achieve specified risk limits, as required by the AB 2588 Air Toxics Hot Spots Program and this rule. The rule also specifies public notification and inventory requirements.
- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- **Rule 1404 – Hexavalent Chromium Emissions from Cooling Towers:** This rule sets limits and restrictions on hexavalent chromium in cooling tower circulating water.
- **Rule 1472 – Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines:** This rule regulated diesel particulate matter emissions from facilities with three or more stationary emergency standby diesel-fueled internal combustion engines. Facilities which comply with all applicable requirements of Rule 1402, including emissions from diesel engines at the facility, may be exempt from this rule.

(b) Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization for the majority of the Southern California region and is the largest Metropolitan Planning Organization in the nation. With regard to air quality planning, SCAG adopted the 2016 RTP/SCS in April 2016, which addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the AQMP. The growth forecasts are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The Regional Transportation Plan/Sustainable Communities Strategy and AQMP are based on projections originating within local jurisdictions.

SCAG's 2016 RTP/SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

In 2008, SCAG released the Regional Comprehensive Plan which addresses regional issues such as housing, traffic/transportation, water, and air quality. The Regional Comprehensive Plan serves as an advisory document to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The Regional Comprehensive Plan

presents a vision of how southern California can balance air quality with growth and development by including goals such as: reducing emissions of criteria pollutants to attain federal air quality standards by prescribed dates and stated ambient air quality standards as soon as practicable; reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas; and to minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to TACs, particulates (PM_{10} and $PM_{2.5}$) and CO.

(c) County of Los Angeles General Plan

Local jurisdictions, such as the County, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the County is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The County is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the County assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors and enforces implementation of such mitigation measures.

The Los Angeles County General Plan 2035 (March 2015) provides the fundamental basis for the County's land use and development policy, and represents the basic community values, ideals, and aspirations to govern a shared environment through 2035. The General Plan addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole.

The applicable measures of the Los Angeles County General Plan Air Quality element are specified below as being the most current standards. These measures will be implemented in connection with development of the Project.[27]

Goal AQ 1 Protection from exposure to harmful air pollutants.

- **Policy AQ 1.1** Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2** Encourage the use of low or no volatile organic compound (VOC) emitting materials.
- **Policy AQ 1.3** Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.

[27] *Los Angeles County Department of Regional Planning, 2014. Public Review Draft Los Angeles County General Plan 2035, Chapter 8 – Air Quality. http:// http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter8_2014.pdf. Accessed March 2015.*

- **Policy AQ 1.4** Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Goal AQ 2 The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.

- **Policy AQ 2.1** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.

- **Policy AQ 2.2** Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.

3. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

The potential for air quality impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(III) Air Quality. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

The State CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the Project are, therefore, evaluated according to thresholds developed by SCAQMD in the CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent guidance, discussed below. These thresholds generally incorporate the checklist questions contained in Appendix G of the State CEQA Guidelines. Greenhouse Gas Emissions and related "climate change" issues are addressed in Section 4.E., Greenhouse Gas Emissions, of this Draft EIR.

Based on the above factors, the Project would have a potentially significant impact on Air Quality if it would result in any of the following:

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD is required, pursuant to the CAA to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of Federal standards. The future development pursuant to the proposed Specific Plan would be subject to the SCAQMD's 2012 AQMP.[28] The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

With regard to air quality planning, SCAG has prepared the RCPG, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP, and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP. Both the RCPG and AQMP strategy incorporate projections from local planning documents.

The 2012 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact of reduced air quality on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment, because this growth is included in the projections used during the preparation of the AQMP. The 2012 AQMP relies on assumptions and data regarding County of Los Angeles growth consistent with the applicable zoning under the existing General Plan. The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

Projects that are consistent with the employment and population projections identified in the Growth Management Chapter of the RCPG prepared by SCAG are considered consistent with the AQMP growth projections, since the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP. SCAG's RCP and Guide provide growth forecasts that are used in the development of air quality-related land use and transportation control strategies. The RCP provided control strategies introduce enforceable measures by which area wide reductions in annual vehicle miles traveled can be achieved. The reduction in vehicle miles traveled correlates with a reduction in emissions of criteria pollutants.

A project is consistent with the AQMP if it is consistent with the applicable rules and regulations and the population, housing and employment assumptions which were used in the development of the AQMP.

AQ-2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Because of the SCAQMD's regulatory role in the Air Basin, the significance thresholds and analysis methodologies in the SCAQMD *CEQA Air Quality Handbook* guidance document was used in evaluating Project impacts. The SCAQMD has established mass emission thresholds below which it is unlikely that an

[28] *South Coast Air Quality Management District, AQMD Website, http://www.aqmd.gov/aqmp/2012aqmp/index.htm.*

individual project's incremental increase in emissions could cause or contribute substantially to an exceedance of applicable ambient air quality standards. Based on these criteria, the Project would result in a potentially significant impact if any of the following would occur:

(1) Construction Thresholds

A potentially significant impact may occur if regional emissions during construction from both direct and indirect sources would exceed any of the following SCAQMD mass emission threshold levels listed below. If so, air quality dispersion modeling may be used determine if the emissions would cause an exceedance of applicable air quality standards. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[29]

- 550 pounds per day CO;
- 75 pounds per day of VOC;
- 100 pounds per day of NO_X;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; and
- 55 pounds per day of $PM_{2.5.}$

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. Refined air quality dispersion modeling should be performed to predict impacts to ground level ambient pollutant levels, as discussed below under subsection (3), Localized Significance Thresholds.

(2) Operation Thresholds

A potentially significant impact may occur if regional emissions during operations from both direct and indirect sources would exceed any of the following SCAQMD mass emission threshold levels listed below. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[30] The SCAQMD has established numeric thresholds for operation in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.[31] As shown in Table 4.B-4, the Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators for other pollutants are also based on federal stationary source significance levels. If the thresholds are exceeded, air quality dispersion modeling may be used to determine if the emissions would cause an exceedance of applicable air quality standards.

[29] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.*

[30] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.*

[31] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-1.*

- 550 pounds per day of CO;
- 55 pounds per day of VOC;
- 55 pounds per day of NO_X;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; and
- 55 pounds per day of $PM_{2.5}$.

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. Refined air quality dispersion modeling should be performed to predict impacts to ground level ambient pollutant levels.

(3) Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative (I-4). The LST methodology was provisionally adopted by the SCAQMD Governing Board in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the local ambient concentrations of that pollutant and distance to the nearest sensitive receptor.

LSTs, which are voluntary, only apply to CO, NO_2, PM_{10}, and $PM_{2.5}$ emissions during construction and operation at the discretion of the lead agency. Screening-level analysis of LSTs is only recommended for construction activities at project sites that are 5 acres or less. The SCAQMD recommends that operational activities and construction for any project over 5 acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. Dispersion modeling would be required for CO_2, NO_X, PM_{10}, and $PM_{2.5}$ emissions during construction and for operational activities. NO_X to NO_2 conversion would be accounted for during the modeling to determine the maximum NO_2 concentrations at the nearest sensitive receptors.

The SCAQMD has developed methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions would be greater than the LSTs, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO and NO_2.[32]
- Maximum localized PM_{10} or $PM_{2.5}$ emissions during construction would be greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 50 $\mu g/m^3$ over five hours (SCAQMD Rule 403 control requirement).

[32] *South Coast Air Quality Management District, LST Methodology, http://www.aqmd.gov/ceqa/handbook/lst/Method_fina.pdf.*

- Maximum localize PM_{10} or $PM_{2.5}$ emissions during operations would be greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 2.5 $\mu g/m^3$ over a 24-hour period or 1.0 $\mu g/m^3$ over an annual period.

Based on criteria set forth in the SCAQMD *CEQA Air Quality Handbook*, the proposed project would have a significant impact with regard to operational emissions if any of the following would occur:

- Traffic generated by the project causes an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor.
- The project would not be compatible with County of Los Angeles, SCAQMD and SCAG air quality policies.

AQ-3 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Air Basin fails to meet national and state standards for O_3 (for both the 1-hour and 8-hour standard), PM_{10} (24 hour and annual) and $PM_{2.5}$, and therefore is considered a federal and state "non-attainment" area for these pollutants. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant.

AQ-4 Would the project expose sensitive receptors to substantial pollutant concentrations?

The SCAQMD *CEQA Air Quality Handbook* states that the determination of the significance of TACs shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process(es) involved
- The proximity of the TACs to sensitive receptors
- The quantity, volume and toxicity of the contaminants expected to be emitted
- The likelihood and potential level of exposure
- The degree to which the design of the proposed project will reduce the risk of exposure

Impacts from TAC emissions may be assessed via a health risk assessment (HRA). The California Air Pollution Control Officers Association (CAPCOA) has provided general guidance for preparing HRAs. CAPCOA's *Health Risk Assessments for Proposed Land Use Projects* describes significance levels that have been used by various air districts in California as enumerated below:[33]

[33] *California Air Pollution Control Officers Association, Health Risk Assessments for Proposed Land Use Projects, (2009) 12.*

- Thresholds can be based on a specific risk level such that a 10 per million excess cancer risk and an acute and chronic hazard index of one should not be exceeded. These thresholds tend to be consistent with the Hot Spot Program thresholds.
- Thresholds can also be based on the region's existing background cancer risk value if one exists.
    - One option is to establish a risk level equal to a region's background risk level.
    - Another option is to establish a risk level equal to twice a region's background risk level.
    - Still another option is to look at the ambient risk in the immediate vicinity of the project area rather than the regional risk level.
- Case by case thresholds may also be defined.

The SCAQMD *CEQA Handbook* recommends: (a) a lifetime probability of contracting cancer greater than 10 in one million (10×10^{-6}) as a significance threshold for evaluating cancer impacts from a facility, and (b) a health hazard index of 1.0 as a significance threshold for evaluating non-carcinogenic impacts from a facility.[34] These thresholds are normally applied to new facilities that emit TACs into the surrounding environment and potentially impact off-site sensitive receptors. In this case, the Project involves locating a new sensitive receptor rather than a new source of TACs. According to SCAQMD Staff, projects that would locate sensitive receptors within 500 feet of a freeway should also utilize these thresholds when assessing impacts to the project site from motor vehicles traveling on the freeway. Based on these guidelines, the Project would have a significant impact from TACs, if:

- On-site stationary sources emit carcinogenic air contaminants or TACs that individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0.[35]
- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.

In addition, since the project introduces potentially sensitive populations to the area, CARB's siting guidelines for TAC emissions (as discussed above under the Regulatory Framework section) will be used in addition the SCAQMD criteria listed above.

AQ-5 Would the project create objectionable odors affecting a substantial number of people?

The SCAQMD *CEQA Air Quality Handbook* contains secondary thresholds consistent with Appendix G CEQA guidelines regarding odors. More specifically, the Project would have a significant impact if it has the potential to create, or be subjected to, an objectionable odor that could impact a substantial number of sensitive receptors.

[34] *South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (2011).*

[35] *SCAQMD Risk Assessment Procedures for Rules 1401 and 212, November 1998.*

b. Methodology

The evaluation of potential impacts to local and regional air quality that may result from the construction and long-term operations of the Project is conducted as follows:

(1) Consistency with Air Quality Management Plan

The 2012 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP, as discussed above. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's numeric indicators.

(2) Construction Impacts

Construction of the proposed uses pursuant to the Harbor-UCLA Medical Campus Master Plan has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as bulldozers, wheeled loaders, cranes, and haul trucks. Workers commuting to and from the site would also generate mobile source emissions from passenger vehicles. Fugitive dust emissions would result from demolition, grading soil movement and excavation activities. Evaporative emissions of VOCs would be generated from the application of architectural coatings (i.e., paints) and asphalt paving. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Build-out of the Campus Master Plan is expected to occur in eight phases, with each phase lasting several years. Construction is anticipated to begin as early as late-2016 and full build-out of all phases is expected in 2030. From 2020 through the end of construction, phases may overlap; therefore, the emissions are estimated assuming overlapping phases in order to evaluate the maximum daily emissions. The amount of construction equipment used and the duration of construction activity could have a substantial effect upon the amount of construction emissions, concentrations and the resulting impacts occurring at any one time. As such, the emission forecasts provided reflect a set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. There are typically four major types of construction activities for development projects: demolition, site preparation, grading, and building construction. The building construction phase can typically be broken down into three sub-categories: building construction, architectural painting, and asphalt paving. The emissions from construction equipment that would be used during each activity were modeled assuming that several activities would occur simultaneously (i.e., overlap) within each of the phases. This would ensure that the analysis provides a reasonably conservative estimate of the maximum daily regional emissions.

Mass daily emissions during construction were calculated using CalEEMod, which is an emissions estimation/evaluation model developed in conjunction with SCAQMD and other California Air Districts.

CalEEMod was used to assist in quantifying emissions from construction activities for build-out of the proposed Campus Master Plan. The output values used in this analysis were adjusted to be Project-specific, based on construction equipment types and the construction schedule. For fugitive dust, consistent with Rule 403, water would be applied to disturbed areas of the site with a control efficiency of 61 percent. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in Appendix B of this Draft EIR.

The potential for localized effects from the on-site portion of daily emissions are evaluated at nearby sensitive receptor locations that could be impacted by the Project based on the SCAQMD's LST methodology, which utilizes on-site mass emission rate look-up tables and project-specific modeling, where appropriate. LSTs are applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. For NO_X and CO emissions, LSTs are developed based on the local ambient concentrations of that pollutant and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5,}$ LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). The screening criteria are generally applicable to projects five acres or less in disturbed area. If a project exceeds five acres or any applicable LST when the mass rate look-up tables are used as a screening analysis, then project specific air quality modeling model may be performed. Construction of the proposed uses pursuant to the Campus Master Plan would potentially disturb more than five acres. Therefore, Project-specific dispersion modeling was conducted for NO_2, CO, PM_{10}, and $PM_{2.5}$ using the USEPA AERMOD dispersion model with meteorological data from the applicable SCAQMD monitoring station (i.e., LAX Airport).[36] Maximum on-site emissions from the various phases and activities were modeled at locations on the Campus where the construction activities would take place. Nearby receptors representing locations of off-site sensitive uses (i.e., residential uses) were placed in all directions around the Project site in order to estimate maximum impacts. The results of the LST dispersion modeling analysis are provided in Appendix B of this Draft EIR.

(3) Operational Impacts

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the site. In addition, emissions would result from stationary and area sources such as fossil fuel combustion for cooling and heating and from landscaping equipment, and evaporative loss emissions associated with cleaning and maintenance activities (consumer product usage, solvents, adhesives, coatings, etc.).

The operational emissions were estimated for an interim build-out year (2023) and full build-out year (2030). The mobile and area source emissions were estimated using CalEEMod. In calculating mobile source

[36] *The Project site is located in SRA 3 and the meteorological station in SRA 3 is located at Los Angeles International Airport. However, the site is located on the border of SRA 4 and is physically closer to the meteorological station for that region. Therefore, the meteorological data from the Long Beach station in SRA 4 is used for dispersion modeling purposes.*

emissions, the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on trip generation rates provided by the Project traffic study[37] to estimate the total vehicle miles traveled (VMT). Stationary and area source emissions from fossil fuel combustion for heating and cool and landscaping equipment, and evaporative losses associated with cleaning and maintenance activities are based on usage rates and emission factors specific to the Air Basin as provided in CalEEMod.

Regional operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. CEQA established the baseline environmental setting at the time that environmental assessment commences. For purposes of the operational emissions analysis, the existing baseline year is assumed to be 2015. Therefore, the incremental change in operational emissions is based on the Project emissions minus the existing baseline emissions.

The potential for localized effects from the on-site portion of daily operation emissions were evaluated at sensitive receptor locations that could be impacted by the Project based on the SCAQMD's LST methodology. Maximum on-site emissions were compared to applicable LST using the mass rate look-up tables. The screening criteria were for a project site greater than 5 acres with a receptor distance of less than 25 meters in Source Receptor Area 3 (Southwest Los Angeles County Coastal). Localized CO concentrations are evaluated based on prior dispersion modeling of the four busiest intersections in the Basin that has been conducted by the SCAQMD for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

(4) Toxic Air Contaminants (TAC) Impacts (Construction and Operations)

TAC emissions sources during construction consist of diesel particulate matter (DPM) from construction equipment and operations consist of chemicals from aircraft maintenance and fueling. Sensitive receptor locations are identified and site-specific dispersion modeling was conducted to determine Project impacts. Potential TAC impacts are evaluated by conducting a detailed analysis using AERMOD dispersion modeling.

The OEHHA is responsible for developing and revising guidelines for performing HRAs under the State's Air Toxics Hot Spots Program Risk Assessment (AB 2588) regulation. In March 2015, OEHHA adopted new guidelines that update the previous guidance by incorporating advances in risk assessment with consideration of infants and children using Age Sensitivity Factors (ASF). These changes also take into account the sensitivity of children to TAC emissions, different breathing rates, and time spent at home. Children have a higher breathing rate compared to adults and would likely spend more time at home resulting in longer exposure durations. On June 5, 2015, SCAQMD incorporated these guidelines in to

[37] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016.*

relevant rules designed for permitting of stationary sources.[38] Although construction would be temporary, construction impacts associated with TACs are addressed quantitatively in a refined HRA.

The HRA was performed in accordance with the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA Guidance).[39] The analysis incorporates the estimated construction emissions, as previously discussed, and dispersion modeling using the USEPA AERMOD model with meteorological data from the closest SCAQMD monitoring station. Sensitive receptors used for modeling were placed at the location of sensitive receptor (i.e., residential) buildings near to the subject property. Heavy-duty equipment and trucks were modeled as volume sources and were located on the subject property and on roadways that trucks would potentially travel on within a 0.25 mile distance of the subject property. Health risk calculations were performed using a spreadsheet tool consistent with the OEHHA Guidance and CARB Hotspots Analysis and Reporting Program (HARP) version 2 spreadsheet methodology. Detailed information about the HRA is provided in Appendix B of this Draft EIR.

Potential TAC impacts for operations are evaluated by conducting a qualitative screening-level analysis. The screening-level analysis consists of identification of new or modified TAC emissions sources. If it is determined that a project would introduce a potentially significant new source, or modify an existing TAC emissions source, then downwind sensitive receptor locations are identified and site-specific dispersion modeling is conducted to determine project impacts.

(5) Odor Impacts (Construction and Operations)

Potential odor impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling) as necessary. The screening-level analysis consists of reviewing the project's site plan and project description to identify new or modified odor sources. If it is determined that the proposed Project would introduce a potentially significant new odor source, or modify an existing odor source, then downwind sensitive receptor locations are identified and site-specific dispersion modeling is conducted to determine proposed Project impacts.

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project includes characteristics consistent with the CAPCOA guidance document[40] for mitigating or reducing emissions from land use development projects. The Project would provide and encourage employees and visitors to utilize alternative modes of transportation which would reduce vehicle trips and VMT. More specifically, the Project would be located within a quarter-mile of public transportation, including existing Torrance Transit System bus routes (e.g., routes 1 and 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South Vermont Street. While the Project site's transit accessibility would result in a corresponding reduction

[38] *South Coast Air Quality Management District, Minutes of the June 5, 2015 Meeting, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-Jul10-001.pdf?sfvrsn=8, Accessed September 28, 2015*

[39] *Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2015).*

[40] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010).*

in transportation-related emissions, the emissions calculations do not incorporate reductions from the transit accessibility characteristics. As a result, the emissions calculations are considered to be conservative and may overestimate actual emissions.

(2) Project Design Features

The Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Project site, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED) Silver Certification by the U.S. Green Building Council (USGBC) through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in Project design, construction and operations; and to provide performance monitoring during Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. The following Project Design Features would reduce air pollutant emissions as well as greenhouse gas emissions, which would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project:

PDF AQ-1: Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.
- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.

- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

PDF AQ-2: Construction Measures: The Project shall implement the following measures during construction activities:

- The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.
- To the greatest extent possible, electric power will be made available for use for electric tools, equipment, lighting, etc.
- The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the use of less polluting off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/SOONProgram.htm.
- In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- The Applicant shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits.

- The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust.
- Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation.
- On-site vehicles shall be limited to 15 miles per hour on unpaved roadways.
- Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches.
- Prior to leaving areas of active construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out.
- Construction areas shall install temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas.
- The Applicant shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust.
- All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site.

d. Project Impacts

(1) Consistency with Air Quality Management Plan

Threshold AQ-1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact Statement AQ-1: *Construction and operation of the Project would not conflict with the growth projections in the SCAQMD AQMP and would comply with applicable control measures. As a result, the Project would not conflict with or obstruct implementation of the Plan and impacts would be less than significant.*

(a) Construction

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan are based. The Project would result in an increase in short-term employment compared to

existing conditions. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would not conflict with implementation of these strategies. Additionally, the Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, the Project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

(b) Operation

The 2012 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

As discussed in Section 4.H., *Land Use*, of this Draft EIR, the Project site is designated "P" (Public and Semi-Public) by the County of Los Angeles 2035 General Plan Update. The "P" General Plan Land Use (GPLU) designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major utilities at a maximum FAR of 3:1.[41] As such, the Project would be consistent with the growth projections as contained in the County's General Plan and thus be consistent with the growth projections in the AQMP.

The AQMP includes Transportation Control Measures that are intended to reduce regional mobile source emissions. While the majority of the measures are implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, the Project would be supportive of measures related to reducing vehicle trips for patrons and employees and increasing commercial density near public transit (see discussion under Subsection 4.C.3.c, *Project Design Features*).

As the Project would be consistent with the growth projections in the AQMP and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips, impacts would be less than significant.

[41] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

(2) Violation of Air Quality Standards

Threshold AQ-2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact Statement AQ-2: *Construction of the Project would not exceed the applicable SCAQMD daily numeric indicators for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. As a result, construction and operations of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and operational impacts would be less than significant.*

(a) Construction

Construction of the proposed uses has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. In addition, fugitive dust emissions would result from excavation and debris removal. The maximum daily regional construction emissions were calculated for the eight phases of construction. It should be noted that the maximum daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day within the construction period. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 4.B-5**, *Maximum Unmitigated Regional Construction Emissions*. As shown therein, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds of significance for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Therefore, with respect to regional emissions, impacts would be less than significant during construction of the Project.

These calculations include appropriate dust control measures that would be implemented during each phase of construction, as required by SCAQMD Rule 403 (Control of Fugitive Dust). All construction equipment with a rating of 50 horsepower or greater was assumed to have an engine that meets CARB and USEPA Tier 4 Final off-road emissions standard. Low-VOC coatings, as specified in PDF AQ-1, were utilized for architectural coatings phases.

(b) Operation

Operational emissions were assessed for mobile, area, and stationary sources. Operational criteria pollutant emissions were calculated for the Project for an interim build-out year (2023) and the full build-out year (2030). Based on the Project Design Features incorporated into the Project, the energy usage rate and the number of vehicle trips from the Project would be reduced compared to the appropriate baseline level (see discussed under Subsection 4.C.3.c, *Project Design Features*). Daily trip generation rates for the Project were provided by the Project traffic study[42] and include trips associated with the hospital and research and development uses. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 4.B-6**, *Maximum Unmitigated Regional Operational Emissions*. Table 4.B-6 also shows the existing emissions from the existing uses on the site. The evaluation of

[42] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, (2016).*

Table 4.B-5

Maximum Unmitigated Regional Construction Emissions [a]
(pounds per day)

Construction Year	Maximum Daily Regional Emissions [b]					
	VOC	NO_X	CO	SO_X	PM_{10} [c]	$PM_{2.5}$ [c]
Construction Year 1	1	24	50	<1	5	1
Construction Year 2	1	10	39	<1	5	1
Construction Year 3	2	46	114	<1	12	4
Construction Year 4	2	20	112	<1	11	4
Construction Year 5	51	26	149	<1	18	6
Construction Year 6	52	92	210	1	31	10
Construction Year 7	16	46	225	1	45	13
Construction Year 8	54	49	276	1	52	15
Construction Year 9	29	52	351	1	83	23
Construction Year 10	64	46	229	1	73	20
Construction Year 11	64	31	220	1	67	19
Construction Year 12	2	13	89	<1	22	6
Construction Year 13	2	13	79	<1	21	6
Construction Year 14	14	13	82	<1	22	6
Construction Year 15	14	9	55	<1	8	2
Maximum Regional Emissions	**64**	**92**	**351**	**1**	**83**	**23**
Regional Significance Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Over (Under)	(11)	(8)	(199)	(149)	(67)	(32)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

[b] *Shaded values indicate maximum emissions.*

[c] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

Source: PCR Services Corporation, 2016

the Project's significance with respect to the SCAQMD thresholds of significance is based on the net change in operational emissions from the existing site and the Project. As shown therein, the net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed the threshold of significance during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. Therefore, with respect to regional emissions from operations, impacts would be less than significant during the interim year and at full build-out.

Table 4.B-6

Maximum Unmitigated Regional Operational Emissions – Interim and Build-Out [a]
(pounds per day)

Operational Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions	**102**	**219**	**841**	**2**	**128**	**37**
Project Interim Year						
Area (Coating, Consumer Products, Landscaping)	29	<1	0.1	<1	<1	<1
Energy (Natural Gas)	1	6	5	<1	0.5	0.5
Motor Vehicles	58	132	611	2	143	40
Construction (Interim Year)	54	49	276	1	52	15
Total Project Interim Year Emissions	**142**	**188**	**892**	**3**	**195**	**56**
Total Net Increase/(Decrease) in Emissions (Total Interim – Existing)	**40**	**(31)**	**51**	**1**	**67**	**19**
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	(15)	(86)	(499)	(149)	(83)	(36)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Project Build-Out						
Area (Coating, Consumer Products, Landscaping)	40	<1	0.2	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	0.6	0.6
Motor Vehicles	63	148	666	3	183	52
Total Project Build-Out Emissions	**104**	**156**	**672**	**3**	**184**	**53**
Total Net Increase/(Decrease) in Emissions (Project Build-Out - Existing)	**2**	**(63)**	**(169)**	**1**	**56**	**16**
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	(53)	(118)	(719)	(149)	(94)	(39)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

Source: PCR Services Corporation, 2016

(3) Non-Attainment Pollutants

Threshold AQ-3: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Impact Statement AQ-3: *Construction of the Project would not exceed the SCAQMD daily regional numeric indicators. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational emissions at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. Thus, construction and operations of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment and impacts would be less than significant.*

(a) Construction

Construction of the Project would not result in the emission of criteria pollutants for which the region is in nonattainment. The Los Angeles County portion of the Air Basin is designated non-attainment for ozone and $PM_{2.5}$ NAAQS and non-attainment for ozone, NO_2, PM_{10}, and $PM_{2.5}$ CAAQS. As shown in Table 4.B-5, maximum daily emissions from construction of the Project would not exceed the numeric indicator of significance for any of these pollutants nor their precursors. Project compliance with CARB and SCAQMD control measures and Project Design Features would be implemented to minimize and reduce construction emissions. As a result, the Project would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Therefore, construction impacts would be less than significant.

(b) Operation

Operation of the Project would not result in the emission of criteria pollutants for which the region is in nonattainment. As shown in Table 4.B-6, maximum daily emissions from operation of the Project would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of the Project would not exceed the applicable thresholds of significance. Therefore, operational impacts would be less than significant.

(4) Substantial Pollutant Concentrations

Threshold AQ-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact Statement AQ-4: *Construction of the Project would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Project at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of the Project would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks that exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of the Project would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. As a result, construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, and localized emissions during construction and interim operations would result in a less than significant impact.*

(a) Construction

(i) Localized Impacts

The localized construction air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).[43] The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized

[43] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

construction emissions thresholds for the Project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are presented in **Table 4.B-7**, *Maximum Unmitigated Localized Significance Threshold Analysis – Construction*. As shown therein, maximum localized concentrations during construction activities would not exceed the allowable thresholds at the closest sensitive receptors for the relevant standards. Therefore, with respect to localized construction emissions, impacts would be less than significant.

Table 4.B-7

Maximum Unmitigated Localized Significance Threshold Analysis – Construction

Pollutant [a]	Averaging Period	Project Concentration (ug/m^3)	Ambient Background [b] (ug/m^3)	Total (ug/m^3)	Threshold (ug/m^3)	Exceed Threshold?
CO	1-hr	273.1	3,548	3,821	23,000	No
CO	8-hr	42.7	2,862	2,904	10,000	No
NO_2	1-hr	86.1	163.6	249.7	339	No
NO_2	1-hr (98th percentile) [c]	50.9	112.2	163.1	188	No
PM_{10}	24-hr	0.87	—	0.87	10.4	No
$PM_{2.5}$	24-hr	0.34	—	0.34	10.4	No

[a] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[b] *Background concentrations are based on the maximum of the most recent three years for which data is available from the SCAQMD for the Long Beach Monitoring Station (2011-2013). See SCAQMD website: http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. The 1-hour CO concentration is based on data from the same time period from the USEPA. See USEPA website: http://www.epa.gov/airdata/ad_rep_mon.html. Accessed March 2015.*

[c] *Based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations.*

Source: PCR Services Corporation, 2016

(ii) Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate matter emissions associated with heavy equipment operations during demolition, grading and excavation, and building construction activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used. These products would comply with all applicable SCAQMD rules for their manufacture and use. The Project will be subject to several SCAQMD rules designed to limit exposure to TACs during construction activities. The Project would be required to comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the renovation and construction activities. Furthermore, the Project would voluntarily implement the construction control measures described in PDF-AQ-2.

Health risk impacts (cancer risk) were assessed for nearby existing and future off-site sensitive receptors (residential and school uses). **Table 4.B-8**, *Maximum Carcinogenic Risk for Off-Site Sensitive Receptors from Construction*, summarizes the carcinogenic risk for representative receptors located throughout the site vicinity. For carcinogenic exposures, the cancer risk from DPM emissions from construction of the project is estimated to result in a maximum carcinogenic risk of 4.1 per one million. The maximum impact would

Table 4.B-8

Maximum Carcinogenic Risk from Project Construction

Sensitive Receptor	Maximum Cancer Risk (# in one million)	
	Starting Exposure Age: 3rd Trimester	Starting Exposure Age: Adult (16 and over)
North of Project Site	2.2	0.2
South of Project Site	4.1	0.4
East of Project Site	2.2	0.2
West of Project Site	0.6	0.1
Maximum Individual Cancer Risk Threshold	*10*	*10*
Exceeds Threshold?	*No*	*No*

Source: PCR Services Corporation, 2016.

occur at sensitive land uses (residences) directly south of the site. As discussed previously, the lifetime exposure under OEHHA guidelines takes into account early life (infant and children) exposure. It should be noted that the calculated cancer risk conservatively assumes sensitive receptors (residential school uses) would not have any mitigation such as mechanical filtration. As the maximum impact would be less than the risk threshold of 10 in one million, impacts would be considered less than significant.

Potential non-cancer effects of chronic (i.e., long term) DPM exposures were evaluated using the Hazard Index approach as described in the OEHHA Guidance. A hazard index equal to or greater than 1.0 represents a significant chronic health hazard. As shown in **Table 4.B-9**, *Maximum Non-Cancer Chronic Impacts for Off-Site Sensitive Receptors,* nearby off-site sensitive receptors would not be exposed to chronic impacts that would exceed the threshold of 1.0. The maximum impact would occur at sensitive receptors directly east of the site. Therefore, non-cancer chronic impacts would be considered less than significant.

Table 4.B-9

Maximum Non-Cancer Chronic Impacts from Project Construction

Sensitive Receptor	Chronic Hazard Index
North of Project Site	0.002
South of Project Site	0.007
East of Project Site	0.002
West of Project Site	0.001
Total Hazard Index	*1.0*
Exceeds threshold?	*No*

Source: PCR Services Corporation, 2016.

The process of assessing health risks and impacts includes a degree of uncertainty. The level of uncertainty is dependent on the availability of data and the extent to which assumptions are relied upon in cases where

the data are incomplete or unknown. All HRAs rely upon scientific studies in order to reduce the level of uncertainty; however, it is not possible to completely eliminate uncertainty from the analysis. Where assumptions are used to substitute for incomplete or unknown data, it is standard practice in performing HRAs to err on the side of health protection in order to avoid underestimating or underreporting the risk to the public. In general, sources of uncertainty that may lead to an overestimation or an underestimation of the risk include extrapolation of toxicity data in animals to humans and uncertainty in the exposure estimates. In addition to uncertainty, there exists "a natural range or variability in the human population in such properties as height, weight, and susceptibility to chemical toxicants."[44] As mentioned previously, it is typical to err on the side of health protection by assessing risk on the most sensitive populations, such as children and the elderly.

(b) Operation

(i) Localized Impacts

The localized operational air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).[45] The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized operational emissions thresholds for the Project. The maximum daily localized emissions and localized significance thresholds are presented in **Table 4.B-10**, *Maximum Unmitigated Localized Operational Emissions – Interim and Build-Out*. Emissions were evaluated for the interim and full build-out operational phases of the Project. Existing emissions were deducted from Project emissions and the net (incremental) emissions were compared to the screening thresholds. For some pollutants, existing operational emissions are greater than Project emissions resulting in negative net emissions. As shown therein, maximum localized operational emissions for sensitive receptors would not exceed the localized thresholds for NO_X, CO, PM_{10} and $PM_{2.5}$. Therefore, with respect to localized operational emissions, impacts would be less than significant.

(ii) Carbon Monoxide Hotspots (Construction and Operations)

The potential for the Project to cause or contribute to CO hotspots is evaluated by comparing Project intersections (both intersection geometry and traffic volumes) with prior studies conducted by the SCAQMD in support of their AQMPs and considering existing background CO concentrations. As discussed below, this comparison provides evidence that the Project would not cause or contribute to the formation of CO hotspots, that CO concentrations at Project impacted intersections would remain well below the ambient air quality standards, and that no further CO analysis is warranted or required.

As shown previously in Table 4.B-1, CO levels in the Project area are substantially below the federal and state standards. Maximum CO levels in recent years are 3 ppm (one-hour average) and 2.5 ppm (eight-hour average) compared to the thresholds of 20 ppm (one-hour average) and 9.0 (eight-hour average). Carbon monoxide decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not

[44] *OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (August 2003) 1-4.*

[45] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

expected that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Table 4.B-10

Maximum Unmitigated Localized Operational Emissions – Build-Out [a]
(pounds per day)

Operational Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions	**24.2**	**7.7**	**6.6**	**<1**	**0.6**	**0.6**
Project Build-Out						
Area (Coating, Consumer Products, Landscaping)	39.8	0.0	0.2	<1	<0.1	<0.1
Energy (Natural Gas)	0.8	7.5	6.3	<1	0.6	0.6
Total Project Build-Out Emissions	**40.6**	**7.5**	**6.5**	**<1**	**<1**	**<1**
Total Net Increase/(Decrease) in Onsite Emissions (Project Build-Out– Existing)	**16.4**	**(0.2)**	**(0.1)**	**<1**	**<0.1**	**<0.1**
SCAQMD Significance Threshold	–	197	1,796	–	4.0	2.0
Over/(Under)	–	(197)	(1,796)	–	(4)	(2)
Exceed Threshold?	**–**	**No**	**No**	**–**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

Source: PCR Services Corporation, 2016

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County with an average daily traffic volume of about 100,000 vehicles per day.[46] This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue.[47] When added to the existing background CO concentrations, the screening values would be 7.6 ppm (one-hour average) and 5.7 ppm (eight-hour average).

Based on the Project traffic study, of the studied intersections that are predicted to operate at a Level of Service ("LOS") of D, E, or F under interim year 2023 and future year 2030 plus Project conditions, multiple intersections would potentially have peak traffic volumes greater than 100,000 per day.[48] However, these intersection already operate at LOS of D, E, or F under existing conditions. The net change in peak traffic

[46] *South Coast Air Quality Management District, 2003 Air Quality Management Plan, Appendix V: Modeling and Attainment Demonstrations, (2003) V-4-24.*

[47] *The eight-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.*

[48] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016.*

volumes would be less than 100,000 per day; as a result, CO concentrations are expected to remain below thresholds. Thus, this comparison provides evidence that the Project would not contribute to the formation of CO hotspots and no further CO analysis is required. Therefore, the Project would result in less than significant impacts with respect to CO hotspots.

(iii) Toxic Air Contaminants

The SCAQMD recommends that a health risk assessment (HRA) be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[49] The CARB siting guidelines, *Air Quality and Land Use Handbook*,[50] which the SCAQMD cites in its own guidelines, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (May 2005), defines a warehouse as having more than 100 truck trips or 40 refrigerated truck trips per day. While the Project would generate minor amounts of diesel emissions from delivery trucks and incidental maintenance activities, the Project would not result in daily truck trips at the level of a warehouse facility. Trucks would comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce PM and NO_X emissions from existing diesel trucks. The Project would not generate diesel emissions equivalent to 100 or more truck trips per day. Therefore, the Project would not be considered a substantial source of diesel particulates.

In addition, typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. The Project does not propose these activities on-site. Minimal emissions of air toxics may result from maintenance, such as from the use of architectural coatings and other products. Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the Project site. Based on the uses expected on the Project site, potential long-term operational impacts associated with the release of TACs would be less than significant.

(5) Odors

Threshold AQ-5: Would the project create objectionable odors affecting a substantial number of people?

Impact Statement AQ-5: *Construction and operation of the Project would not create or introduce objectionable odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.*

(a) Construction

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Therefore, no significant impact would occur and no mitigation is required.

[49] *South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

[50] *California Air Resources Board,* Air Quality and Land Use Handbook: A Community Health Perspective*, (2005).*

(b) Operations

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Long-term Project operations would not introduce new sources of odors and would not be create objectionable odors that could affect nearby sensitive receptors. The Project does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Project would be covered and situated away from the property line and sensitive off-site uses. Medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less-than-significant and no mitigation is required.

(6) On-Site Sensitive Uses

Hospital uses are normally considered sensitive receptors. However, potential effects resulting from a Project on sensitive populations on the Project-site are not considered an impact to the environment under CEQA. Nonetheless, due to the sensitivity of on-site receptors, the potential for air pollutant emissions to affect on-site receptors is disclosed herein.

As required in PDF-AQ-2, construction of the Project would utilize heavy-duty construction equipment that meet the most stringent USEPA and CARB certified Tier 4 standards, which would result in substantially reduced combustion emissions of NO_X, PM_{10}, and $PM_{2.5}$ as compared to the statewide fleet average. PDF-AQ-2 requires the Project to comply with strict idling limits in accordance with Section 2485 in Title 13 of the California Code of Regulations and to prohibit the queuing and staging of heavy-duty equipment and trucks in front of on-site building entrances and exits and as far away as possible from patient rooms and building air intake systems, which would minimize the potential for exposure of construction emissions to on-site sensitive receptors. The Project would also implement numerous fugitive dust control measures as best management practices in compliance with SCAQMD Rule 403, which would include, but is not limited to, the use of covers and watering, limiting on-site vehicles speeds on unpaved roads, requiring haul trucks to be covered with adequate freeboard space, and implementing haul truck procedures to prevent the track out of dust and debris. Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. The Project would install temporary fencing around active construction areas as needed to prevent debris and material movement on the site and into patient care buildings or to off-site areas. Furthermore, the Project would ensure building air filtration media and HVAC systems are serviced, maintained, and replaced to ensure a high level of indoor air quality. As listed in PDF-AQ-1, the Project buildings would be designed and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a MERV of 15 as required for hospital inpatient care. Per ASHRAE Standard 52.2 (2012), MERV 15 would result in a removal efficiency of at least 85 percent for particles from 0.3 to 1.0 micrometers (µm), 90 percent for 1.0 to 3.0 µm, and 95 percent for 3.0 to 10.0 µm.[51] As such, the use of MERV 15 air filtration media or better would achieve

[51] *ASHRAE, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. https://www.ashrae.org/File%20Library/docLib/StdsAddenda/52_2_2012_2015Supplement.pdf. Accessed March 2016.*

substantial reductions in PM_{10} and $PM_{2.5}$ from outdoor air concentrations, including from construction-related DPM concentrations and associated health risks. Implementation of PDF-AQ-1 and PDF-AQ-2 and compliance with applicable regulations and other construction best management practices in accordance with SCAQMD Rule 403 would ensure that construction-related emissions would not adversely affect on-site sensitive receptors.

Operation of the Project would not introduce new substantial sources of emissions. The Existing Hospital has 373 budgeted/staffed beds. The Project would result in 379 budgeted/staffed beds, which is an increase of 6 budgeted/staffed beds over existing conditions. As a result, the Project would not result in substantial changes to hospital operations and would not result in a substantial increase in the number of vendor and service trucks and emergency vehicles visiting the site. As discussed previously, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs and air pollutants. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds, licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time. Potential localized net changes in air quality impacts from on-site sources of emissions, including DPM, would be minimal since hospital operations and the number of vendor and service trucks and emergency vehicles visiting the site under the Project would be generally similar to existing conditions. Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaners. The Project would not introduce new sources of these types. Minimal emissions may result from use of consumer and cleaning products; however, usage of these products under the Project would be similar to existing conditions. As such, the Project would not result in a substantial net change in localized on-site emissions, including DPM and other TACs. Therefore, operation of the Project would not adversely affect on-site sensitive receptors.

4. CUMULATIVE IMPACTS

a. Construction

There are a number of related projects in the Project area that have not yet been built or are currently under construction. Since the Applicant has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. For this reason, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this Draft EIR.

With respect to the Project's short-term construction-related air quality emissions and cumulative conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the federal Clean Air Act mandates. As such, construction of the Project would comply with SCAQMD Rule 403 requirements and the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time. In addition, the Project would utilize a construction contractor(s) that complies with required and applicable Best Available Control Technology ("BACT") and the In-Use Off-Road Diesel Vehicle Regulation. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects in the Air Basin, which would include each of the related projects in the Project area. As shown above in Table 4.B-5 and Table 4.B-7, regional and

localized construction emissions associated with the Project would not exceed the SCAQMD numeric indicators. As such, the Project's contribution to cumulatively significant construction impacts to air quality would be less than significant.

b. Operation

The SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Los Angeles County portion of the Air Basin is currently in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Section 15064(h)(3) of the CEQA *Guidelines* provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

> *"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency…"*

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2012 AQMP. The Project would not conflict with or obstruct implementation of AQMP and would be consistent with the growth projections in the AQMP.

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed previously, the Project would not exceed the SCAQMD regional numeric indicators. Therefore, the Project's incremental contribution to long-term emissions of non-attainment pollutants and ozone precursors, considered together with related projects, would not be cumulatively considerable, and therefore impacts would be less than significant.

5. MITIGATION MEASURES

The Project would result in less-than-significant impacts with respect to emissions of construction and operational emissions and consistency with applicable air quality plans, policies, or regulations. Therefore, no mitigation measures would be required.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts regarding construction and operational emissions and consistency with applicable air quality plans, policies, or regulations would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
C. ENERGY

1. INTRODUCTION

In accordance with Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the Project. This section represents a summary of the Project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the Project's energy implications, are discussed in greater detail elsewhere in this Draft EIR, including in Chapter 2.0, *Project Description*, and Sections 4.E., *Greenhouse Gas Emissions*, 4.H., *Land Use and Planning*, and 4.L., *Transportation and Traffic*. Additional supporting calculations for the analysis presented in this section are provided in Appendix F of this Draft EIR.

2. ENVIRONMENTAL SETTING

Section 21100(b) of the State CEQA Guidelines requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. CEQA Guidelines Appendix F of the State CEQA Guidelines states that in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. CEQA Guidelines Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives and potentially in other required sections of this Draft EIR.

a. Existing Conditions

(1) Existing On-Site Improvements

Most of the facilities in the central Campus were designed and constructed prior to 1960, prior to modern energy standards. Many of the existing buildings on the Campus date back to the 1940s, including numerous small wood-frame barracks and temporary/modular buildings that collectively occupy the majority of the Medical Center Campus land area. Further, the existing layout of the Medical Center Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies.

The existing Central Plant provides and maintains 24-hour utility generation, transmission, and distribution to on-site buildings. As described in the Campus Master Plan, the Central Plant consists of a Boiler Plant and Chiller Plant. The Boiler Plant consists of three natural gas-fired steam boilers that are permitted by the South Coast Air Quality Management District (SCAQMD). Boilers H-1 and H-2 are rated at 400 horsepower with a steam capacity of 13,800 pounds per hour and Boiler H-3 is rated at 300 horsepower with a steam capacity of 10,400 pounds per hour. The Chiller Plant consists of four chillers with a total capacity of 3,814 tons with chilled water pumping capacity of 6,065 gallons per minute. From the Central Plant, low-pressure

steam with condensate return (for research equipment), compressed air (for instrumentation and automation functions), hot water (for building heating and domestic hot water), and chilled water (for cooling) are distributed though on-site infrastructure throughout the Campus. Thus, the Central Plant operates as the primary component of the Campus's heating, ventilation, and air conditioning (HVAC) system. Electricity is primarily distributed via overhead powerlines to transformers located at the individual buildings, while steam, compressed air, and heated/cooled water is distributed through an underground pipe system. The Campus also maintains six 2 megawatt (MW) emergency generators.

As the distribution systems were designed and implemented in a piecemeal fashion as demand warranted, they do not achieve optimal operating efficiency. Further, the generation and distribution infrastructure is reaching the end of its service life and requires continually increased levels of maintenance to remain operational.

A number of infrastructure systems on the Medical Center Campus are at the end of their service life or inadequate for current needs and require increasing maintenance or replacement. These include portions of the electrical system (normal and emergency power), which includes 40-year-old substations throughout the Campus and some inadequate distribution systems; lighting systems, many of which are original and require replacement for reasons of energy-efficiency.

Materials management throughout the Medical Center Campus—encompassing everything from loading dock design to the handling and provision of medical supplies and equipment, technology, linens, and food—also requires overhauling and centralization for reasons of efficiency and improved fulfillment of requests. At the other end of that continuum, waste management operations also require improvements in collection, staging, and processing, to allow for more efficiency and sustainable practices for compliance with increasingly stringent mandatory state and local regulations.

b. Regulatory Framework Summary

No federal or regional regulations are applicable to the analysis of energy resources impacts. As such, only State and local regulations are discussed below.

(1) State

(a) State CEQA Guidelines

Section 21100(b) of the CEQA Statute requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives and potentially in other required sections of this Draft EIR.

Section 21100(b) of the CEQA Statute requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including but not limited to measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives and potentially in other required sections of this Draft EIR. In accordance with Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the Project. This section provides a summary of the Project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the Project's energy implications, are also discussed elsewhere in this Draft EIR including in Chapter 2.0, Project Description, Section 4.E., *Greenhouse Gas Emissions*, Section 4.H., *Land Use and Planning*, and Section 4.L., *Transportation and Traffic*.

(b) Senate Bill 375 (SB 375, Steinberg) (Chapter 728, Statutes of 2008)

Senate Bill (SB) 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions and was adopted by the State on September 30, 2008. Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS. On April 7, 2016, the Southern California Association of Governments (SCAG) adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS).[1] Using growth forecasts and economic trends, the 2016 RTP/SCS provides a vision for transportation throughout the region for the next 25 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016 RTP/SCS successfully achieves and exceeds the greenhouse gas (GHG) emission-reduction targets set by CARB by demonstrating an eight percent reduction by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.

SCAG's 2016 RTP/SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

[1] *Southern California Association of Governments, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 20126 http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed June 2016.*

(c) Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) environmental air quality."[2] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the State. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. The CALGreen Code was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2014 (the energy provisions took effect on July 1, 2014).[3]

(d) Senate Bill 1078(SB 1078, Sher) (Chapter 516, Statutes of 2002) and Senate Bill 107 (SB 107, Simitian) (Chapter 464, Statutes of 2006) and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewables Portfolio Standard (RPS) to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that would result in a total renewable energy requirement for utilities of 33 percent by 2020. However, on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020. SB 350 (Chapter 547, Statues of 2015) further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 was signed into law on October 7, 2015.

(e) California Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006)

California SB 1368, a companion bill to the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), requires the California Public Utilities Commission (CPUC) and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for

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[2] *California Building Standards Commission, Title 24, California Code of Regulations, Part 11, 2010 California Green Building Standards Code (CalGreen), 2010.*

[3] *California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.*

reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour.

(f) Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order B-30-15, which:

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030,
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets, and
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

CARB subsequently expressed its intention to initiate the Climate Change Scoping Plan update during the summer of 2015, with adoption scheduled for 2016.

(2) Local

The Los Angeles County General Plan provides the fundamental basis for the County's land use and development policy, and addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole. Measures related to energy usage that would be applicable to the Project are contained in the Los Angeles County 2035 General Plan Update Land Use Element and the County of Los Angeles Community Climate Action Plan (CCAP). Project consistency with the General Plan is discussed in Section 4.H., *Land Use and Planning*, of this Draft EIR, while Project consistency with the CCAP is discussed in Section 4.E., *Greenhouse Gas Emissions*.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of potential impacts related to energy usage that may result from the construction and long-term operations of the Project has been conducted as described below.

(1) Construction

Build-out of the Campus Master Plan is expected to occur in eight phases, with each phase lasting several years. Construction is anticipated to begin as early as late 2016/early 2017 and full build-out of all phases is expected in 2030. The energy usage required for Project construction has been estimated based on the

number and type of construction equipment that would be used during Project construction, the extent that various equipment are utilized in terms of equipment operating hours or miles driven, and the estimated duration of construction activities. Energy for construction worker commuting trips has been estimated based on the predicted number of workers for the various phases of construction and the vehicle miles traveled (VMT). The assessment also includes a discussion of the Project's compliance with relevant energy-related regulatory measures and Project Design Features that would minimize the amount of energy usage during construction. These measures are also discussed in Chapter 2.0, Project Description, Section 4.E., *Greenhouse Gas Emissions*, Section 4.H., *Land Use and Planning*, and Section 4.L., *Transportation and Traffic*.

(2) Operations

The energy usage required for Project operations has been estimated based on the net change in energy demand from the new buildings and facilities compared to the existing Campus. The energy usage takes into account building energy standards pursuant to the Title 24 Building Standards Code. Energy for transportation from Campus employees, patients, and visitors has been estimated based on the predicted number of trips to and from the Campus and the VMT. Energy usage from water demand (e.g., electricity used to supply, convey, treat, and distribute) has been estimated based on the net change from the new buildings and facilities compared to the existing Campus. The assessment also includes a discussion of the Project's compliance with relevant energy-related regulations and Project Design Features that would minimize the amount of energy usage during operations. These measures are also discussed in Chapter 2.0, *Project Description*, Section 4.E., *Greenhouse Gas Emissions*, Section 4.H., *Land Use and Planning*, and Section 4.L., *Transportation and Traffic*, of this Draft EIR.

b. Thresholds of Significance

The potential for energy usage impacts is based on thresholds derived from Appendix F of the State *CEQA Guidelines*. These questions are as follows:

Would the project:

- Result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation?

In consideration of the above factors, the following threshold is utilized to determine if the Project would result in potentially significant impacts on energy resources:

EN-1 Would the Project result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project would renovate the existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings that meet or exceed the energy standards in the Title 24

Building Standards Code and repurposing/remodeling existing buildings on the campus to improve operational efficiencies.

The Project would replace outdated and inadequate infrastructure systems throughout the Campus with newer systems designed in compliance with current standards of efficiency. Systems that would be replaced include portions of the electrical system (operational and emergency power), which includes 40-year-old substations throughout the Campus and some inadequate distribution systems; and lighting systems, many of which are original. The Central Plant, which provides for heating and cooling for the eastern portion of the Medical Center Campus distributed through an on-site infrastructure system, would be replaced with new more efficient systems. The Central Plant's on-site distribution system would also be improved as each phase is developed, with the entirety of the Medical Center Campus (except LA BioMed uses and proposed future Bioscience Tech Park uses) being served by the Central Plant.

The Central Plant would be replaced during Phase C (anticipated between 2018/2019 and 2023). The Campus's emergency generators would also remain in its current location.

Long-term sustainability is an important principle guiding the Master Plan Project. Green building practices would be incorporated into new construction. The current County policy requires LEED Silver-level certification, or the equivalent, for any public facility over 10,000 square feet in floor area. Green building practices would be integrated into all building design, construction, and operation and would be integrated with Campus infrastructure. Sustainability criteria would include (1) green building metrics, (2) reduction of energy demand, (3) reduction of thermal energy needs, (4) water balance, and (5) use of healthy building materials. As the Master Plan Project is implemented, one or more of the following systems would be utilized for environmental performance certification.

- U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) for Healthcare Rating System / Green Guide for Healthcare: Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare Silver Certification.
- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to take advantage of economies of scale and the unique challenges and opportunities inherent in Campus projects.
- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.
- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.
- Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the Hospital.

In addition to the above, new construction associated with the Project would be designed with infrastructure in compliance with the County's Low Impact Development (LID) requirements for stormwater management.

The Project would be located in close proximity to existing and future public transit stops, including existing Torrance Transit System bus routes (e.g., routes 1, 3, and Rapid 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South

Vermont Street, which would result in reduced vehicle trips and VMT. In addition, the western two-thirds of the Campus is designated as a Transit Overlay District (TOD) due to proximity to the Metro Transit Station on Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. The Project would provide an on-site pedestrian network that integrates the Campus with Carson Street activity and with transit-oriented development along Vermont Avenue and Carson Street The pedestrian network would provide improved circulation and ingress/egress through the site and form a continuous circulation system, allowing staff and guests to reach their destinations more efficiently. Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes on the Campus between the main parking areas and the New Hospital Tower and Outpatient buildings. Several north/south walks and promenades would connect the center of the Campus with the public edge along Carson Street, while a comprehensive network of walks and trails would direct pedestrians east/west through the Campus. The planned pedestrian circulation system would allow for direct access between parking areas and facilities, with a secondary system connecting courtyards and plazas. As such, the Project would result in a reduction in transportation-related energy efficiency compared to the existing Campus.

(2) Project Design Features

The Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Campus, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for LEED Silver Certification by the USGBC through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in project design, construction and operations; and to provide performance monitoring during Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. Project Design Features would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project, and implemented to enhance energy efficiency and meet County sustainability requirements. These measures are provided in Section 4.B, Air Quality, and are repeated below for convenience:

PDF-AQ-1, Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for

major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.

- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.
- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by Project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall incorporate appropriate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

d. Project Impacts

(1) Energy Consumption

Threshold EN-1: Would the Project result in wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preempt future energy development or future energy conservation?

Impact Statement EN-1: *Impacts regarding the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation would be less than significant. The Project would incorporate energy efficiency measures and comply with applicable measure to reduce energy consumption and would allow for future energy conservation.*

(a) Construction

(i) Anticipated Energy Consumption

As discussed in Chapter 2, Project Description, of the Draft EIR, the Master Plan Project would be constructed in overlapping phases over a period of approximately 15 years starting as early as late 2016 and 2030. Approximately 295,000 cubic yards of demolition debris would be exported from the site and 430,000 cubic yards of soil would be imported and exported from the site. Although the specific Master Plan projects to be constructed in each phase are subject to change over time as circumstances dictate, the proposed phasing serves to define the maximum construction activity at one time and the maximum developed floor area that can be constructed at one time for the purposes of evaluating the associated impacts on energy consumption, among other resources.

Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, it is estimated that a maximum of approximately 80,600 one-way truck trips would be required to haul the material to off-site reuse and disposal facilities over the 15 year construction period. It is conservatively estimated that a maximum of approximately 460,000 one-way vendor truck trips would be required to deliver building materials and supplies to the Campus over the 15 year construction period. According to the California Air Resources Board (CARB) on-road vehicle emissions model, EMFAC2014, heavy-duty trucks operating in the South Coast Air Basin would have an average fuel economy of 6.31 miles per gallon averaged over the 2016 through 2030 construction timeframe. Based on the information described above, construction of the Project would use a total of approximately 758,000 gallons of diesel fuel for haul truck and vendor delivery trips.[4] On an annual average basis, haul trucks and vendor delivery trips associated with construction would use approximately 50,600 gallons of diesel fuel per year.

Heavy-duty construction equipment associated with demolition, grading, utilities, paving, and building construction would include equipment such as excavators, graders, tractors/loaders/backhoes, dozers, scrapers, air compressors, cranes, forklifts, generators, pumps, welders, rollers, trenchers and pavers. The majority of the equipment would likely be diesel-fueled; however, smaller equipment, such as air compressors and forklifts may be electric-, gasoline-, or natural gas-fueled and tower cranes would likely be electric. For the purposes of this assessment, it is assumed equipment would be diesel-fueled, due to the speculative nature of specifying the amounts and types of non-diesel equipment that might be used, and the difficulties in calculating the energy which would be consumed by this non-diesel equipment. This also represents a worst-case scenario intended to represent the maximum potential energy use during construction. Based on the number and type of construction equipment that would be used during Project construction, and based on the estimated duration of construction activities, the Project would use approximately 971,400 gallons of diesel fuel for heavy-duty construction equipment.[5] On an annual average basis, heavy-duty construction equipment would use approximately 64,800 gallons of diesel fuel per year.

The number of construction workers that would be required would vary based on the phase of construction and activity taking place. The transportation fuel required by construction workers to travel to and from the

[4] *Fuel consumption is estimated based on fuel consumption factors in the EMFAC2014 on-road vehicle emissions model for heavy-heavy-duty construction trucks and trip distances in the California Emissions Estimator Model (CalEEMod).*

[5] *Fuel consumption is estimated based on fuel consumption factors in the OFFROAD2011 emissions model and the equipment horsepower and load factor ratings in CalEEMod.*

Project site would depend on the total number of worker trips estimated for the duration of construction activity. According to the EMFAC2014 model, passenger vehicles operating in the South Coast Air Basin would have an average fuel economy of 28.26 miles per gallon averaged over the 2016 through 2030 construction timeframe. Assuming construction worker automobiles have an average fuel economy consistent with the EMFAC2014 model and given the total vehicle miles traveled for construction workers, based on engineering estimates provided in the California Emissions Estimator Model (CalEEMod) used for the air quality and greenhouse gas emissions assessment, workers would travel a total of 96.9 million miles and would use approximately 3.43 million gallons of fuel (primarily gasoline) for construction worker trips. On an annual average basis, construction workers would use approximately 228,500 gallons of fuel (primarily gasoline) per year.

In 2014, California consumed a total of 343,568 thousand barrels of gasoline for transportation, which is equivalent to a total annual consumption of 14.4 billion gallons by the transportation sector.[6] For diesel, California consumed a total of 79,756 thousand barrels for transportation, which is equivalent to a total annual consumption of 3.3 billion gallons by the transportation sector.[7]

Based on the conservatively estimated fuel usage amounts presented above, construction of the Project would use approximately 228,500 gallons of gasoline and 115,400 gallons of diesel on an annual average basis, assuming worker automobiles are gasoline fueled and heavy-duty construction equipment is primarily diesel-fueled. To put these numbers into perspective, the estimated annual average construction fuel usage would represent a very small fraction of the state's annual fuel usage (about 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption).

Electricity used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment would generally not result in a substantial increase in on-site electricity use. Certain heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. The Project would utilize electric or alternatively fueled equipment as available and as feasible. Electricity use during construction would be variable depending on lighting needs and the use of electric-powered equipment and would be temporary for the duration of construction activities. In addition, the electricity supply for buildings and facilities that would be demolished would be shut off as a safety measure. Therefore, it is expected that construction electricity use would be offset by the shutting off of the electricity supply in buildings to be demolished during construction. Thus, electricity use during construction would generally be considered as negligible.

As discussed in Chapter 2, Project Description, of the Draft EIR, the Harbor-UCLA Medical Center Master Plan Project proposes the development of up to 250,000 square feet of new biomedical research facilities (the Bioscience Tech Park) on the western end of the Medical Center Campus. Approximately 50 percent, or approximately 125,000 square feet, is assumed to be constructed by the year 2023, with the remainder constructed by 2030.

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[6] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2014, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=US. Accessed March 2016.*

[7] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2012, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_df.html&sid=US. Accessed March 2016.*

Based on the proposed development program and engineering estimates that form the basis of the construction-related impact analyses, it is estimated that a maximum of approximately 7,700 one-way truck trips would be required over the construction period. Based on the number of truck trips described above, construction would use a total of approximately 8,400 gallons of diesel fuel for truck trips.[8] On an annual average basis, haul trucks and vendor delivery trips associated with construction would use approximately 560 gallons of diesel fuel per year (averaged over the assumed 15-year Master Plan Project duration).

Based on the number and type of construction equipment that would be used during construction, and based on the estimated duration of construction activities, approximately 73,900 gallons of diesel fuel would be used for heavy-duty construction equipment.[9] On an annual average basis, heavy-duty construction equipment would use approximately 4,900 gallons of diesel fuel per year (averaged over the 15-year Master Plan Project duration).

With respect to construction workers, energy consumption is based on the transportation fuel required by construction workers to travel to and from the site. According to the EMFAC2014 model, passenger vehicles operating in the South Coast Air Basin would have an average fuel economy of 28.26 miles per gallon averaged over the 2016 through 2030 construction timeframe. Assuming construction worker automobiles have an average fuel economy consistent with the EMFAC2014 model and given the total vehicle miles traveled for construction workers, based on engineering estimates provided in CalEEMod, which is used for the air quality and greenhouse gas emissions assessment, workers would travel a total of 504,670 miles and would use approximately 17,900 gallons of fuel (primarily gasoline) for construction worker trips. On an annual average basis, construction workers would use approximately 1,200 gallons of fuel (primarily gasoline) per year (averaged over the 15-year Master Plan Project duration).

Based on the estimated fuel usage amounts presented above, construction of the Bioscience Tech Park would use approximately 1,200 gallons of gasoline and 5,460 gallons of diesel on an annual average basis, assuming worker automobiles are gasoline fueled and heavy-duty construction equipment is primarily diesel-fueled (averaged over the 15-year Master Plan Project duration). To put these numbers into perspective, the estimated annual average construction fuel usage would represent a very small fraction of the state's annual fuel usage (about 0.000008 percent of the statewide annual gasoline consumption and 0.0002 percent of the statewide annual diesel consumption).

Electricity used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment would generally not result in a substantial increase in on-site electricity use. It is expected that construction electricity use would be offset by the shutting off of the electricity supply in buildings to be demolished during construction. Thus, electricity use during construction would generally be considered as negligible.

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[8] *Fuel consumption is estimated based on fuel consumption factors in the EMFAC2014 on-road vehicle emissions model for heavy-heavy-duty construction trucks and trip distances in the California Emissions Estimator Model (CalEEMod).*

[9] *Fuel consumption is estimated based on fuel consumption factors in the OFFROAD2011 emissions model and the equipment horsepower and load factor ratings in CalEEMod.*

(ii) Regulatory Compliance

The Project would utilize construction contractors who demonstrate compliance with applicable CARB regulations governing the accelerated retrofitting, repowering, or replacement of heavy duty diesel on- and off-road equipment. As discussed in Section 4.B., *Air Quality*, of this Draft EIR, CARB has adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants. This measure prohibits diesel-fueled commercial vehicles greater than 10,000 pounds from idling for more than five minutes at any given time. CARB has also approved the Truck and Bus regulation (CARB Rules Division 3, Chapter 1, Section 2025, subsection (h)) to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California; this regulation will be phased in, with full implementation for large and medium fleets by 2023 and for small fleets by 2028. In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. Implementation began January 1, 2014, and the compliance schedule requires that best available control technology turnovers or retrofits be fully implemented by 2023 for large and medium equipment fleets and by 2028 for small fleets.

While intended to reduce construction emissions, compliance with the above anti-idling and emissions regulations would also result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. It is not possible to accurately quantify the amount of energy that construction of a project would save by complying with these regulations due to the difficulties in estimating idling times and technology turnovers in the absence of the regulations. Nonetheless, idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

With respect to solid waste, the County of Los Angeles Construction and Demolition Debris Recycling and Reuse ordinance (Title 20, Division 4, Chapter 20.87) generally requires that at least 50 percent of construction and demolition debris be recycled or reused. The County is in the process of developing a roadmap to increase the target to 70 percent for mixed debris and 100 percent for asphalt and concrete.[10] Overall, the County has proposed long-term disposal reduction targets of 80 percent diversion from landfills by 2025 and 95 percent by 2045. The Project would utilize construction contractors in compliance with applicable County waste-reduction ordinances. Through compliance with applicable County regulations and contracting with approved waste haulers, the Project would meet or exceed the required level of waste recycling and reuse rate for construction and demolition debris.

Construction of the Bioscience Tech Park would also utilize construction contractors who demonstrate compliance with applicable CARB regulations and applicable County waste-reduction ordinances. Compliance with the above anti-idling and emissions regulations and waste-reduction ordinances would result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy.

[10] *County of Los Angeles, Department of Public Works, Roadmap to a Sustainable Waste Management Future,(2014).*

(iii) Conclusion

Construction would utilize energy for necessary on-site activities and to transport buildings materials, soil, and debris to and from the Campus. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, compliance with the previously discussed anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. The Project would also meet or exceed the County's waste diversion targets as specified in PDF-AQ-1. Idling restrictions, the use of newer engines and equipment, and diverting waste would result in less fuel combustion and energy consumption. The Project would also utilize newer equipment that meet stringent emissions standards and provide opportunities for future energy efficiency by using electric or alternatively-fueled equipment as available and feasible. Therefore, construction of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not preempt future energy conservation. As a result, impacts would be less than significant.

(b) Operation and Maintenance

(i) Anticipated Energy Consumption

The Master Plan Project must comply with the portions of County's Green Building Standards, LID Code, and CCAP applicable to nonresidential healthcare facilities. The Project would incorporate Project Design Features in a manner to achieve the equivalent of USGBC LEED® Silver Certification. Additionally, physical and operational Project characteristics for which sufficient data are available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis, and include but are not limited to the following measures: optimizing energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations; reducing indoor and outdoor water use by a minimum of 20 percent; and designating a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and pre-wiring, or installing conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in project design, construction and operations; and to provide performance monitoring during Master Plan Project operations to reconcile design and energy performance and enhance energy savings.

The daily operation of the Project would generate demand for electricity, natural gas, and water supply, as well as generating wastewater requiring conveyance, treatment, and disposal off-site, and solid waste requiring disposal off-site. Based on engineering estimates used as the basis for GHG emissions calculations, the initial operational year of the Project would have an electricity demand of approximately 20.91 million kilowatt-hours (kWh), which is inclusive of approximately 3.56 million kWh for water supply and wastewater treatment.[11] To put this number into perspective, the value is compared to the Southern California Edison network demand, which is a regional utility provider for much of Southern California, including Los Angeles County. In 2015, Southern California Edison had total system sales of 87,544 million

[11] *Values are based on the Title 24(2013) standards. Compliance with future updated Title 24 standards in effect at the time of building permit issuance could result in reduce energy demand.*

kWh.[12] The Project represents approximately 0.02 percent of the Southern California Edison network demand for the 2015 year, which is a very small fraction of the Southern California Edison network.

Based on engineering estimates used as the basis for GHG emissions calculations, the initial operational year of the Project would have a natural gas demand of approximately 23.64 million kilo British thermal units (kBtu) per year.[13] To put this number into perspective, the value is compared to the Southern California Gas Company network demand, which is a regional utility provider for much of Southern California, including Los Angeles County. In 2015, the Southern California Gas Company had natural gas sales of approximately 291 billion cubic feet, equivalent to approximately 306 billion kBtu.[14] The Project represents approximately 0.008 percent of the Southern California Gas Company network demand for the 2015 year, which is a very small fraction of the Southern California Gas Company network.

As discussed in Section 4.E., *Greenhouse Gas Emissions*, of this Draft EIR, Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing statewide GHG emissions. These Executive Orders establish the goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. These goals have not yet been codified. However, in order to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its *Climate Change Scoping Plan*, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail."[15] Although the State has yet to identify specific technologies and measures, in particular for meeting the 2050 target, it is reasonable to conclude that the Project's post-2020 emissions trajectory, and associated energy use, is expected to follow a declining trend, consistent with Statewide efforts to meet these future year targets.

Based on engineering estimates used as the basis for GHG emissions calculations, full buildout of the Bioscience Tech Park would have an electricity demand of approximately 5.11 million kWh, which is inclusive of approximately 1.84 million kWh for water supply and wastewater treatment. This represents approximately 0.006 percent of the Southern California Edison network demand for the 2015 year, which is a very small fraction of the Southern California Edison network.

Based on engineering estimates used as the basis for GHG emissions calculations, full buildout of the Bioscience Tech Park would have a natural gas demand of approximately 4.38 million kBtu per year. This represents approximately 0.001 percent of the Southern California Gas Company network demand for the 2015 year, which is a very small fraction of the Southern California Gas Company network.

(ii) Alternative Energy Considerations

The use of energy provided by alternative (i.e., renewable) resources, off-site and on-site, to meet the Master Plan Project's operational demands is constrained by the energy portfolio mix managed by Southern

[12] *Edison International, Edison International and Southern California Edison 2015 Annual Report,(2016).*

[13] *Values are based on the Title 24(2013) standards. Compliance with future updated Title 24 standards in effect at the time of building permit issuance could result in reduce energy demand.*

[14] *Sempra Energy, 2015 Annual Report,(2016).*

[15] *California Air Resources Board, Climate Change Scoping Plan,(2008), page 117.*

California Edison, the service provider for the Project site, and limitations on the availability or feasibility of on-site energy generation.

Southern California Edison is required to commit to the use of renewable energy sources for compliance with the Renewables Portfolio Standard. Southern California Edison is required to meet the requirement to procure at least 33 percent of their energy portfolio from renewable sources by 2020 through the procurement of energy from eligible renewable resources, to be implemented as fiscal constraints, renewable energy pricing, system integration limits, and transmission constraints permit. SB 350 (Chapter 547, Statues of 2015) further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. Eligible renewable resources are defined in the Renewable Portfolio Standard to include biodiesel; biomass; hydroelectric and small hydro (30 Mega Watts [MW] or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal; landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. In 2014, Southern California Edison served approximately 23.2 percent of its retail electricity sales with renewable power.[16] This represents the available off-site renewable sources of energy that would meet Project demand.

With respect to on-site renewable energy sources, because of the Project's location, there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydro, digester gas, fuel cells, geothermal energy, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels.

Solar and wind power represent variable-energy, or intermittent, resources that are generally used to augment, but not replace, natural gas-fired (or other non-renewable fuel) energy power generation, since reliability of energy availability and transmission is necessary to meet demand, which is constant.

Wind-powered energy is not feasible on the Project site due to the lack of sufficient wind in the Los Angeles basin. The California Energy Commission (CEC) studied the State's high wind resource potential. Based on a map of California's wind resource potential, the Project site is not identified as an area with wind resource potential. Wind resource areas with winds above 12 mph within Los Angeles County are located in relatively remote areas in the northwestern portion of the County.

Similarly, solar energy is highly variable in the Los Angeles area, particularly in proximity to the coastline where there is increased cloud cover and an intermittent marine layer, and is therefore not cost-effective or reliable as a primary source of energy. The CEC has identified areas within the State with high potential for viable solar, wind, and geothermal energy production. The CEC rated California's solar potential by county using insolation values available to typical photovoltaic system configurations, as provided by the National Renewable Energy Laboratory. Although Los Angeles as a County has a relatively high photovoltaic potential of 3,912,346 megawatt-hours (MWh)/day, inland counties such as Inyo (10,047,177 MWh/day), Riverside (7,811,694 MWh/day), and San Bernardino (25,338,276 MWh/day) are more suitable for large-scale solar power generation. In addition, most of the high potential areas of greater than 6 KWh/sqm/day in Los

[16] *California Public Utilities Commission, California Renewables Portfolio Standard, http://www.cpuc.ca.gov/renewables/. Accessed April 2016.*

Angeles County are concentrated in the northeastern corner of the county around Lancaster, approximately 60 miles to the north of the Project site. These facts alone do not preclude its use in the Project area or on the Project site. The Project would support the County's CCAP to promote solar installations by incorporating building design elements that includes solar ready rooftops for solar collectors or photovoltaic panels. As such, the Project would promote solar electrical systems. It is not possible to accurately quantify the energy savings from the use of solar collectors or photovoltaic panels since it is unknown the extent that such equipment would be required to be installed.

The Bioscience Tech Park would also utilize renewable energy as part of Southern California Edison requirement to use renewable energy sources for compliance with the Renewables Portfolio Standard. With respect to on-site renewable energy sources, there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydro, digester gas, fuel cells, geothermal energy, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels. Wind-powered energy is not feasible on the Project site due to the lack of sufficient wind in the Los Angeles basin as discussed previously. Similarly, solar energy is highly variable in the Los Angeles area, particularly in proximity to the coastline where there is increased cloud cover and an intermittent marine layer, and is therefore not cost-effective or reliable as a primary source of energy. Nonetheless, solar energy would be promoted consistent with the County's CCAP by incorporating building design elements that includes solar ready rooftops for solar collectors or photovoltaic panels.

(iii) Energy Conservation: Regulatory Compliance

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code. The purpose of the California Green Building Standards Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings, which includes requirements for energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[17] The CALGreen Code was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2014 (the energy provisions took effect on July 1, 2014).[18] The Project would comply with or exceed the applicable provisions of Title 24 and the California Green Buildings Standards in affect at the time of building permit issuance. According to the CEC, the Title 24 (2013) standards use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Title 24 (2008) standards. It is expected that future updates to the Title 24 standards would result in increased energy efficiency. However, it is not possible to accurately predict the increased level of energy efficiency associated with future updates to the Title 24 standards; therefore, the energy estimates provided

[17] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

[18] *California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.*

in this Draft EIR represent the current Title 24 (2013) standards. It is reasonable to conclude that the Master Plan Project would achieve greater levels of energy efficiency than provided herein.

With respect to solid waste, the Project is required to comply with applicable regulations, including those pertaining to waste reduction and recycling. Waste haulers serving the Project site would divert Project-generated municipal waste in accordance with applicable County ordinances as well as future updates to the County ordinances in effect at the time of construction and operations.

The Bioscience Tech Park would comply with or exceed the applicable portions of the Title 24 standards in affect at the time of building permit issuance. As discussed previously, future updates to the Title 24 standards would result in increased energy efficiency. The energy estimates provided in this Draft EIR represent the current Title 24 (2013) standards. Although it is not possible to accurately predict the increased level of energy efficiency associated with future updates to the Title 24 standards, it is reasonable to conclude that the Bioscience Tech Park would achieve greater levels of energy efficiency than provided herein. Similar to the Master Plan Project, solid waste disposal would comply with the applicable County ordinances as well as future updates to the County ordinances in effect at the time of construction and operations.

(iv) Transportation Estimated Energy Consumption

Operation of the Project would result in transportation energy use primarily from Campus employees, patients, and visitors traveling to and from the Project site. Transportation fuels, primarily gasoline and diesel, would be provided by local or regional suppliers and vendors. As discussed previously, in 2014, California consumed a total of 14.4 billion gallons of gasoline and 3.3 billion gallons of diesel in the transportation sector.[19, 20] Project-related vehicles would require a fraction of a percent of the total state's transportation fuel consumption. According to the EMFAC2014 model, the vehicle fleet average fuel economy in the South Coast Air Basin in 2030 is predicted to be 31.67 miles per gallon for gasoline and 13.38 miles per gallon for diesel with gasoline vehicles accounting for 85.1 percent of the total VMT and diesel vehicles accounting for 8.2 percent of the total VMT. Electric vehicles are predicted to account for 6.7 percent of the total VMT.

Based on the Project's estimated vehicle miles traveled of 75.93 million miles per year, and assuming the Project's mix of vehicle types is similar to the Basin-wide fleet average, approximately 2.04 million gallons of gasoline and 465,400 gallons of diesel fuel would be required in a year. This would represent about 0.01 percent of the statewide gasoline consumption and about 0.01 percent of the statewide diesel consumption, which represents a very small fraction of the state's annual fuel usage. As stated in Section 4.E., *Greenhouse Gas Emissions*, the Project would include pre-installation or installation of electric vehicle supply equipment (EVSE) consistent with the County's CCAP, which would eliminate infrastructure roadblocks for Campus employees, patients, and visitors that purchase electric or electric-hybrid vehicles. As a result, the Project would support statewide efforts to improve transportation energy efficiency and reduce wasteful or inefficient transportation energy consumption with respect to private automobiles.

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[19] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2014, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=US. Accessed March 2016.*

[20] *U.S. Energy Information Administration, Table F3: Motor Gasoline Consumption, Price, and Expenditure Estimates, 2012, http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_df.html&sid=US. Accessed March 2016.*

Alternative-fueled, electric, and hybrid vehicles, to the extent these types of vehicles would be utilized by Campus employees, patients, and visitors, would reduce the Project's consumption of gasoline and diesel; however, the effect may be minimal in current vehicle market. According to the EMFAC2014 model, electric vehicles are predicted to account for 6.7 percent of the total VMT in 2030 in the South Coast Air Basin. Campus employees, patients, and visitors that utilize alternative-fueled (electric) vehicles would be expected to result in fuel savings up to about 6.7 percent. Based on the estimate above, this would translate to a fuel savings of up to about 160,600 gallons of fuel (primarily gasoline, assuming electric vehicles replace gasoline-fueled passenger vehicles) per year.

Operation of the Bioscience Tech Park would result in an estimated vehicle miles traveled of 8.43 million miles per year. Assuming the Project's mix of vehicle types is similar to the Basin-wide fleet average, approximately 226,500 gallons of gasoline and 51,700 gallons of diesel fuel would be required in a year. This represents about 0.002 percent of the statewide gasoline consumption and about 0.002 percent of the statewide diesel consumption, which represents a very small fraction of the state's annual fuel usage.

Bioscience Tech Park employees and visitors that utilize alternative-fueled (electric) vehicles would be expected to result in fuel savings up to about 6.7 percent. Based on the estimate above, this would translate to a fuel savings of up to about 17,800 gallons of fuel (primarily gasoline, assuming electric vehicles replace gasoline-fueled passenger vehicles) per year.

(v) Conclusion

Operation of the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. Overall, the Master Plan Project would replace aging facilities and infrastructure with new ones providing considerably higher efficiency in terms of energy and water demands; as such, while the Project would increase the overall intensity of land uses on the Medical Center Campus, it would use less energy per square foot of development compared to existing conditions. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Therefore, operation of the Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and would not preempt future energy conservation. As a result, impacts would be less than significant.

e. Cumulative Impacts

Under CEQA, individually small project-level contributions to environmental impacts may be potentially considerable in the aggregate or cumulative level. A cumulatively considerable impact is the impact of a project in addition to the related projects. In the case of energy, the proximity of the project to other energy-demanding projects or activities is typically not directly relevant to the determination of a cumulative impact. Energy is generally regulated on regional, state, federal, or even global scales. Currently, no established non-speculative method exists to assess the cumulative energy impact of a proposed independent development project.

As discussed previously, the State has adopted numerous regulations to improve energy efficiency from a variety of sectors including residential, commercial, and industrial buildings, transportation, utility providers, and others. Individual projects located within the State would be required to comply with these regulations. End-users of energy would be required to incorporate mandated building strategies and techniques to ensure energy use from building systems meet established efficiency targets. Transportation energy end-users would be required to utilize vehicles that meet increasingly stringent fuel economy standards. Utility providers would be required to provide an increasing fraction of energy from renewable sources in accordance with the State's Renewables Portfolio Standard. Compliance with these regulations would ensure cumulative projects achieve improved energy efficiency and minimize the wasteful and inefficient use of energy.

At the local level, the County of Los Angeles has adopted a Green Building Standards Code and Low Impact Development Ordinance that includes mandatory efficiency measures more stringent than State requirements, further improving energy efficiency for projects in the County. The County's CCAP includes additional measures that would reduce the wasteful and inefficient use of energy by requiring a reduction in GHG emissions, which is inherently related to energy use. While a quantitative metric has not been established to evaluate cumulative energy impacts, because the County has adopted standards that would improve energy efficiency beyond State requirements applicable to all projects located in the County, it is determined that energy impacts would not be cumulatively considerable.

4. MITIGATION MEASURES

The Project would result in less than significant impacts with respect to the wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance and/or removal or preemption of future energy conservation. Therefore, no mitigation measures would be required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant and no mitigation measures would be required.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
D. GEOLOGY AND SOILS

1. INTRODUCTION

This section describes existing conditions and the regulatory framework associated with geology and soils and analyzes the potential impacts of the Project regarding fault rupture, seismic hazards, ground shaking, liquefaction, soil erosion or the loss of topsoil, expansive soils, and landform/landslide in the unincorporated Los Angeles community of West Carson and in the Project vicinity. Information in this section is based on the analysis and findings provided in the Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan (Geotechnical Report), prepared by Ninyo & Moore, April 2015. The Geotechnical Report is included in Appendix C of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Regional Geology

The Project Site is located within the Peninsular Ranges Geomorphic Province of southern California. This geomorphic province encompasses an area that extends approximately 125 miles from the Transverse Ranges and the Los Angeles River Basin south to the Mexican border and beyond another approximately 775 miles to the tip of Baja California. The Peninsular Ranges province varies in width from approximately 30 to 100 miles is characterized by northwest-trending mountain range blocks separated by similarly trending faults.

The predominant rock type that underlies the Peninsular Ranges province is a Cretaceous age igneous rock (granitic rock) referred to as the Southern California batholith. Older Jurassic age metavolcanic and metasedimentary rocks and older Paleozoic limestone, altered schist, and gneiss are present within the province. Cretaceous-age marine sedimentary rocks and younger Tertiary-age rocks comprised of volcanic, marine, and non-marine sediments overlie the older rocks. More recent Quaternary sediments, primarily of alluvial origin, comprise the low-lying valley and drainage areas within the region, including the area where the Harbor-UCLA Medical Center Project Site is located.

The Project is situated in the Los Angeles Basin, a region divided into four structural blocks that include uplifted zones and synclinal depressions. The structural blocks are generally bounded by fault systems. The Project site is situated in the southwestern block of the seaward part of the basin which is bounded by the Newport-Inglewood zone of deformation. This block is a combination of folds and faults and is characterized by overlapping staggering anticlinal hills. Newport-Inglewood and Palos Verdes are the major active fault systems located in proximity to the Project site. The predominant tectonic activity associated with these and other faults within the regional tectonic framework is right-lateral, strike-slip and/or reverse movement.

b. Site Geology

Regional geologic maps indicate that the Project site is underlain by late to middle Pleistocene age alluvial flood plain deposits generally comprised of dissected gravel, sand, silt and clay-bearing alluvium.

(1) Groundwater

The site is located within the west coast sub-basin of the Los Angeles Coastal Groundwater Basin. Historic groundwater monitoring well data from the State of California Water Resources Control Board's GeoTracker Website[1] were reviewed for wells located on adjacent properties east and north of the Project site. Based on the groundwater measurements in these wells from 2007 to 2014, groundwater levels at these locations have ranged from approximately 48 to 60 feet below the ground surface. The Los Angeles County Safety Element indicates that the historic high groundwater in the vicinity of the Project site is approximately 30 feet deep. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present onsite.

(2) Faulting and Seismicity

The Project site is located in a seismically active area, as is the majority of southern California and the potential for strong ground motion at the site is considered significant. Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. According to the preliminary Geotechnical Report (Appendix C), the Project site is not transected by any known active or potentially active faults. However, earthquake events on one of the active or potentially active faults near the Project Site could result in strong ground shaking, which could affect the Harbor-UCLA Medical Center campus.

The Project is not located within a State of California Earthquake Fault Zone, although the active Newport-Inglewood fault is located approximately 3.4 miles northeast. **Figure 4.D-1,** *Regional Fault Locations***,** shows the Project location relative to the principal faults in the region. Blind thrust faults are low-angle faults at depths that do not break the surface and are, therefore, not shown on Figure 4.D-1. **Table 4.D-1,** *Principal Regional Active Faults*, lists selected principal known active faults, including blind thrust faults, within approximately 30 miles of the center of the Project area and their maximum moment magnitude (M_{max})[2].

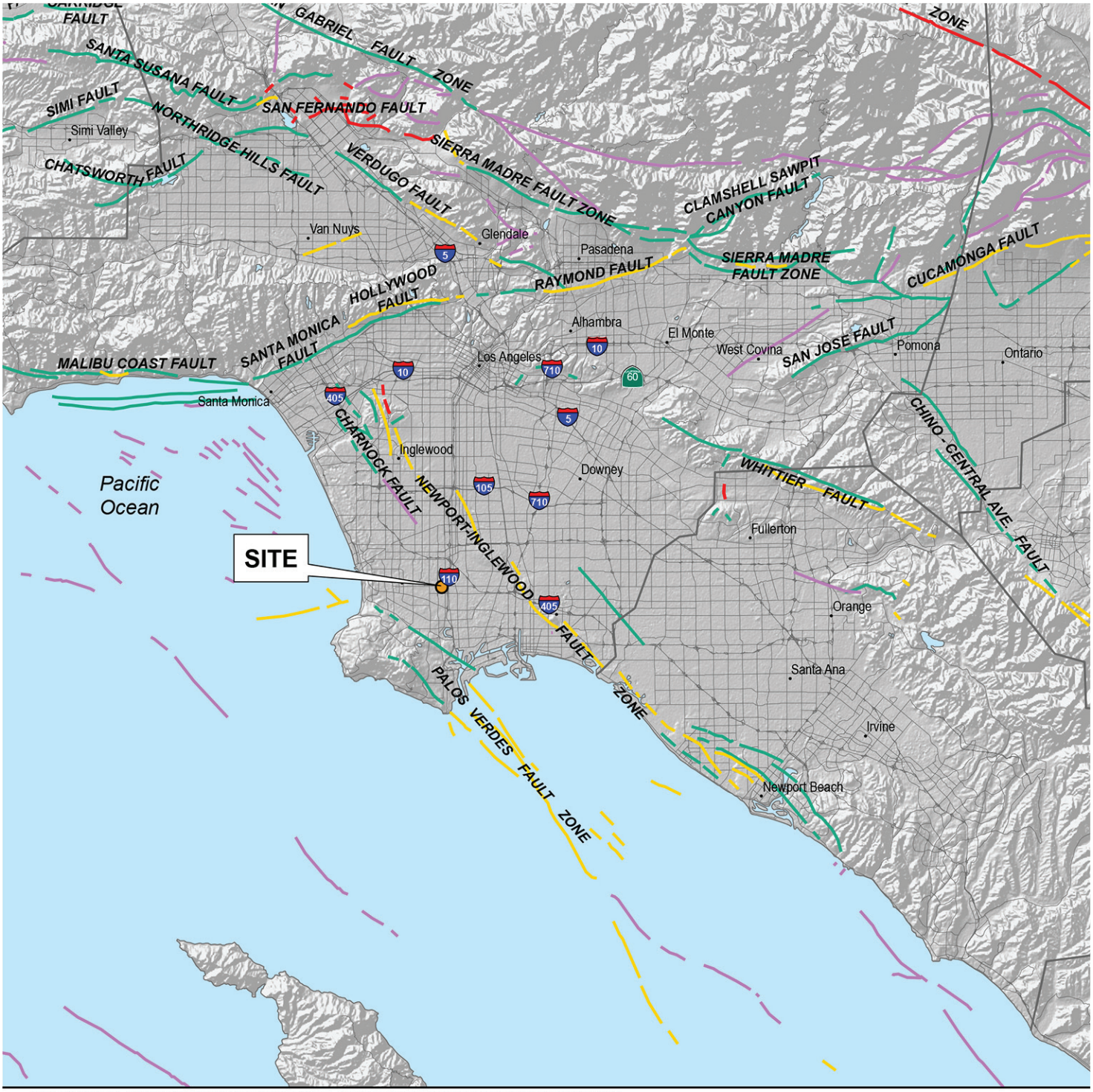
According to the Geotechnical Report prepared for the proposed Project, the site is not located within an area considered susceptible to liquefaction (**Figure 4.D-2**, *Liquefaction Seismic Hazar*d Zones). In addition, the potential for liquefaction at the site is considered relatively low based on recent groundwater depths of 48 to 60 feet in the site vicinity.

(3) Landslides

Landslides, slope failures, and mudflows of earth materials generally occur where slopes are steep and/or the earth materials are too weak to support themselves. Earthquake-induced landslides may also occur due to seismic ground shaking. A review of geologic maps did not reveal any past landslides at the Project site. In addition, the Project Site has been extensively developed and is primarily covered with pavement, hardscape, and buildings and structures. The Project Site also includes some small graded slopes associated

[1] *State of California Water Resources Control Board. http://geotracker.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=harbor+ucla+medical+center%2C+carson%2C+ca. Accessed, April, 2015*

[2] *Cao, et al., 2003. The Revised 2002 California Probabilistic Seismic Hazard Maps. http://www.conservation.ca.gov/cgs/rghm/psha/ofr9608/Pages/Index.aspx, Accessed, April 2015*



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)
REFERENCE: JENNINGS, 2010, FAULT ACTIVITY MAP OF CALIFORNIA.

LEGEND

FAULT ACTIVITY:

- HISTORICALLY ACTIVE
- LATE QUATERNARY
- HOLOCENE ACTIVE
- QUATERNARY
- COUNTY BOUNDARIES

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

PCR

N

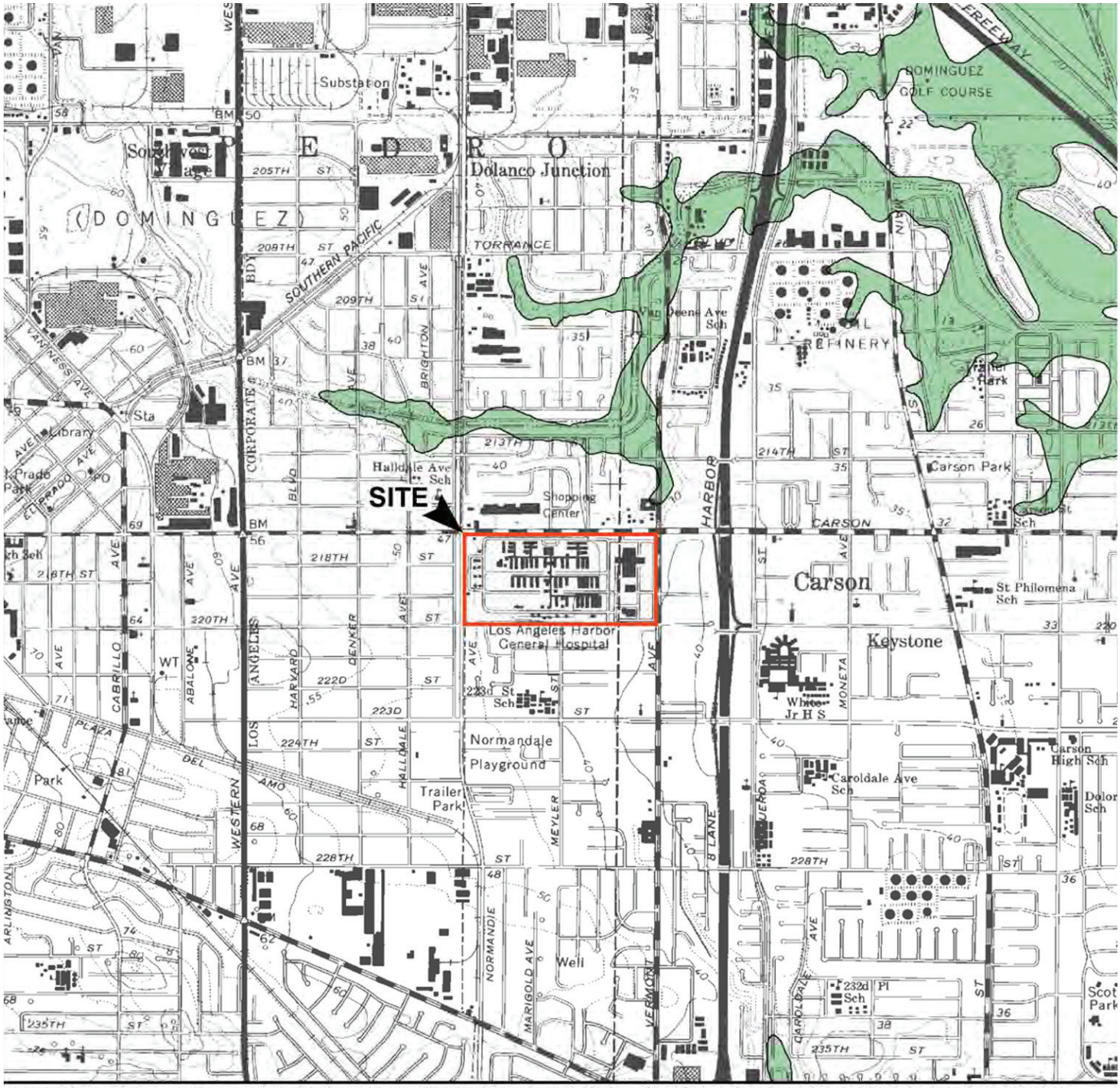
0 10 Miles

Regional Fault Locations

Harbor-UCLA Medical Center Master Plan

Source: Ninyo and Moore Geotechnical and Environmental Sciences Consultants, April 2015.

FIGURE
4.D-1



REFERENCE: CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF MINES AND GEOLOGY, STATE OF CALIFORNIA, 1999, SEISMIC HAZARD ZONES MAP OFFICIAL REVISED MAP TORRANCE QUADRANGLE, 7.5-MINUTE SERIES: SCALE 1:24,000.

LEGEND

LIQUEFACTION:
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

PCR

N

0 2000 Feet

Liquefaction Seismic Hazards Zone Map

Harbor-UCLA Medical Center Master Plan

Source: Ninyo and Moore Geotechnical and Environmental Sciences Consultants, April 2015.

FIGURE
4.D-2

Table 4.D-1

Principal Regional Active Faults

Fault	Approximate Fault Distance[a] to Site Miles (Kilometers)	Maximum Moment Magnitude (M_{max})
Newport-Inglewood (Los Angeles Basin)	3.4 (5.5)	7.1
Palos Verdes	307 (5.9)	7.3
Puente Hills Blind Thrust	10.3 (16.5)	7.1
Upper Elysian Park Blind Thrust	16.7 (26.8)	6.4
Santa Monica	16.9 (27.1)	6.6
Elsinore	18.1 (29.1)	6.7
Hollywood	18.6 (30.0)	6.4
Malibu	19.1 (30.7)	6.7
Anacapa-Dume	19.8 (31.9)	7.5
Raymond	20.5 (32.9)	6.5
Verdugo	22.2 (35.7)	6.9
San Joaquin Hills Blind Thrust	22.7 (36.5)	6.6
Sierra Madre	26.9 (43.3)	7.2
San Jose	27.8 (44.7)	6.4
Clamshell-Sawpit	29.3 (47.1)	6.5

[a] *USGS, 2008*

Source: Ninyo & Moore, 2015

with landscaping and pedestrian areas. An on-site area northwest of the Existing Hospital Tower contains a slope that descends approximately 25 feet toward the edge of the building. This slope is landscaped and lined at the bottom edge with a drainage system. According to the Geotechnical Report, the potential for future landslides or mudflows to affect developments within the Project area is relatively low.

(4) Site Soils

Exposed materials at the surface of the Project site include clays and silty sandy soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together.

Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the Project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses.

(5) Subsidence

Subsidence is characterized as a sinking of ground surface relative to surrounding areas, and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to subsurface vaults, pipelines and other improvements.

Historically, subsidence has occurred in the City of Long Beach, but is not known to have occurred at the Project site. The County of Los Angeles Safety Element (1990) does not indicate mapped areas of subsidence. According to the Geotechnical Report, the potential for subsidence in the Project area is low.

(6) Compressible/Collapsible Soils

Compressible soils are generally comprised of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. Soil collapse is a phenomenon where the soils undergo a significant decrease in volume upon increase in moisture content, with or without an increase in external loads. Buildings, structures, and other improvements may be subject to excessive settlement-related distress when compressible soils or collapsible soils are present.

The Geotechnical Report states that the Project area is underlain by older alluvial deposits which are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse. Older, undocumented fill soils related to previous development may be present at the Project Site and, if so, may be potentially compressible or collapsible. Due to the presence of potentially compressible or collapsible soils at the site, the potential exists for differential settlement, which can destabilize areas of hardscape or building components.

(7) Expansive Soils

Expansive soils include clay minerals that are characterized by their ability to undergo significant volume change (shrink or swell) due to variation in moisture content. Sandy soils are generally not expansive. Changes in soil moisture content can result from rainfall, irrigation, pipeline leakage, surface drainage, perched groundwater, drought, or other factors. Volumetric change of expansive soil may cause excessive cracking and heaving of structures with shallow foundations, concrete slabs-on-grade, or pavements supported on these materials.

According to the Geotechnical Report, near-surface soils in the Project site are generally clayey and sandy silt soils. Sandy soils typically have a low expansion potential. However, clayey soils are typically expansive.

(8) Corrosive Soils

The geologic environment of the Project site could include soil conditions potentially corrosive to concrete and metals. Corrosive soil conditions may exacerbate the corrosion hazard to buried conduits, foundations, and other buried concrete or metal improvements. Corrosive soils could cause premature deterioration of these underground structures or foundations.

c. Regulatory Setting

The following subsections discuss the various codes, regulations and policies applicable to geology and soils at the federal, state and local levels.

(1) Federal

(a) National Earthquake Hazards Reduction Program Reauthorization Act of 2004

The Earthquake Hazards Reduction Act {(Public Law 95-124, 42 U.S.C. 7701 et. seq.), as amended by Public Laws 101614, 105-47, 106-503, and 108-360.} was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). The program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives. NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigation and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, reports, and coordinating responsibilities. Programs under NEHRP inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the Project would be required to adhere.

In October 2004, NEHRP was reauthorized to develop effective measures for earthquake hazard reduction; promote the adoption of earthquake hazards reduction measures by government agencies, standards and codes organizations, and others involved in planning and building infrastructure; improve the understanding of earthquakes and their effects through interdisciplinary research; and, develop, operate, and maintain both the Advanced National Seismic System (ANSS) and the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). The act also directed that NEHRP support development and application of performance-based seismic design (PBSD). It also established an Advisory Committee on Earthquake Hazards Reduction (ACEHR) that will assess scientific and engineering trends; program effectiveness; and program management, coordination, and implementation. A NEHRP Interagency Coordinating Committee (ICC) was also established to oversee NEHRP planning, management, and coordination.

(2) State

(a) Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621-2624, Division 2, Chapter 7.5) was enacted in 1972 to address the hazard of surface faulting to structures for human occupancy.[3] The primary purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings intended for human occupancy on the surface traces of active faults. The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones, known as "earthquake fault zones", around the surface traces of active faults and to issue maps to assist cities and counties in planning, zoning, and building regulation functions. Local agencies must enforce the Alquist-

[3] *The Act was originally entitled the Alquist-Priolo Geologic Hazards Zone Act.*

Priolo Earthquake Fault Zoning Act in the development permit process, where applicable, and may be more restrictive than state law requires. The Act requires that, prior to approval of a project, a geologic study be conducted to define and delineate any hazards from surface rupture. A geologist registered by the State of California, within the lead agency's organization or retained by the lead agency for the project, must prepare this geologic report. A 50-foot building setback from any known trace of an active fault is required. The Alquist-Priolo Earthquake Fault Zoning Act and its regulations are presented in California Department of Conservation, California Geological Survey, Special Publications (SP) 42, Fault-rupture Hazard Zones in California.

(b) Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Section 2690-2699) addresses the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the Safety Element of their General Plan and encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. Under Public Resources Code Section 2697, cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.

State publications supporting the requirements of the Seismic Hazards Mapping Act include the California Geological Survey SP 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, and SP 118, *Recommended Criteria for Delineating Seismic Hazard Zones in California*. The objectives of SP 117 are to assist in the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations and to promote uniform and effective statewide implementation of the evaluation and mitigation elements of the Seismic Hazards Mapping Act. SP 118 implements the requirements of the Seismic Hazards Mapping Act in the production of Probabilistic Seismic Hazard Maps for the State.

(c) Title 24 California Building Standards Code

The California Buildings Standards Commission (Commission) is responsible for coordinating, managing, adopting, and approving building codes in California. On July 1 2014, the 2013 California Building Standards Code (CBSC) became effective and updated all prior codes under California Code of Regulations (CCR) Title 24. The State of California provides minimum standards for building design through the 2013 California Building Code (CBC), a component of the 2013 CBSC. Chapters 16 through 18 of the 2013 CBC regulate structural design, structural tests and inspections, and soils and foundations. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC), which is used widely throughout the country (generally adopted on a state by state or district by district basis). The CBC, which has been modified for California conditions, contains numerous provisions that are more stringent than those in the UBC because of California's seismic and environmental conditions. According to Section 1613 of the CBC, "[e]very structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7."[4]

[4] *ASCE 7 is a document published by the American Society of Civil Engineers (ASCE) that specifies minimum design loads for buildings and other structures.*

(d) Senate Bill 1953: The Alquist Hospital Seismic Safety Act

Senate Bill (SB) 1953, signed into law on September 21, 1994, is an amendment to the Alfred E. Alquist Hospital Seismic Safety Act of 1983 and is California's Hospital Seismic Safety Law.[5] The 1983 Act was a response to the damage to hospitals in the 1971 Sylmar quake, and the amendment resulted from assessment of damage to hospitals following the 1994 Northridge earthquake. SB 1953 (Chapter 740) as amended is chaptered into statute in Sections 130000 through 130070 of the California Health and Safety Code. SB 1953 was a result of failures to nonstructural components of hospitals that were built in accordance with the structural provisions of the Act. SB 1953 amended the Act to address the issues of survivability of both structural and nonstructural components of hospital buildings after a seismic event. SB 1953 ensures that by 2030 California hospitals must be capable of remaining operational after a seismic event or other natural disaster. Consisting of two parts, the law requires hospitals to fix or replace buildings with structural problems that may cause them to collapse in an earthquake. Secondly, non-structural features such as electrical, mechanical, plumbing and fire safety systems must be anchored and braced so they do not become falling hazards and a threat to life in the event of a disaster. Licensed acute care facilities such as the Existing Hospital Tower have more stringent rules regarding meeting seismic standards by 2030 than sub-acute care facilities. To achieve compliance with the requirements of SB 1953 before 2030, the Project is proposed to build a New Hospital Tower compliant with SB 1953 to house acute care functions.

(3) Local

(a) Los Angeles County General Plan Update (2035)

California Government Code Section 65300 requires general plans to include "a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires." As such, the Los Angeles County General Plan Update (2035) Safety Element (Chapter 12) addresses hazards which must be considered in the physical development of the County, including seismic, geologic, erosion; flooding; hazardous materials; noise control; and emergency/disaster preparedness. Applicable goals and polices from the Safety Element are identified below:

> **Goal S1:** An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.
>
> - **Policy S1.1:** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
> - **Policy S1.2:** Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.
> - **Policy S1.3:** Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.

[5] *Office of Statewide Health Planning & Development. California's Hospital Seismic Safety Law (2005). Available at http://www.oshpd.ca.gov/fdd/seismic_compliance/SB1953/SeismicReport.pdf, accessed on July 19, 2016.*

- **Policy S1.4:** Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

Goal S2: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.

- **Policy S2.1:** Discourage development in the County's Flood Hazard Zones.
- **Policy S2.2:** Discourage development from locating downslope from aqueducts.
- **Policy S2.3:** Consider climate change adaptation strategies in flood and inundation hazard planning.
- **Policy S2.4:** Ensure that developments located within the County's Flood Hazard Zones are sited and designed to avoid isolation from essential services and facilities in the event of flooding.
- **Policy S2.7:** Locate essential public facilities, such as hospitals and fire stations, outside of Flood Hazard Zones, where feasible.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The technical analyses supporting the impact conclusions in the following section are based on the analysis contained in the Preliminary Geotechnical Evaluation Report prepared by Ninyo & Moore (Appendix C of this Draft EIR). The conclusions in the Preliminary Geotechnical Evaluation Report were primarily derived from the following tasks:

- Review of readily available topographic and geologic maps, published geotechnical literature, geologic and seismic data, soil data, groundwater data, aerial photographs, and in-house information;
- Review of geotechnical aspects of Project plans and documents pertaining to the site;
- Geotechnical site reconnaissance by a representative of Ninyo & Moore conducted on February 16, 2015, to observe and document the existing site conditions at the Project site;
- Compilation and analysis of existing geotechnical data pertaining to the site;
- Assessment of the general geologic conditions and seismic hazards affecting the area and evaluation of their potential impacts on the Project;
- Preparation of report presenting the results, as well as conclusions regarding the Project's geologic and seismic impacts, and recommendations to address the impacts to be included in the environmental planning documents; and
- Report preparation presenting results and conclusions regarding the Project's geologic and seismic impacts, and recommendations to address the impacts to be included in the environmental planning documents.

Data and conclusions from the analyses in the Preliminary Geotechnical Evaluation Report were used to determine potential impacts from the Project to and from the site geology and soils parameters. These

impacts were compared against the Thresholds of Significance set forth below to determine the level of significance of potential impacts.

b. Thresholds of Significance

The potential for geologic impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(VI) Geology and Soils. Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

   1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to *Division of Mines and Geology Special Publication 42*);

   2) Strong seismic ground shaking;

   3) Seismically related ground failure, including liquefaction; or

   4) Landslides.

b) Result in substantial soil erosion or the loss of topsoil.

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

d) Be located on expansive soils, as defined in Table 18-1-B of the UBC (1994), or corrosive soils, creating substantial risk to life or property.

e) Have soils that would be incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater.

The Initial Study determined that the Project would have a less than significant impact with respect to Checklist question VI.e). Accordingly, this environmental topic is not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Geology and Soils if it would:

GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

   1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to *Division of Mines and Geology Special Publication 42*).

2) Strong seismic ground shaking.

3) Seismically related ground failure, including liquefaction.

4) Landslides.

GEO-2: Result in substantial soil erosion or the loss of topsoil.

GEO-3: Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

GEO-4: Be located on expansive soils, as defined in Table 18-1-B of the UBC (1994), or corrosive soils, creating substantial risk to life or property.

c. Project Characteristics or Design Features

There are no specific Project Design Features that relate to geology and soils on the Project Site. However, the Project would comply with all applicable building requirements related to geology and soil conditions. Recommendations from the Geotechnical Report would be incorporated into the Project. In addition, the construction plans for acute care facilities proposed as part of the Project would be reviewed and approved by the California Office of Statewide Health Planning and Development (OSHPD).

Also, with regard to impacts pertaining to soil erosion or the loss of topsoil, the Project would implement numerous BMPs as detailed in the Water Quality Management Plan (WQMP) for the Project. The analysis below refers to Section 4.G., *Hydrology and Water Quality*, of this Draft EIR for a listing of the BMPs proposed for the Project.

d. Project Impacts

Threshold GEO-1: Would the Project expose people or structures to potential substantial adverse effects, including the risk or loss, injury, or death, involving earthquake fault rupture, seismic shaking, ground failure, or landslides?

Impact Statement GEO-1: *The Harbor-UCLA Campus is subject to seismic shaking due to its location in the seismically active southern California region. Based on subsurface geologic conditions and the depth to groundwater, the potential for substantial adverse effects due to fault rupture and ground failure is relatively low, but impacts are nonetheless potentially significant.*

(1) Fault Rupture

As previously stated, the Project site is not transected by any known active or potentially active faults. The active Newport-Inglewood fault is located approximately 3.4 miles northeast and the active Palos Verdes fault is located approximately 3.7 miles southwest of the estimated center of the Project site. The Project is not located within a State of California Earthquake Fault Zone; therefore, the potential for surface rupture at the site is relatively low and is considered a less than significant impact. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible. This is a potentially significant impact.

(2) Seismic Ground Shaking

The Harbor-UCLA Campus is located within a seismically active region, and thus the potential for seismic ground shaking exists at the site. However, the level of ground shaking at a given location depends on many factors, including the size and type of earthquake, the distance from the earthquake, and subsurface geologic conditions. The type of construction also affects how particular structures and improvements perform during ground shaking.

A site-specific analysis was conducted to evaluate the potential levels of ground shaking that could occur. The 2013 CBC recommends that the design of structures be based on spectral response accelerations in the direction of maximum horizontal response (5 percent damped) having a 1 percent probability of collapse in 50 years. These spectral response accelerations represent the Risk-Targeted Maximum Considered Earthquake (MCE_R) ground motion. The horizontal peak ground acceleration (PGA) that corresponds to the MCE_R for the site was calculated at 0.65g using the USGS web-based seismic design tool (USGS, 2014). The mapped and design PGA were estimated to be 0.62g and 0.43g, respectively, using the USGS (2014) calculator and the American Society of Civil Engineers 7-10 Standard. These ground motion estimates do not include near-source factors that may be applicable to the design of the structures on-site. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus.

(3) Liquefaction

According to the Seismic Hazard Zones Map, the Harbor-UCLA Campus is not in an area susceptible to liquefaction; historic high groundwater depths of 48 to 60 feet in the Project vicinity limit the potential for liquefaction that could adversely affect Project buildings and structures. However, the site could be subject to seismically-induced soil settlement, which could have a significant impact on people and proposed buildings on the Harbor-UCLA Campus.

(4) Landslides

The Project Site has been extensively developed and is primarily covered with pavements, hardscape, and structures. It also includes some graded slopes associated with landscaping. An area northwest of the Existing Hospital Tower contains a landscaped slope that descends approximately 25 feet toward the edge of the building and is lined at the bottom edge with a drainage system. In addition, there have been no historic landslides at the site. Therefore, the potential for future landslides or mudflows to affect developments within the Project site are not anticipated and no significant impacts are expected. Slopes created for future developments within the Project area will be designed to reduce the potential for landslides or mudflows.

Threshold GEO-2: Would the Project result in a significant impact if it would result in substantial soil erosion or the loss of topsoil?

Impact Statement GEO-2: *Compliance with the County's National Pollutant Discharge Elimination System through implementation of a Storm Water Pollution Prevention Program for erosion control would be required during Project construction and with County's Low Impact Development (LID) ordinance requirements during operations. Impacts related to soil erosion and loss of soil would be less than significant.*

As previously stated, the materials exposed at the surface of the Project site include clays and silty sand soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together.

Future construction at the Project site would result in ground surface disruption during excavation, grading, and trenching that would create the potential for erosion to occur. However, as described in Section 4.G., Hydrology and Water Quality, any project involving grading of an area greater than one acre is required to apply for a National Pollutant Discharge Elimination System permit from the Los Angeles Regional Water Quality Control Board. This permit requires preparation and implementation of a Storm Water Pollution Prevention Program (SWPPP) incorporating Best Management Practices (BMPs) for erosion control. Specifically, construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development, must obtain the Construction Activities Stormwater General Permit. Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. Positive surface drainage should be accommodated at project construction sites to allow surface runoff to flow away from site improvements or areas susceptible to erosion. To reduce wind-related erosion, wetting of soil surfaces and/or covering exposed round areas and soil stockpiles could be considered during construction operations, as appropriate. The use of soil tackifiers may also be considered to reduce the potential for wind related soil erosion. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. In addition, the topographic gradients at the Project Site are relatively gentle. Therefore, potential soil erosion impacts during construction would be less than significant and no mitigation is required.

BMPs related to ongoing drainage design and maintenance practices would be included in the SWPPP and implemented to reduce soil erosion during operation of the proposed Project. Examples of these procedures could include surface drainage measures for erosion due to water, such as the use of erosion prevention mats or geofabrics, silt fencing, sandbags and plastic sheeting, and temporary devices. Soil erosion during operation can also be mitigated through design procedures such as appropriate surface drainage design of roadways and facilities to provide for positive surface runoff. These design procedures would address reducing concentrated run-off conditions that could cause erosion and affect the stability of Project improvements.

Additionally, as discussed in more detail in Section 4.G., Hydrology and Water Quality, of this Draft EIR, buildout of the Harbor-UCLA Master Plan Project would increase the amount of pervious area on the Campus. However, the Project would be built out in compliance with the County's Low Impact Development (LID) ordinance, which requires new development to include features and practices that provide physical, biological, and chemical controls that remove pollutants from stormwater runoff generated on a project site. Typical LID features include bioretention or infiltration, which are intended to reduce and slow peak stormwater flows discharged off-site compared to existing conditions. Since these and other LID compliance practices and feature area intended to prevent, among other potential impacts, erosion and sedimentation conveyed by stormwater and discharged to off-site storm drain infrastructure and receiving water bodies, compliance with County LID requirements would prevent erosion of soil on the Project Site. Accordingly, following Project buildout, operational impacts related to erosion of on-site soil would be less than significant.

Threshold GEO-3: Would the Project result in a significant impact if it would be located on a geologic unit or soil that is unstable or that would become unstable, potentially resulting in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact Statement GEO-3: *Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to differential soil settlement and liquefaction beneath proposed buildings, due to the presence of alluvium and possible undocumented fill, and relatively shallow depths to groundwater beneath the Campus. Subsidence hazards would be less than significant.*

(1) Subsidence

As previously stated, historic subsidence is not known to have occurred on the Harbor-UCLA Campus and it does not lie within a mapped subsidence area according to the County of Los Angeles Safety Element. Therefore, the potential for subsidence on the Project site is relatively low. Subsidence hazards during construction and operation would be a less than significant impact.

(2) Compressible/Collapsible Soils

The Project area is underlain by older alluvial deposits which are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse. Older undocumented fill soils related to the previous development at the Project Site may also be potentially compressible or collapsible. Due to the presence of potentially compressible/collapsible soils at the site, there is a potential for differential settlement, which could cause damage to Project improvements. This is a potentially significant impact.

(3) Shallow Groundwater

Proposed construction activities in the Project area would include excavation and site grading for new medical, office and retail structures, pedestrian areas, landscaping, open space areas, and parking area improvements. Areas of shallower perched groundwater may be encountered during excavations. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. If wet or saturated soil conditions are encountered during excavation, instability could occur and present a constraint to the construction of foundations. This is a potentially significant impact.

Threshold GEO-4: Would the Project result in a significant impact if it would be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), or corrosive soils, creating substantial risk to life or property?

Impact Statement GEO-4: *Buildout of the Harbor-UCLA Campus could result in potentially significant impacts related to expansive and corrosive soils beneath proposed buildings, based on the underlying soil type(s).*

(1) Expansive Soils

As previously stated, the near-surface soils in the Project site are generally clayey and sandy silt soils. Clayey soils are typically expansive when wetted, and could have an adverse effect on proposed Project buildings. This is a potentially significant impact.

(2) Corrosive Soils

The Project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. This is a potentially significant impact.

4. CUMULATIVE IMPACTS

The study area considered for cumulative impacts encompasses the areas that could be affected by Harbor-UCLA Master Plan Project activities as well as by other projects whose activities could directly or indirectly affect the geology and soils of the Project Site. All of the identified related projects would be built in the same seismically active region and could experience ground shaking and other seismically related hazards, similar to the Project. Those projects would also be subject to applicable seismic standards, safety requirements and, standard design specification to keep potential risk of damage from seismic and other geologic hazards to an acceptable level. Geologic and soil impacts are generally site-specific and there is little, if any, cumulative relationship between development projects. Adherence to all relevant plans, codes, and regulations with respect to project design and construction would reduce project-specific and cumulative geologic impacts. Therefore, the Harbor-UCLA Medical Center Campus Master Plan Project, considered together with related projects, would not result in a cumulatively considerable contribution to cumulatively significant geology and seismicity impacts.

During construction of the proposed and related projects, grading and excavation have the potential to expose soils in the area to wind and water erosion, resulting in a loss of soils. As discussed above under Impact Statement GEO-2, any project involving grading of an area greater than one acre is required to apply for a NPDES permit, which requires the use of BMPs for erosion control. Compliance with NPDES requirements would minimize potential soil erosion impacts for the proposed and related projects. Moreover, compliance with the County's LID ordinance would ensure features and practices intended to reduce, among other impacts, sedimentation in stormwater discharge, would be incorporated into Project design and operations. Therefore, the Harbor-UCLA Medical Center Campus Master Plan Project, considered together with related projects, would not result in a cumulatively considerable contribution to cumulatively significant soil erosion impacts.

Operation of the proposed and related projects would not change the geologic properties of the Project area. Seismic and other geologic hazards could still potentially impact the proposed and related projects as they are located in a seismically active region. However, these risks would not increase or decrease as a result of the proposed and/or related projects. Therefore, operation of the Harbor-UCLA Medical Center Master Plan Project, considered together with the related projects, would not result in a cumulatively considerable contribution to cumulatively significant impacts with respect to geology, soils and seismicity.

5. MITIGATION MEASURES

The following measure is required to mitigate Impact GEO-1:

MM-GEO-1: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate potential fault rupture, seismic ground shaking, and liquefaction hazards identified under Impact GEO-1:

- *Seismicity:* Structural elements of future improvements shall be designed to resist or accommodate appropriate site-specific ground motions and conform to the current seismic design standards.
- *Liquefaction:* An assessment of the liquefaction potential and seismically induced dynamic settlement shall be made prior to detailed design and construction of the proposed Project. Structural design and mitigation techniques, such as in-situ ground modification or supporting foundations with piles at depths designed specifically for liquefaction, shall be included.

  To evaluate the potential liquefaction hazard for the Project, a subsurface evaluation could be performed. Site-specific geotechnical evaluations that assess the liquefaction and dynamic settlement characteristics of the on-site soils shall include the drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils.

  Methods for construction in areas with a potential for liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of Project improvements on piles at depths designed specifically for liquefaction. Pile foundations can be designed for a liquefaction hazard by supporting the piles in dense soil or bedrock located below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.

The following measure is required to mitigate Impact GEO-3:

MM-GEO-2: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C of this Draft EIR) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate unstable soil hazards identified under Impacts GEO-3:

- *Compressible/Collapsible Soils and Settlement:* An assessment of the potential for soils that are prone to settlement shall be made prior to detailed design and construction of Project improvements, and mitigation techniques shall be developed, as appropriate, to reduce impacts related to settlement to low levels.

During the detailed design phase of the Project components, surface reconnaissance and site-specific geotechnical evaluations shall be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, drilling of exploratory borings or test pits, and laboratory testing of soils, where appropriate, to evaluate site conditions.

Prescribed mitigation measures for soils with the potential for settlement include removal of compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting.

- *Shallow Groundwater:* A subsurface exploration shall be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of Project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the Project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.

The following measure is required to mitigate Impact GEO-4:

MM-GEO-3: All recommendations included in the Preliminary Geotechnical Evaluation prepared for the Project (provided in Appendix C) shall be followed. A detailed subsurface geotechnical evaluation shall be performed to address site-specific conditions at the locations of the planned improvements and provide detailed recommendations for design and construction. The geotechnical evaluation shall include the following measures to mitigate expansive soils hazards identified under Impacts GEO-4.

- *Expansive Soils:* An assessment of the potential for expansive soils will be conducted during the detailed design and construction phases of the Project. Mitigation techniques such as over excavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions would reduce the impact from expansive soils to low levels.
- *Corrosive Soils:* An assessment of the potential for corrosive soils will be conducted during the detailed design phase of the Project through a subsurface evaluation including soil testing and analysis of soils at foundation design depths. Laboratory tests would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Data will be reviewed by a corrosion engineer and mitigation techniques suitable for the proposed Project will be implemented as appropriate. Mitigation of corrosive soil conditions could include the use of concrete resistant to sulfate exposure. Corrosion protection for metals used in underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration could include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects would be developed in the design phase and would reduce impacts related to corrosive soils to low levels.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Given compliance with applicable building codes and seismic safety requirements, as well as implementation of applicable mitigation measures, impacts related to geology and soils would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
E. GREENHOUSE GAS EMISSIONS

1. INTRODUCTION

This section addresses greenhouse gas (GHG) emissions generated by the construction and operation of the Project inclusive of mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project to reduce GHG emissions and associated impacts. The analysis also addresses the consistency of the Project with applicable regulations, plans, and policies set forth by the State of California and the County to reduce GHGs. The Project's potential contributions to global climate change impacts are identified. GHG emission calculations prepared for the Project are provided in Appendix D of this Draft EIR.

2. ENVIRONMENTAL SETTING

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however current data increasingly indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) GHG emissions is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. The extent to which increased concentrations of GHGs have caused or will cause climate change and the appropriate actions to limit and/or respond to climate change are the subject of significant and rapidly evolving regulatory efforts at the federal and state levels of government.

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). Mass emissions are calculated by converting pollutant specific emissions to CO_2e emissions by applying the proper global warming potential (GWP) value.[1] These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories; however, the resulting difference in CO_2e emissions is relatively minor. By applying the GWP ratios, project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The CO_2e values are calculated for construction years as well as Existing Hospital and Master Plan Project buildout conditions in order to generate a net change in GHG emissions for construction and operation. Compounds that are regulated as GHGs are discussed below.

[1] *GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change.*

Carbon Dioxide (CO_2): CO_2 is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 is the reference gas (GWP of 1) for determining the GWPs of other GHGs.

Methane (CH_4): CH_4 is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH_4 is 21 in the IPCC SAR and 25 in the IPCC AR4.

Nitrous Oxide (N_2O): N_2O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N_2O is 310 in the IPCC SAR and 298 in the IPCC AR4.

Hydrofluorocarbons (HFCs): HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWPs of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4.

Perfluorocarbons (PFCs): PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4.

Sulfur Hexafluoride (SF_6): SF_6 is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4.

a. Existing Conditions

(1) Greenhouse Gas Emissions Inventory

Worldwide man-made emissions of GHGs were approximately 49,000 million metric tons (MMT) CO_2e annually including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation).[2] Emissions of CO_2 from fossil fuel use and industrial processes accounts for 65 percent of the total while CO_2 emissions from all sources accounts for 76 percent of the total. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. In 2013, the United States was the world's second largest emitter of carbon dioxide at 5,300 MMT (China was the largest emitter of carbon dioxide at 10,300 MMT).[3]

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the 2013 GHG inventory data (i.e., the latest year for which data are available from CARB), California emitted 459.3 $MMTCO_2e$ including emissions resulting from imported electrical power and 419.3 $MMTCO_2e$

[2] *Intergovernmental Panel on Climate Change, Fifth Assessment Report - Synthesis Report, 2014.*

[3] *PBL Netherlands Environmental Assessment Agency and the European Commission Joint Research Center, Trends in Global CO_2 Emissions 2014 Report, 2014.*

excluding emissions related to imported power.[4] Between 1990 and 2013, the population of California grew by approximately 8.2 million (from 29.8 to 38.0 million).[5] This represents an increase of approximately 27.5 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $773 billion in 1990 to $2.21 trillion in 2013 representing an increase of approximately 186 percent.[6] Despite the population and economic growth, California's net GHG emissions only grew by approximately 9.5 percent between 1990 and 2013. The California Energy Commission (CEC) attributes the slow rate of growth to the success of California's renewable energy programs and its commitment to clean air and clean energy.[7] **Table 4.E-1**, *State of California Greenhouse Gas Emissions,* identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2011 (i.e., the most recent year in which data are available from CARB). As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at 37 percent in 2013.

(2) Existing Site Greenhouse Gas Emissions

The Medical Center Campus is currently developed with approximately 1.3 million square feet of differentiated buildings including the hospital and the current hospital expansion in the east sector of the Medical Center Campus; LA Biomed facilities in the central portion of the Medical Center Campus; administration and facilities management buildings in various locations of the Medical Center Campus; and large tenants, such as the Children's Institute International and MFI's Harbor-UCLA Professional Building (outpatient care) and Imaging Center, in the west sector of the Medical Center Campus. The existing Medical Center Campus generates mobile source emissions from vehicle trips to and from the Medical Center Campus and from the operation of medical helicopters. The Existing Hospital generates on-site area and stationary source emissions from the combustion of natural gas from the existing Central Plant for cooling and heating. As described in the Campus Master Plan, the Central Plant consists of a Boiler Plant and Chiller Plant. The Medical Center Campus also maintains six 2-megawatt (MW) emergency generators that would result in stationary source emissions from the combustion of fuel oil when required to operate. Other existing emissions include on-site combustion area source emissions from fossil-fueled landscaping equipment. The Master Plan Project would not result in changes in GHG emissions associated with the operation of the Central Plant or emergency generators. In addition, the operation of medical helicopters under Existing Hospital conditions is expected to be similar under the Master Plan Project. In order to compare the change in GHG emissions from implementation of the Project, this analysis estimates GHG emissions from Existing Hospital uses that would be demolished, replaced, or renovated under the Project. Mobile source emissions from visitors and employees traveling to and from the Medical Center Campus are also included in the GHG emissions estimate. The estimated Existing Hospital emissions from uses and elements that would be demolished, replaced, or renovated under the Project are summarized in **Table 4.E-2**, *Estimated Existing*

[4] *California Air Resources Board, "California Greenhouse Gas 2000-2013 Inventory by Scoping Plan Category - Summary," http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2000-13_20150831.pdf. Accessed February 2016.*

[5] *U.S. Census Bureau, "California, Population of Counties by Decennial Census: 1900 to 1990," http://quickfacts.census.gov/qfd/states/06000lk.html. Accessed November 2015; California Department of Finance, "E-5 Population and Housing Estimates for Cities, Counties and the State, January 2011-2015, with 2010 Benchmark," http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php. Accessed November 2015.*

[6] *California Department of Finance, "Financial & Economic Data: Gross Domestic Product, California," http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Misc.htm. Accessed November 2015. Amounts are based on current dollars as of the date of the report (June 2015).*

[7] *California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004, (2006).*

Table 4.E-1

State of California Greenhouse Gas Emissions

Category	Total 1990 Emissions using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2013 Emissions using IPCC AR4 ($MMTCO_2e$)	Percent of Total 2013 Emissions
Transportation	150.7	35%	169.0	37%
Electric Power	110.6	26%	90.5	20%
Commercial and Residential	44.1	10%	43.5	9%
Industrial	103.0	24%	92.7	20%
Recycling and Waste [a]	–	–	8.9	2%
High GWP/Non-Specified [b]	1.3	<1%	18.5	4%
Agriculture/Forestry	23.6	6%	36.2	8%
Forestry Sinks	-6.7		-- [c]	--
Net Total (IPCC SAR)	**426.6**	**100%**	--	--
Net Total (IPCC AR4) [c]	**431**	**100%**	**459.3**	**100%**

[a] *Included in other categories for the 1990 emissions inventory.*

[b] *High GWP gases are not specifically called out in the 1990 emissions inventory.*

[c] *CARB revised the State's 1990 level GHG emissions using GWPs from the IPCC AR4.*

Sources: California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, (2007); California Air Resources Board, "California Greenhouse Gas 2000-2013 Inventory by Scoping Plan Category – Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed February 2016.

Hospital Greenhouse Gas Emissions. Detailed emissions calculations are provided in Appendix D of this Draft EIR.

(3) Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC, in its *Fifth Assessment Report, Summary for Policy Makers*, stated that "it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together."[8] A report from the National Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in

[8] *Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, (2013) 15.*

Table 4.E-2

Estimated Existing Hospital Greenhouse Gas Emissions

Emissions Sources	CO_2e (Metric Tons per Year) [a]
Existing Hospital	
Mobile Sources	26,255
Area	< 1
Energy (Electricity and Natural Gas)	5,959
Water/Wastewater Conveyance	867
Waste	2,209
Subtotal	**35,290**

[a] *Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix D.*

Source: PCR Services Corporation, 2016

the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.[9]

According to CARB, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more large forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.[10] Below is a summary of some of the potential effects, reported by an array of studies that could be experienced in California as a result of global warming and climate change.

(a) Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.[11]

[9] *Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America. 2010;107:12107-12109.*

[10] *California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, (2006).*

[11] *California Energy Commission, Scenarios of Climate Change in California: An Overview, February 2006. http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-SF.PDF. Accessed March 2015.*

In 2009, the California Natural Resources Agency (CNRA) published the *California Climate Adaptation Strategy*[12] as a response to the Governor's Executive Order S-13-2008. The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the CEC was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers.[13] The website, known as Cal-Adapt, became operational in 2011.[14] The information provided from the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values from a variety of scenarios and models and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors. According to the Cal-Adapt website, the portion of the County of Los Angeles in which the Medical Center Campus is located (near Carson, CA) could result in an average increase in temperature of approximately 5 to 9 percent (about 3.2 to 5.7°F) by 2070-2090, compared to the baseline 1961-1990 period.

(b) Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change."[15] For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation.[16] Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full.[17] Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.[18]

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concludes that "climate change will likely have a significant effect on California's future water resources…[and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain." It also reports that the relationship between climate change and its potential effect on water demand is not well understood, but "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many

[12] *California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, (2009).*

[13] *Ibid.*

[14] *The Cal-Adapt website address is: http://cal-adapt.org.*

[15] *Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003. http://www.pacinst.org/reports/climate_change_and_california_water_resources.pdf. Accessed March 2015.*

[16] *Ibid*.

[17] *Ibid.*

[18] *Ibid.*

regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.[19] In its *Fifth Assessment Report*, the IPCC states "Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions."[20]

(c) Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

(d) Agriculture

California has a $30 billion agricultural industry that produces half the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[21]

(e) Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2-11.5°F (1.1-6.4°C) by 2100, with significant regional variation.[22] Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.[23, 24]

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[19] *California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006. http://baydeltaoffice.water.ca.gov/climatechange/DWRClimateChangeJuly06_update8-2-07.pdf. Accessed March 2015.*

[20] *Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, (2013) 20.*

[21] *California Climate Change Center, Our Changing Climate: Assessing the Risks to California, (2006).*

[22] *National Research Council, Advancing the Science of Climate Change, (2010).*

[23] *Parmesan, C., 2004. Ecological and Evolutionary Response to Recent Climate Change.*

[24] *Parmesan, C and Galbraith, H, 2004. Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew. Cent. Glob. Clim. Change.*

b. Regulatory Framework

(1) Federal

The USEPA is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO_2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the Energy Star labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the United States Supreme Court held in April of 2007 that the USEPA has statutory authority under Section 202 of the federal Clean Air Act to regulate GHGs. The Court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare.

On May 19, 2009, the President announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[25]

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the Clean Air Act consistently with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not themselves impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

[25] *United States Environmental Protection Agency, "EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks," August 2012, http://www.epa.gov/oms/climate/documents/420f12051.pdf. Accessed March 2015.*

(2) State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs from commercial and private activities within the State.

(a) California Air Resources Board

The CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan, for which it works closely with the federal government and the local air districts. The State Implementation Plan is required for the State to take over implementation of the federal Clean Air Act.

(b) Executive Order S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

The Secretary of CalEPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Resources Agency, the Chairperson of CARB, the Chairperson of the California Energy Commission, and the President of the Public Utilities Commission. Representatives from these agencies comprise the California Climate Action Team (CAT).

The CAT provides biennial reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change. The first CAT Report to the Governor and the Legislature in 2006 contained recommendations and strategies to help meet the targets in Executive Order S 3-05.[26] The 2010 CAT Report, finalized in December 2010, expands on the policy oriented 2006 assessment.[27] The new information detailed in the CAT Report includes development of revised climate and sea-level projections using new information and tools that have become available in the last two

[26] *California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2006).*

[27] *California Environmental Protection Agency, California Climate Action Team Report to the Governor and the Legislature, (2010).*

years; and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts.

(c) California Assembly Bill 32 (AB 32, Nunez) (Chapter 488, Statutes of 2006)

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006, focusing on reducing GHG emissions in California to 1990 levels by 2020. As required by AB 32, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 $MMTCO_2e$ using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under business-as-usual (BAU) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its 2020 BAU emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 $MMTCO_2e$. CARB also updated the State's 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy.[28] CARB's revised 2020 BAU emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$. Therefore, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would be 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent. A summary of the GHG emissions reductions required under AB 32 is provided in **Table 4.E-3**, *Estimated Greenhouse Gas Emissions Reductions Required by AB 32*.

AB 32 defines GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under AB 32, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020. On or before June 30, 2007, CARB was required to publish a list of discrete early action GHG emission reduction measures that would be implemented to be made enforceable by 2010. In 2007, CARB published its Final Report for Proposed Early Actions to Mitigate Climate Change in California.[29] This report described recommendations for discrete early action measures to reduce GHG emissions as part of California's AB 32 GHG reduction strategy. Resulting from this are three new regulations proposed to meet the definition of "discrete early action greenhouse gas reduction measures," including the following: a low carbon fuel standard; reduction of HFC 134a (HFC used in automobile air-conditioning systems) emissions from non-professional servicing of motor vehicle air conditioning systems; and improved landfill gas capture. CARB estimates that by 2020, the reductions from those three measures would range from 13 to 26 $MMTCO_2e$. Six additional early-action regulations were adopted on October 25, 2007 that targeted: motor vehicles; auxiliary engines from docked ships; PFCs from the semiconductor industry; propellants in consumer products; automotive maintenance; and SF_6 from non-electricity sectors.

[28] *California Air Resources Board, "2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition," http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed March 2015.*

[29] *California Air Resources Board, Proposed Early Actions to Mitigation Climate Change in California, (2007).*

Table 4.E-3

Estimated Greenhouse Gas Emissions Reductions Required by AB 32

Emissions Category	GHG Emissions ($MMTCO_2e$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	**169 (28.4%)** [a]
2011 Scoping Plan (IPCC AR4)	
2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	**78.4 (15.4%)** [b]

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents

[a] *596 – 427 = 169 / 596 = 28.4%*
[b] *509.4 – 431 = 78.4 / 509.4 = 15.4%*

Source: California Air Resources Board, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; California Air Resources Board, "2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition," http://www.arb.ca.gov/cc/inventory/data/bau.htm. Accessed March 2015.

(d) California Assembly Bill No. 1493 (AB 1493, Pavley), (Chapter 200, Statutes of 2002)

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The State of California in 2004 submitted a request for a waiver from federal clean air regulations, which ordinarily preempts state regulation of motor vehicle emission standards, to allow the state to require reduced tailpipe emissions of CO_2. In late 2007, the USEPA denied California's waiver request. In early 2008, the state brought suit against USEPA related to this denial. In January 2009, the President directed the USEPA to assess whether its denial of the waiver was appropriate under the federal Clean Air Act. In June 2009, the USEPA granted California the waiver.

However, as discussed previously, the USEPA and USDOT have adopted federal standards for model year 2012 through 2016 light-duty vehicles. In light of the USEPA and USDOT standards, California - and states adopting California emissions standards - have agreed to defer to the proposed national standard through model year 2016. The 2016 endpoint of the federal and state standards is similar, although the federal standard ramps up slightly more slowly than required under the state standard. The state standards (called the Pavley standards) require additional reductions in CO_2 emissions beyond model year 2016 (referred to as Pavley Phase II standards). As noted above, the USEPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the Pavley Phase II standards, but the State of California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater

reductions nationally and is stringent enough to meet state GHG emission reduction goals.[30] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet state law.

(e) Executive Order S-01-07

Executive Order S-01-07 was enacted by the Governor on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California.

(f) Senate Bill 97 (SB 97, Dutton) (Chapter 185, Statutes of 2007)

Senate Bill (SB) 97 (Chapter 185, Statutes of 2007), enacted in 2007, amended CEQA to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the California Office of Planning and Research to develop revisions to the State CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised State CEQA Guidelines by January 2010. The revisions were completed in March 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions. The CEQA Guidelines require:

- Inclusion of GHG analyses in CEQA documents;
- Determination of significance of GHG emissions; and
- If significant GHG emissions would occur, adoption of mitigation to address significant emissions.

(g) Senate Bill 375 (SB 375, Steinberg) (Chapter 728, Statutes of 2008)

SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the State on September 30, 2008. Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organization , to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets for the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization for the region in which the County of Los Angeles is located. The target is a per capita reduction of 8 percent for 2020 and 13 percent for 2035 compared to the 2005 baseline. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the low carbon fuel standard regulations.

Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS;

[30] *California Air Resources Board, "Advanced Clean Cars Summary," http://www.arb.ca.gov/msprog/clean_cars/acc%20summary-final.pdf. Accessed March 2015.*

however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS. On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS).[31] Using growth forecasts and economic trends, the 2016 RTP/SCS provides a vision for transportation throughout the region for the next 25 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016 RTP/SCS successfully achieves and exceeds the GHG emission-reduction targets set by CARB by demonstrating an eight percent reduction by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.

SCAG's Sustainable Communities Strategy provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

(h) Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[32] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental

[31] *Southern California Association of Governments, 2016-2040 RTP/SCS, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed June 2016.*

[32] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

quality.[33] The CALGreen Code was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2014 (the energy provisions took effect on July 1, 2014).[34]

(i) Senate Bill 1078 (SB 1078, Sher) (Chapter 516, Statutes of 2002) and Senate Bill 107 (SB 107, Simitian) (Chapter 464, Statutes of 2006) and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewables Portfolio Standard to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the Renewables Portfolio Standard with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020.

(j) California Senate Bill 1368

California SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission (CPUC) and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour.

(k) Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order B-30-15, which:

- Established a new interim Statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030,
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets, and
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

CARB subsequently expressed its intention to initiate the Climate Change Scoping Plan update during the summer of 2015, with adoption scheduled for 2016.

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[33] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

[34] *California Energy Commission, Building Standards Information Bulletin 13-07, December 18, 2013.*

(I) Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as one of the strategies California will employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established and facilities subject to the cap will be able to trade permits to emit GHGs.

CARB designed and adopted a California Cap-and-Trade Program[35] pursuant to its authority under AB 32. The development of this Program included a multi-year stakeholder process and consideration of potential impacts on disproportionately impacted communities. The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors[36] (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program's duration.

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program.[37] Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or "MRR").[38]

Each covered entity with a compliance obligation is required to surrender "compliance instruments"[39] for each $MTCO_2e$ of GHG they emit. Covered entities are allocated free allowances in whole or part (if eligible), buy allowances at auction, purchase allowances from others, or purchase offset credits. A "compliance period" is the time frame during which the compliance obligation is calculated. The years 2013 and 2014 are the first compliance period, the years 2015–2017 are the second compliance period, and the third compliance period is from 2018–2020. At the end of each compliance period, each facility will be required to surrender compliance instruments to CARB equivalent to their total GHG emissions throughout the compliance period. There also are requirements to surrender compliance instruments covering 30 percent of the prior year's compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30 percent of its 2013 GHG emissions.

The Cap-and-Trade Regulation provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions

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35 *17 CCR §§ 95800 to 96023.*

36 *See generally 17 CCR §§ 95811, 95812.*

37 *17 CCR § 95812.*

38 *17 CCR §§ 95100-95158.*

39 *Compliance instruments are permits to emit, the majority of which will be "allowances," but entities also are allowed to use CARB-approved offset credits to meet up to 8 percent of their compliance obligations.*

reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in its First Update to the Climate Change Scoping Plan:

> *The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances.* ***But as the cap declines, aggregate emissions must be reduced.***[40]

In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program. However, as climate change is a global phenomenon and the effects of GHG emissions are considered cumulative in nature, a focus on aggregate GHG emissions reductions is warranted.

Further, the reductions in GHG emissions that will be achieved by the Cap-and-Trade Program inherently are variable and, therefore, impossible to quantify with precision:

> *The Cap-and-Trade Regulation is different from most of the other measures in the Scoping Plan. The [R]egulation sets a hard cap, instead of an emission limit, so the emission reductions from the program vary as our estimates of "business as usual" emissions in the future are updated. In addition, the Cap-and-Trade Program works in concert with many of the direct regulatory measures—providing an additional economic incentive to reduce emissions. Actions taken to comply with direct regulations reduce an entity's compliance obligation under the Cap-and-Trade Regulation. So, for example, increased deployment of renewable electricity sources reduces a utility's compliance obligation under the Cap-and-Trade Regulation.*[41]

If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In other words, the Cap-and-Trade Program functions sort of like an insurance policy for meeting California 2020's GHG emissions reduction mandate:

> *The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together,*

[40] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, at 86 (May 2014) (emphasis added).*

[41] *Ibid.*

> *direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.*[42]
>
> *[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.*[43]

In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB under AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.[44] Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.

The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.[45] While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015:

> *Suppliers of natural gas, suppliers of RBOB [Reformulated Gasoline Blendstock for Oxygenate Blending] and distillate fuel oils, suppliers of liquefied petroleum gas, and suppliers of liquefied natural gas specified in sections 95811(c), (d), (e), (f), and (g) that meet or exceed the annual threshold in section 95812(d)* ***will have a compliance obligation beginning with the second compliance period****.*[46]

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions.

The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). However, transportation fuels that are "supplied" in California, but can be demonstrated to have a final destination outside California, do not generate a compliance obligation. The underlying concept here is that CARB is seeking to capture tailpipe GHG emissions from the combustion of transportation fuels supplied to California end-users. Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of

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[42] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, at 88 (May 2014)*

[43] *Id. at 86-87.*

[44] *17 CCR § 95811(b).*

[45] *17 CCR §§ 95811, 95812(d).*

[46] *Id. at § 95851(b)(emphasis added).*

GHG emissions from CEQA projects associated with vehicle-miles traveled (VMT) are covered by the Cap-and-Trade Program.

(3) Regional

The Medical Center Campus is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished though air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles. After AB 32 was passed, SCAQMD formed a Climate Change Committee along with a Greenhouse Gases CEQA Significance Thresholds Working Group and the SoCal Climate Solutions Exchange Technical Advisory Group. On September 5, 2008, the SCAQMD Board approved the SCAQMD Climate Change Policy, which outlines actions the SCAQMD will take to assist businesses and local governments in implementing climate change measures, decrease the agency's carbon emissions, and provide information to the public regarding climate change. On December 5, 2008, the Board approved interim CEQA GHG significance thresholds for stationary source projects where it is the lead agency. The threshold is a tiered approach to determine a project's significance, with 10,000 metric tons (MT) of CO_2e as a screening numerical threshold for stationary source projects. In order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, the GHG CEQA Significance Threshold Working Group drafted thresholds with the intent of capturing 90 percent of development projects.[47] Under Tiers 1 and 2, projects that are exempt from CEQA or consistent with an approved local GHG reduction plan can be found to be less than significant. Under Tier 3, a project's GHG emissions are compared to the draft screening thresholds. At present, the SCAQMD has not formally adopted thresholds for use by other lead agencies, but recommends that industrial projects utilize the 10,000 $MTCO_2e$ screening level that has been adopted for SCAQMD projects. The GHG CEQA Significance Threshold Working Group has drafted a significance indicator of 3,000 $MTCO_2e$ for mixed-use or all land use projects, but it has not been formally adopted. Under Tier 4, a project's GHG emissions are compared to a performance standard, such as achieving a percentage reduction in GHG emissions from a base case scenario or achieving a project-level efficiency target of 4.8 $MTCO_2e$ per service population.

(4) Local

(a) County of Los Angeles General Plan

The Los Angeles County 2035 General Plan provides the fundamental basis for the County's land use and development policy, and addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole. Measures related to GHG emissions that would

[47] *South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds," GHG Meeting 15 Main Presentation, September 28, 2010, http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/sept29.html. Accessed March 2015.*

be applicable to the Master Plan Project are contained in the Los Angeles County 2035 General Plan Conservation and Open Space element. Project consistency with the General Plan is discussed in Section 4.H., Land Use and Planning.

(b) County of Los Angeles Community Climate Action Plan

The County of Los Angeles has adopted a Community Climate Action Plan (CCAP),[48] a component of the General Plan, which sets a target to reduce GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11 percent below 2010 levels by 2020. The CCAP shows clearly that the reductions are not expected to occur uniformly from all sources or sectors of GHG emissions (refer to Table 4-1 of the CCAP). The CCAP describes the County's plan for achieving this goal, including specific strategy areas for each of the major emissions sectors, and provides details on the 2010 and projected 2020 emissions in the unincorporated areas. The actions in the CCAP are priority actions and intended for near-term implementation, such that the County can achieve its GHG reduction goal for 2020 for the unincorporated areas of Los Angeles County.

The CCAP includes 26 local actions to reduced GHG emissions and are grouped into the following five strategy areas. The percent of the local emissions reductions from 2010 levels are also provided (reductions achieved by state programs are not included in the percentages):

- Green Building and Energy (approximately 36 percent of local emissions reductions);
- Land Use and Transportation (approximately 34 percent of local emissions reductions);
- Water Conservation and Wastewater (approximately 4 percent for the water sector and 22 percent for the building energy sector of local emissions reductions);
- Waste Reduction, Reuse, and Recycling (approximately 3 percent of local emissions reductions); and
- Land Conservation and Tree Planting (less than 1 percent of local emissions reductions).

The County considers many of the local actions to be cost effective, particularly in the green building and energy strategy area. In addition to reducing GHG emissions, all local actions have many co-benefits, such as improved public health, improved air quality, energy savings, increased mobility, and enhanced community well-being.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of potential impacts to GHG emissions that may result from the construction and long-term operations of the Master Plan Project is conducted as follows:

[48] *County of Los Angeles, Final Unincorporated Los Angeles County Community Climate Action Plan 2020, (August 2015).*

(1) Greenhouse Gas Emissions

(a) Existing Project Site Emissions

Existing Hospital operational emissions have been estimated using CalEEMod (Version 2013.2.2) software, an emissions inventory model recommended by the SCAQMD for land use development projects. CalEEMod was used to forecast the daily regional emissions from mobile, area, and stationary sources. In calculating mobile-source emissions, an operational year of 2015 was used in the Master Plan Project traffic study[49] and the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on standard Institute of Transportation Engineers (ITE) trip generation rates, for each Existing Hospital land use provided by the Project traffic study[50] to estimate the total vehicle miles traveled (VMT).

Emissions of GHGs from on-site natural gas combustion and off-site electricity generation are based on usage data from the CEC's *California Commercial End Use Survey* (CEUS), which lists energy demand by building type.[51] The data from the CEUS is from 2002 and represents actual usage rates from survey respondents, covering a wide range of building ages. Since 1978, the CEC has established building energy efficiency standards, which are updated periodically. As discussed previously, the Existing Hospital buildings on the Medical Center Campus were built in 1943 and 1962. Thus, the use of the CEUS 2002 survey data to represent the electrical demand for the existing Medical Center Campus is appropriate and represents the best available data. The CEUS provides data on a limited statewide basis or for each of the four largest investor- or publicly-owned utilities (Pacific Gas & Electric, Southern California Edison (SCE), Sacramento Municipal Utility District, and San Diego Gas & Electric). For the purposes of this assessment, natural gas usage factors for SCE were used as most representative of the existing Medical Center Campus. Emission factors for GHGs due to electrical generation to serve the demands of the existing Medical Center Campus were obtained from the Los Angeles Department of Water and Power (LADWP) *2012 Power Integrated Resource Plan*, which accounts for the generation mix using renewable and non-renewable sources.[52] LADWP provides 20 percent of electricity via renewable sources.[53]

Emissions of GHGs from solid waste disposal are calculated using the CalEEMod software. The emissions are based on the waste disposal rate for the land uses, the waste diversion rate, and the GHG emission factors for solid waste decomposition. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, are used in this assessment.

Emissions of GHGs from water and wastewater are due to the energy required to supply, distribute and treat. Wastewater also results in emissions of GHGs from wastewater treatment systems. Emissions are calculated using the CalEEMod tool and are based on the water usage rate for the land uses, the electrical intensity

[49] *Fehr & Peers, Traffic Impact Analysis for the Harbor-UCLA Medical Center Master Plan Project, (2016).*

[50] *Ibid.*

[51] *California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed November 2013.*

[52] *Los Angeles Department of Water and Power, 2012 Power Integrated Resource Plan, (2012) C-11.*

[53] *Los Angeles County Department of Water and Power, 2012 Power Integrated Resource Plan, (2012) 111.*

factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the emission factors for the wastewater treatment process. The CalEEMod software uses the electrical intensity factors from the 2006 CEC report *Refining Estimates of Water-Related Energy Use in California*.[54] The emissions of GHGs associated with the wastewater treatment process emissions are also calculated using the CalEEMod software as described in the *California Emissions Estimator Model User's Guide, Appendix A*.[55] As stated in the *User's Guide*, the GHGs emitted from each type of wastewater treatment are based on the CARB's *Local Government Operations Protocol*,[56] which are in turn based on USEPA methodologies.[57]

(b) Project-Related Emissions (Provided for Informational Purposes)

For the purposes of this EIR, total GHG emissions from the Master Plan Project were quantified for disclosure purposes to provide information to decision makers and the public regarding the level of the Project's annual GHG emissions.

The CCAR has prepared the General Reporting Protocol for calculating and reporting GHG emissions from a number of general and industry-specific activities.[58] No specific protocols are available for land use projects, so the General Reporting Protocol has been adapted to address GHG emissions from the Project. The information provided in this section is consistent with the General Reporting Protocol minimum reporting requirements. The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include:

- Scope 1: Direct, on-site combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, off-site emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy.[59]

CARB believes that consideration of so-called indirect emissions provides a more complete picture of the GHG footprint of a facility: "As facilities consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information" to CARB to be considered for future strategies by the industrial sector.[60] For these reasons, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements.

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[54] *California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, (2006).*

[55] *California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, (2013).*

[56] *California Air Resources Board, Local Government Operations Protocol, Chapter 10: Wastewater Treatment Facilities, (2008).*

[57] *United States Environmental Protection Agency, Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006, Chapter 8: Waste, (2008).*

[58] *California Climate Action Registry, General Reporting Protocol Version 3.1, (2009).*

[59] *Embodied energy includes energy required for water pumping and treatment for end-uses.*

[60] *California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), (2007).*

Additionally, the Office of Planning and Research directs lead agencies to "make a good-faith effort, based on available information, to calculate, model, or estimate…GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[61] Therefore, direct and indirect emissions have been calculated for the Master Plan Project.

For purposes of this analysis, it is considered reasonable and consistent with criteria pollutant calculations to consider those GHG emissions resulting from Project-related incremental (net) increase in the use of on-road mobile vehicles, electricity, and natural gas compared to existing conditions. This includes Project construction activities such as demolition, hauling, and construction worker trips. This analysis also considers indirect GHG emissions from water conveyance, wastewater generation, and solid waste handling. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis. In order to report total GHG emissions using the CO_2e metric, the GWP ratios corresponding to the warming potential of CO_2 over a 100-year period is used in this analysis.

(i) Construction Emissions

Construction emissions are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source emissions factors. The emissions are estimated using the CalEEMod (Version 2013.2.2) software, an emissions inventory software program recommended by the SCAQMD. CalEEMod is based on outputs from OFFROAD2011 and EMFAC2011, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. The output values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the same construction phasing assumptions used for the criteria pollutant analysis (see Section 4.B., *Air Quality*, in this Draft EIR) to generate GHG emissions values for each construction year for CO_2, CH_4, N_2O, and CO_2e. The values are derived from factors published in the *2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories*.[62] These values are then converted to metric tons for consistency. The CO_2e emissions are calculated for the construction period and future Master Plan Project buildout conditions in order to estimate the net change in GHG emissions for Project construction and operation. In accordance with SCAQMD guidance, GHG emissions from construction have been amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions). Detailed construction GHG emissions calculations are provided in Appendix D of this Draft EIR.

(ii) Operational Emissions

Mobile source emission calculations associated with operation of the Master Plan Project are also calculated using the CalEEMod model. In calculating mobile-source emissions, the trip length values for the Project are based on CalEEMod provided defaults for the relevant land uses (e.g., hospital land uses). The trip distances for the various operational activities were multiplied by the average daily trip estimates for each land use based on the data provided by the Project traffic study to estimate the average daily VMT.[63] Since GHG

[61] *Office of Planning and Research, Technical Advisory, p. 5.*

[62] *Intergovernmental Panel on Climate Change, 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, (2006).*

[63] *Fehr & Peers, Traffic Impact Analysis for the Harbor-UCLA Medical Center Master Plan Project, (2016).*

emission impacts are assessed on an annual basis, the average daily VMT for each land use were multiplied by the number of days each land use would be in operation in a year. CalEEMod may not adequately reflect future year GHG emissions because it does not incorporate the emission factors for the 2017-2025 vehicle emissions standards. The national policy for fuel efficiency and emissions standards for the United States auto industry requires that new passenger cars and light-duty trucks achieve an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO_2 per mile by model year 2016 (Phase I standards), based on USEPA calculation methods. In August 2012, more stringent phased-in standards were adopted for new model year 2017 through 2025 passenger cars and light-duty trucks. By 2020, new vehicles are projected to achieve 41.7 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 213 grams of CO_2 per mile (Phase II standards). By 2023, new vehicles are projected to achieve 49.4 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 180 grams of CO_2 per mile (Phase II standards). By 2025, new vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile (Phase II standards). CARB staff has provided future year CO_2 emission factors for on-road mobile sources in California that may be used if the project's mobile sources include "all vehicle classifications."[64] With respect to the Project, all vehicle types including passenger vehicles, light-duty trucks, and vendor/delivery trucks, would visit the Medical Center Campus. Therefore, this assessment uses the CO_2 emission factors provided by CARB staff to estimate the future year interim and buildout (2023 and 2030) GHG emissions from mobile sources. Emissions of CH_4 and N_2O were estimated based on the direct result outputs from the CalEEMod tool for years 2023 and 2030. The CO_2, CH_4, and N_2O mobile source emissions were added together, using the appropriate GWP values, to obtain emissions in units of $MTCO_2e$.

With regard to energy usage, the consumption of fossil fuels to generate electricity and to provide heating and hot water generates GHG emissions. Future fuel consumption rates are estimated based on specific square footage of the hospital land uses, as well as predicted water supply needs of the Master Plan Project. Energy usage (off-site electricity generation and on-site natural gas consumption) for the Project is calculated within CalEEMod using the CEC's CEUS data set.[65] This data set provides energy intensities of different land uses throughout the state and different climate zones. However, since the data from the CEUS is from 2002, the CalEEMod software incorporates correction factors to account for compliance with the Title 24 Building Standards Code. This assessment also includes electricity-related GHG emissions from the proposed enclosed parking structure, which would include elevators, lighting, and a ventilation system.

Water and wastewater generated from the Master Plan Project require energy to supply, distribute and treat. The CalEEMod software uses the electrical intensity factors from the 2006 CEC report *Refining Estimates of Water-Related Energy Use in California*.[66] The emissions of GHGs associated with the wastewater treatment process emissions are also calculated using the CalEEMod software as described in the *California Emissions Estimator Model User's Guide, Appendix A*.[67]

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64 *California Air Resources Board, Statewide Emission Factors (EF), March 2014.*

65 *California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/Chart.aspx. Accessed December 2013.*

66 *California Energy Commission, Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report, CEC-500-2006-118, (2006).*

67 *California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, (2013).*

Emissions from solid waste handling generated from the Project are also accounted for in the GHG emissions inventory. The GHG emission factors, particularly for CH_4, are based on default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery).

Other sources of GHG emissions from operation of the Project include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod tool uses landscaping equipment GHG emission factors from the CARB OFFROAD2011 model and the CARB *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)*.[68] The CalEEMod software estimates that landscaping equipment operate for 250 days per year in the South Coast Air Basin.

(2) Consistency with Greenhouse Gas Reduction Plans

The CCAP is a resource for the unincorporated areas of the County. Public agencies and private developers can also use the CCAP to comply with project-level review requirements pursuant to CEQA. CEQA Guidelines specify that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions, provided that the programmatic analysis (or climate action plan) does the following (CEQA Guidelines Section 15183.5):

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Monitor the plan's progress.
- Adopt the GHG Reduction Strategy in a public process following environmental review.

The CCAP meets CEQA Guidelines Section 15183.5 listed above by: (1) quantifying all primary sectors of GHG emissions within the unincorporated areas for 2010 and 2020; (2) including a reduction target that is consistent with the recommendations in the AB 32 Scoping Plan for municipalities to support the overall AB 32 reduction targets; (3) analyzing community emissions for the unincorporated areas as a whole and including predicted growth expected by 2020; (4) including specific measures to achieve the overall reduction target; (5) including periodic monitoring of plan progress; and (6) submitting the CCAP to be adopted in a public process following compliance with CEQA. Therefore, the Project is evaluated for consistency with the CCAP.

[68] *California Air Resources Board, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, (6/13/2003), http://www.arb.ca.gov/msei/2001_residential_lawn_and_garden_changes_in_eqpt_pop_and_act.pdf. Accessed November 2013.*

As discussed previously, the County adopted Title 31 of the County's Code of Ordinances (the Los Angeles County Green Building Standards Code) in November 2013, which adopts by reference the CALGreen code except as changed or modified in Title 31. The County Department of Regional Planning is working on an ordinance to repeal the Green Building and Drought Tolerant Landscaping requirements from Title 22 (Planning and Zoning Code). Additionally, the ordinance will update the Green Building Program's tree requirements in order to increase shade to sidewalks and parking lots for human comfort, and to shade buildings to conserve energy used for air conditioning. In addition, the County of Los Angeles General Plan provides recommendations for emission reduction strategies for reducing GHG emissions. Thus, if the Master Plan Project is designed in accordance with these policies and regulations, it would result in a less than significant impact, since it would be consistent with the overarching local and regional plans and regulations for reducing GHG emissions.

b. Thresholds of Significance

The potential for greenhouse gas emissions impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

(VII) Greenhouse Gas Emissions. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

(1) Direct or Indirect Project GHG Emissions

The *State CEQA Guidelines* do not provide numeric or qualitative thresholds of significance for GHG emissions. However, AB 32 requires GHGs emitted in California to be reduced to 1990 levels by 2020 and 80% below 1990 levels by 2050. The Technical Advisory on CEQA and Climate Change from OPR suggests that, in absence of regulatory guidance or standards, lead agencies, such as the County, must undertake project-by-project analyses consistent with available guidance and current CEQA practice to ascertain project impacts under CEQA. In the latest *State CEQA Guidelines* amendments, which went into effect on March 18, 2010, OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The County has prepared a CCAP which meets *State CEQA Guidelines* Section 15183.5 and provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County, which is consistent with the recommendations in the AB 32 Scoping Plan.[69]

Although GHG emissions can be quantified, CARB, SCAQMD and the County have yet to adopt project-level numerical significance thresholds for GHG emissions that would be applicable to the Master Plan Project. Assessing the significance of a project's contribution to cumulative global climate change involves: (1)

[69] *County of Los Angeles, Department of Regional Planning, Final Unincorporated Los Angeles County Community Climate Action Plan, (August 2015).*

developing pertinent inventories of GHG emissions, and (2) considering project consistency with applicable emission reduction strategies and goals, such as those set forth in the County of Los Angeles CCAP. Because the CCAP meets CEQA Guidelines Section 15183.5, project-specific environmental documents that incorporate applicable CCAP actions may "tier off" the EIR certified for the County General Plan and CCAP to meet project-level CEQA evaluation requirements for GHG emissions. Projects that demonstrate consistency with applicable CCAP actions can be determined to have a less than significant cumulative impact on GHG emissions and climate change (notwithstanding substantial evidence that warrants a more detailed review of project-level GHG emissions). Based on the above factors, a project that generates GHG emissions, either directly or indirectly, would have a significant impact on GHG Emissions if it would result in the following:

GHG-1 Would the Project result in GHG emissions that are not consistent with the County of Los Angeles *Community Climate Action Plan*?

(2) Consistency with Greenhouse Gas Reduction Plans

As part of AB 32, the County and State recommend general policies and measures to minimize and reduce GHG emissions from land use development project. Thus, if the project is designed in accordance and not in conflict with these policies and measures, it would result in a less than significant impact since it would be consistent with the County's strategies and local actions on reducing GHG emissions (County of Los Angeles CCAP). Therefore, a significant impact would occur if:

GHG-2 The Project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

c. Project Characteristics or Design Features

(1) Project Characteristics

The Master Plan Project includes characteristics consistent with the CAPCOA guidance document[70] for mitigating or reducing emissions from land use development projects. The Project would renovate the existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings that meet or exceed the energy standards in the Title 24 Building Standards Code and repurposing/remodeling existing buildings on the campus to improve operational efficiencies. The Project would provide and encourage employees, patients, and visitors to utilize alternative modes of transportation which would reduce vehicle trips and VMT. More specifically, the Project would be located within a quarter-mile of public transportation, including existing Torrance Transit System bus routes (e.g., routes 1, 3, and Rapid 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South Vermont Street. In addition, the western two-thirds of the Campus is designated as a Transit Overlay District (TOD) due to proximity to the Metro Silver Line Transit Station on Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. While the Medical Center Campus' transit accessibility would result in a corresponding reduction in transportation-related GHG emissions, the emissions calculations do not incorporate reductions from the transit accessibility characteristics. As a result, the emissions calculations are considered to be conservative and may overestimate actual emissions.

[70] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010).*

(2) Project Design Features

The Master Plan Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Medical Center Campus, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED) Silver Certification by the U.S. Green Building Council (USGBC) through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in project design, construction and operations; and to provide performance monitoring during Master Plan Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. The following Project Design Features would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project, implementation of which would reduce GHG emissions as well as air pollutant emissions:

PDF-AQ-1, Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.
- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.
- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically

designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.

- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by Project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall incorporate appropriate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

d. Project Impacts

(1) Greenhouse Gas Emissions

Threshold GHG-1: Would the Project result in GHG emissions that are not consistent with the Los Angeles County *Community Climate Action Plan*?

Impact Statement GHG-1: *Impacts from short- and long-term increases in GHG emissions would be less than significant. The Master Plan Project would generate GHG emissions due to construction and operational activities; however, the net increase in annual GHG emissions, directly and indirectly, would be consistent with the Los Angeles County* Community Climate Action Plan.

(a) Project Consistency with CCAP

The Master Plan Project's significance with respect to GHG emissions is evaluated based on its consistency with applicable GHG reduction strategies in the County of Los Angeles CCAP. **Table 4.E-3**, *Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies*, contains a list of GHG-reducing strategies applicable to the Project. The project-level analysis describes the consistency of the Project with these GHG emissions reduction strategies. As discussed in Table 4.E-3, the Master Plan Project is consistent with the applicable strategies in the County of Los Angeles CCAP. Therefore, in accordance with CEQA Guidelines Section 15183.5, which specifies that CEQA project evaluation of GHG emissions can "tier off" a programmatic analysis of GHG emissions such as the Los Angeles County *Community Climate Action Plan*, the Master Plan Project would result in less than significant GHG emissions.

Table 4.E-3

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
Green Building and Energy		
BE-1: Green Building Development	Promote and incentivize at least Tier 1 voluntary standards within CALGreen for all new residential and nonresidential buildings. Develop a heat island reduction plan and facilitate green building development by removing regulatory and procedural barriers.	**Consistent.** According to the County's CCAP, adoption of the CALGreen Tier 1 standards is voluntary, but would result in approximately 10 percent less energy use than the 2013 Title 24 standard for commercial development, which is prerequisite for LEED for typical commercial buildings. However, for health care facilities, LEED requires a 5 percent reduction in energy for new construction, in consideration of the specific electricity needs of hospitals and other health care facilities. Therefore, the Project would be considered to be generally consistent with this measure as the Project would achieve at a minimum the LEED prerequisite for health care facilities as required in PDF-AQ-1, which states that the Project would be designed to optimize energy performance and reduce building energy cost by 5 percent for new construction and 3 percent for major renovations compared to ASHRAE 90.1-2010, Appendix G, and the Title 24 Building Standards Code. The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent. The Project is consistent with the GHG reductions under this strategy.
BE-2: Energy Efficiency Programs	Energy efficiency retrofits for at least 25 percent of existing commercial buildings over 50,000 square feet and at least 5 percent of existing single family residential buildings.	**Not Applicable.** The proposed Project is not an existing building; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for existing buildings.
BE-3: Solar Installations	Promote and incentivize solar installations for new and existing homes, commercial buildings, carports and parking areas, water heaters, and warehouses. (Emissions reductions assume implementation of solar photovoltaics; however, project applicants can install other solar technologies, such as solar thermal, as feasible, which may increase GHG reductions, relative to standard photovoltaics systems.)	**Consistent.** Project buildings shall be constructed with solar-ready rooftops that provide for the installation of on-site solar PV or SWH systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
BE-4: Alternative Renewable Energy	Implement pilot projects for currently feasible wind, geothermal, and other	**Not Applicable.** The proposed Project is not a utility project; therefore, this strategy does not

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
Programs	forms of alternative renewable energy. (Potential future forms of non-GHG energy could include nuclear fusion, which is being researched by many parties, including the Lockheed Martin Skunk Works in Palmdale, but which has not yet been experimentally proven as a viable commercial energy source. As new technologies become proven, the County will consider how they can support further development and deployment of such technologies.) Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for utility pilot projects.
BE-5: Wastewater Treatment Biogas	Encourage renewable biogas projects. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The proposed Project is not a biogas project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for biogas projects.
BE-6: Energy Efficiency Retrofits of Wastewater Equipment	Encourage the upgrade and replacement of wastewater treatment and pumping equipment. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The proposed Project is not a wastewater treatment or pumping project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for wastewater treatment and pumping projects.
BE-7: Landfill Biogas	Partner with the owners and operators of landfills with at least 250,000 tons of waste-in-place to identify incentives to capture and clean landfill gas to beneficially use the biogas to generate electricity, produce biofuels, or otherwise offset natural gas or other fossil fuels. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The proposed Project is not a landfill project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for landfill projects.
Land Use and Transportation		
LUT-1: Bicycle Programs and Supporting Facilities	Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking	**Consistent.** The Project would promote and support local, regional, and State mobility objectives to reduce vehicle miles traveled and infrastructure costs. Bicycle infrastructure

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
	and "end-of-trip" facilities.	including bicycle parking and "end-of-trip" facilities would comply with the applicable portions of the County's HDO (Los Angeles County Code, Title 22, Section 22.52.1225). The HDO requires the following number of bicycle parking spaces for commercial buildings: ▪ Short-term (two hours or less): o General Retail/Restaurants: One space per each 5,000 square feet of gross floor area (two space minimum). o Office: One space per each 20,000 square feet of gross floor area (two space minimum). ▪ Long-term (two hours or longer): o General Retail/Restaurants: One space per each 12,000 square feet of gross floor area (two space minimum). o Office: One space per each 10,000 square feet of gross floor area (two space minimum). In addition, the HDO requires that all new commercial and industrial buildings with 75,000 or more square feet of gross floor area install showers and changing facilities that shall at a minimum be accessible to employees.
LUT-2: Pedestrian Network	Construct and improve pedestrian infrastructure to increase walking and pedestrian access to transit and transit stations/hubs. Program the construction of pedestrian projects toward the goal of completing 15,000 linear feet of new pedestrian improvements/amenities per year.	**Consistent.** The Project would locate related hospital uses in close proximity to each other, which would encourage pedestrian activity. The Project would enhance the pedestrian experience through the provision of landscaped pedestrian walkways through the Medical Center Campus.
LUT-3: Transit Expansion	Collaborate with the Los Angeles County Metropolitan Transportation Authority (Metro) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. Construct and improve bicycle, pedestrian and transit infrastructure to increase bicyclist and pedestrian access to transit and transit stations/hubs.	**Not Applicable.** The Project is not a transit expansion project; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for transit expansion projects.
LUT-4: Travel Demand Management	Encourage ride- and bike-sharing programs and employer-sponsored vanpools and shuttles. Encourage market-based bike sharing programs	**Consistent.** The Project would provide on-site bicycle parking and end-of-trip facilities are required by County's HDO. The Project would also provide parking spaces designed for carpool

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
	that support bicycle use around and between transit stations/hubs. Implement marketing strategies to publicize these programs and reduce commute trips.	or alternative fueled vehicles which will encourage Project employees and visitors to carpool or use less emitting vehicles.
LUT-5: Car-Sharing Program	Implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles.	**Consistent.** The Project would provide parking spaces designed for carpool or alternative fueled vehicles which will encourage Project employees and visitors to carpool or use less emitting vehicles.
LUT-6: Land Use Design and Density	Promote sustainability in land use design, including diversity of urban and suburban developments.	**Consistent.** The Project would be designed to incorporate sustainability and energy efficiency measures and achieve LEED certification. The Project would promote and support local, regional, and State mobility objectives to reduce vehicle miles traveled by providing bicycle parking and end-of-trip facilities. The Medical Center Campus is also accessible to existing public transportation routes.
LUT-7: Transportation Signal Synchronization Program	Improve the network of traffic signals on the major streets throughout LA County.	**Consistent.** The Project's traffic impact analysis includes an impact assessment of Project traffic. Details of the analysis are provided in Section 4.L**.,** *Transportation and Traffic*, and in Appendix I of this Draft EIR. Required improvements to the network of traffic signals in the Project area would be made in accordance with the findings and recommendations of the traffic impact analysis.
LUT-8: Electric Vehicle Infrastructure	Install 500 electric vehicle (EV) charging facilities at County-owned public venues (e.g., hospitals, beaches, stand-alone parking facilities, cultural institutions, and other facilities) and ensure that at least one-third of these charging stations will be available for visitor use.	**Consistent.** The Project shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
LUT-9: Idling Reduction Goal	Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer's specifications.	**Consistent.** Section 2485 in Title 13 of the California Code of Regulations limits the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction to five minutes at any location. The Project shall comply with this regulatory requirement and would encourage construction contractors to further limit idling to 3 minutes or less when practicable and feasible. Construction contractors shall be required to submit a construction vehicle management plan that includes the following information: idling time goals; requiring hour meters on equipment; and documenting the serial number, horsepower, age, and fuel of all onsite

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
		equipment.
LUT-10: Efficient Goods Movement	Support regional efforts to maximize the efficiency of the goods movement system throughout the unincorporated areas. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The Project is not a goods movement project; therefore, this strategy does not apply to the Project. This emission reduction strategy would primarily be implemented by Los Angeles County's Department of Public Works by supporting efforts to evaluate zero and/or near-zero emission freight corridors and working with appropriate agencies and partners to identify and replace at-grade railroad crossings to reduce freight delay and vehicle idling (CCAP, p. C-13). The Project would not conflict with or impede the County's ability to implement this strategy to maximize the efficiency of the goods movement system.
LUT-11: Sustainable Pavements Program	Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Consistent.** Although the County has indicated this measure has not been quantified or counted toward attainment of the County's CCAP target, the Project would strive to reduce waste from the re-pavement/maintenance of roadways directly adjacent to Project construction site areas that are degraded by construction activity and heavy-duty equipment usage. Recycled/reused materials shall be used to the extent available and feasible.
LUT-12: Electrify Construction and Landscaping Equipment	Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Consistent.** Although the County has indicated this measure has not been quantified or counted toward attainment of the County's CCAP target, the Project would utilize electric equipment for construction equipment where feasible. Candidate equipment includes electric cranes, which have been demonstrated as feasible and have been used in other construction projects in the region. The Project shall also prioritize the use of landscaping contractor(s) with electric-powered equipment where available and feasible.
Water Conservation and Wastewater		
WAW-1: Per Capita Water Use Reduction Goal	Meet the State established per capita water use reduction goal as identified by SB X7-7 for 2020. (The State goal is a 20 percent reduction in per capita water use compared to baseline levels.)	**Consistent.** As stated in PDF-AQ-1, the Project would reduce indoor water use by a minimum of 20 percent by installing water fixtures that exceed applicable standards.
WAW-2: Recycled Water Use, Water Supply Improvement Programs, and Stormwater Runoff	Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes consistent with the appropriate provisions of Title 22 and approval of the California Department of Health Services. Manage stormwater, reduce potential treatment, and protect local	**Not Applicable.** As noted by the County, this measure has not been quantified or counted toward attainment of the County's CCAP target.

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
	groundwater supplies. Note: GHG emissions reductions of larger efforts to promote the use of wastewater and gray water have not been quantified or counted toward attainment of the County's CCAP target.	
Waste Reduction, Reuse, and Recycling		
SW-1: Waste Diversion Goal	For the County's unincorporated areas, adopt a waste diversion goal to comply with all state mandates to divert at least 75 percent of waste from landfill disposal by 2020.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris. Project-generated solid waste would be collected by private waste services providers that would process mixed waste that yields diversion results comparable to source separation and would achieve the County's goal of 75 percent waste diversion by 2020. Medical waste would be disposed of in accordance with applicable regulations.
Land Conservation and Tree Planting		
LC-1: Develop Urban Forests	Support and expand urban forest programs within the unincorporated areas.	**Consistent.** The Landscape Master Plan, which is included in the Harbor-UCLA Medical Center Campus Master Plan, would provide a campus-like setting where the use of landscape would help reduce dependency on natural resources by capturing and cleaning stormwater runoff and shading buildings to help reduce cooling demands. Landscaped outdoor spaces would accommodate active social gatherings and passive gardens for contemplation and relaxation. Landscaped areas for exercise would be provided to serve staff and educate the public regarding preventative healthcare. The Landscape Master Plan recommends the planting of a landscape buffer along the Harbor-UCLA Medical Center Campus perimeter that includes trees lining the Medical Center Campus street frontages and major landscape groupings identifying entrances to the Medical Center Campus. Throughout the Medical Center Campus interior, the Master Plan Project proposes landscaped courtyard gardens and plazas and a network of walkways or trails that form a continuous circulation system, allowing staff and

Table 4.E-3 (Continued)

Consistency with Applicable Community Climate Action Plan Greenhouse Gas Reduction Strategies

Strategy	Category / Description	Consistency Analysis
		guests to reach their destinations with minimized opportunities for pedestrian/vehicular conflicts. The Project would also use drought-tolerant and water-efficient landscaping.
LC-2: Create New Vegetated Open Space	Restore and revegetate previously disturbed land and/or unused urban and suburban areas.	**Consistent.** See discussion under LC-1.
LC-3: Promote the Sale of Locally Grown Foods and/or Products	Establish local farmers markets and support locally grown food. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** As noted by the County, this measure has not been quantified or counted toward attainment of the County's CCAP target.
LC-4: Protect Conservation Areas	Encourage the protection of existing land conservation areas. Note: GHG emissions reductions from this strategy have not been quantified or counted toward attainment of the County's CCAP target.	**Not Applicable.** The Medical Center Campus is not an existing land conservation area; therefore, this strategy does not apply to the Project. The Project would not conflict with or impede the County's ability to implement this strategy for existing land conservation areas.

Source: PCR Services Corporation, 2016

(b) Construction Emissions

In order to provide additional information to decision makers and the public, the emissions of GHGs associated with construction of the Master Plan Project were calculated for each year of construction activity. Detailed emissions calculations are provided in Appendix D. Results of the GHG emissions calculations are presented on **Table 4.E-4**, *Unmitigated Construction Greenhouse Gas Emissions*. Although GHGs generated during construction are considered one-time emissions, it is important to include them when assessing all of the long-term GHG emissions associated with a project. The CCAP includes goals and strategies that address construction-related GHG emissions including LUT-9 (idling reduction goal) and LUT-12 (electrification of equipment as feasible). As previously discussed in Table 4.E-3, the Project would be consistent with these measures. As a result, while the Project would result in one-time construction GHG emissions, the Project would be consistent with applicable measures and would therefore not conflict with achievement of the County's GHG emissions reduction target.

(c) Operations

In order to provide additional information to decision makers and the public, the emissions of GHGs associated with operation of the Master Plan Project were calculated. The Project must comply with the portions of the County's Green Building Standards applicable to health care facilities. The Project would incorporate Project Design Features in a manner to achieve the USGBC LEED Silver Certification or equivalent. Additionally, physical and operational Project characteristics for which sufficient data are

Table 4.E-4

Unmitigated Construction Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons) [a]
Construction Phase M	742
Construction Phase C	5,597
Construction Phase 1	1,845
Construction Phase 2	1,563
Construction Phase 3	2,707
Construction Phase 4	12,008
Construction Phase 5	11,342
Construction Phase 6	7,607
Construction Phase LA Biomed	1,017
Total	**44,428**

[a] *Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix D.*

Source: PCR Services Corporation, 2016

available to quantify the reductions from building energy and resource consumption have been included in the quantitative analysis. However, specific measures for achieving LEED Silver Certification are not finalized; therefore, the Project's GHG emissions analysis provided herein does not fully account for all GHG reductions that would occur from Project implementation. Therefore, the GHG emissions analysis conservatively overestimates the Project's emissions and it is likely that actual GHG emissions from the Project would be lower than shown in this analysis. The conservatively estimated maximum annual net GHG emissions resulting from motor vehicle, energy (i.e., electricity, natural gas), water conveyance, and waste sources were calculated for Project buildout and are shown in **Table 4.E-5**, *Annual Greenhouse Gas Emissions*. The net annual emissions from the Project amounts to approximately 0.09 percent of the County's total estimated GHG emissions target for 2020 (6,440 $MTCO_2e$ for the Project compared to 7,104,621 $MTCO_2e$ for the County).

The County's CCAP provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. The reduction target is specifically a County-wide target and not a mandated reduction target for individual projects. The CCAP does not require reductions to occur uniformly from all sources or sectors of GHG emissions. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. As discussed in Table 4.E-3, the Project would be consistent with applicable CCAP measures, which would minimize the increase in GHG emissions that would otherwise occur without implementation of the various sustainability, energy efficiency, water efficiency, solid waste, and transportation reduction measures. Furthermore, one of the Project objectives is to secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles. Achieving this objective by redeveloping an existing hospital site would be more GHG efficient (i.e., result in fewer GHG emissions) than developing a new hospital campus on a greenfield site. Therefore, while the Project results is conservatively estimated to result in a minimal net increase in GHG emissions, the Project would be consistent with applicable CCAP measure to minimize its GHG emissions and the Project would not be expected to conflict with the County's ability to achieve the CCAP target reduction.

Table 4.E-5

Annual Greenhouse Gas Emissions (2030)

Emissions Sources	CO_2e (Metric Tons per Year) [a]		
	Existing	**Project**	**Net Change**
Mobile Sources	26,255	29,551	3,296
Area	< 1	< 1	—
Energy (Electricity and Natural Gas)	5,959	7,428	1,469
Water/Wastewater Conveyance	867	2,030	1,163
Waste	2,209	2,721	512
Subtotal	**35,290**	**41,730**	**6,440**

[a] *Totals may not add up exactly due to rounding in the modeling calculations Detailed emissions calculations are provided in Appendix D of this Draft EIR.*

[b]

Source: PCR Services Corporation, 2016

(2) Greenhouse Gas Reduction Plans

Threshold GHG-2: Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Statement GHG-2: *Construction and operation of the Master Plan Project would not conflict with applicable GHG emissions reductions plans, policies, or regulations. As a result, construction and operation of the Project would not have a significance impact with respect to consistency with GHG reduction plans, and impacts would be less than significant.*

Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the Project's GHG emissions would actually cause a measurable increase in global GHG emissions necessary to influence global climate change. Newer construction materials and practices, current energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to those built years ago; however, the net effect is difficult to quantify. Thus, the estimated net increase in emissions resulting from implementation of the Project presented above may be an over- or underestimation. The GHG emissions of the Project alone would not likely cause a direct physical change in the environment.

According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[71] It is global GHG emissions in their aggregate that contribute to climate change, not any single source of GHG emissions alone. However, given 1) the lack of evidence indicating that those emissions would cause a measurable increase in global GHG emissions necessary to exacerbate global climate change and 2) the fact that the Project incorporates physical and operational

[71] *California Air Pollution Control Officer's Association, CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008.*

Project characteristics and Project Design Features that would reduce potential GHG emissions to a less-than-significant level, the Project is considered not to conflict with the GHG reduction goals of AB 32.

As discussed previously, the Project incorporates a Project Design Feature (PDF-AQ-1) that would reduce GHG emissions by increasing energy-efficiency beyond requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate characteristics that would reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation.

The Project would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. The Project would be designed to optimize energy performance and reduce building energy cost by a minimum of 5 percent for new construction and 3 percent for major renovations. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in the quantitative analysis). The average tree can sequester approximately 330 pounds of carbon dioxide from the atmosphere every year. The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards.

In accordance with the County's Green Building Program and CALGreen, the Project would incorporate the following features supportive of goals to reduce GHG emissions:

- **Energy Conservation:** Buildings must reduce energy demand at least 15 percent below Title 24 (2008 State of California Energy Efficiency Standards). The Project would meet this objective by achieving LEED Silver Certification and exceeding the Title 24 (2013) standards.
- **Outdoor Water Conservation:** A smart irrigation controller must be installed for any landscaped area of the Project. Sixty-five percent of the total landscaped areas shall use drought-tolerant plant species selected from the County's Drought-Tolerant Plant List.
- **Resource Conservation:** At least 65 percent of construction waste (by weight) must be recycled, reused, or diverted. The project would recycle, reuse, or divert 75 percent of its non-hazardous construction waste.
- **Tree Planting**: A minimum of one 15-gallon tree must be planted and maintained for every 10,000 square feet of developed area. At least 65 percent of the trees must be listed on the County's Drought Tolerant Plant List.
- **High-Efficiency Toilets**: New toilets must be rated high efficiency.

Consistency with GHG reduction strategies is an important priority, and reasonable reduction efforts should be taken. As discussed previously in Table 4.E-3, the Master Plan Project is consistent with the applicable GHG reductions strategies and local actions in the County of Los Angeles CCAP. Additionally, the Project is consistent with GHG reduction measures from other applicable plans. **Table 4.E-6**, *Consistency with Applicable Greenhouse Gas Reduction Strategies*, contains a list of GHG-reducing strategies potentially applicable to the Project. The Project-level analysis describes the consistency of the Project with these strategies.

Table 4.E-6

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
AB 1493 (Pavley Regulations)	Reduces greenhouse gas emissions in new passenger vehicles from 2012 through 2016. Also reduces gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020.	**Consistent.** The Project would be consistent with this regulation and would not conflict with implementation of the vehicle emissions standards.
SB 1368	Establishes an emissions performance standard for power plants within the State of California.	**Consistent.** The Project would be consistent with this regulation and would not conflict with implementation of the emissions standards for power plants.
Low Carbon Fuel Standard	Establishes protocols for measuring life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels.	**Consistent.** The Project would be consistent with this regulation and would not conflict with implementation of the transportation fuel standards.
California Green Building Standards Code Requirements	All bathroom exhaust fans shall be ENERGY STAR compliant.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
	HVAC Systems will be designed to meet ASHRAE standards.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
	Energy commissioning shall be performed for buildings larger than 10,000 square feet.	**Consistent.** The Project would be commissioned as part of its USGBC LEED Silver Certification process.
	Air filtration systems are required to meet a minimum of MERV 8 or higher.	**Consistent.** The Project would meet or exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Refrigerants used in newly installed HVAC systems shall not contain any CFCs.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Parking spaces shall be designed for carpool or alternative fueled vehicles. Up to eight percent of total parking spaces will be designed for such vehicles.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Long-term and short-term bike parking shall be provided for up to five percent of vehicle trips.	**Consistent.** The Project would provide bicycle parking and end-of-trip facilities in accordance with the applicable portion of the County's HDO.
	Stormwater Pollution Prevention Plan (SWPPP) required.	**Consistent.** The Project would meet this requirement.

Table 4.E-6 (Continued)

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
	Indoor water usage must be reduced by 20% compared to current California Building Code Standards for maximum flow.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and reduce indoor water usage by a minimum of 20 percent.
	All irrigation controllers must be installed with weather sensing or soil moisture sensors.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Wastewater usage shall be reduced by 20 percent compared to current California Building Standards.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and reduce indoor water usage by a minimum of 20 percent.
	Requires a minimum of 50% recycle or reuse of nonhazardous construction and demolition debris.	**Consistent.** The Project would exceed this requirement as part of its USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris.
	Requires documentation of types of waste recycled, diverted or reused.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process.
	Requires use of low VOC coatings consistent with AQMD Rule 1168.	**Consistent.** The Project would be consistent with this regulation and would meet or exceed the low VOC coating requirements.
	100 percent of vegetation, rocks, soils from land clearing shall be recycled or stockpiled on-site.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process. The Project would recycle or reuse 75 percent of total nonhazardous construction and demolition debris (including 100 percent of nonhazardous vegetation, rocks, and soils).
Climate Action Team	Reduce diesel-fueled commercial motor vehicle idling.	**Consistent.** The Project would be consistent with the CARB Air Toxics Control Measure (ATCM)) to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time (see Section 4.B., *Air Quality*, of this Draft EIR).

Table 4.E-6 (Continued)

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
	Achieve California's 50 percent waste diversion mandate (Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris. Project-generated solid waste would be collected by private waste services providers that would process mixed waste that yields diversion results comparable to source separation and would achieve the County's goal of 75 percent waste diversion by 2020. Medical waste would be disposed of in accordance with applicable regulations.
	Plant five million trees in urban areas by 2020 to effect climate change emission reductions.	**Consistent.** The Project would provide appropriate landscaping on the Medical Center Campus including vegetation and trees.
	Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.	**Consistent.** The Project would, as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process, reduce indoor water usage by a minimum of 20 percent.
	Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates appliance energy efficiency standards that apply to electrical devices or equipment sold in California. Recent policies have established specific goals for updating the standards; new standards are currently in development.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
	Apply strategies that integrate transportation and land-use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/ commercial development along transit corridors, and implementing intelligent transportation systems.	**Consistent.** The Project would incorporate physical and operational Project characteristics that would reduce vehicle trips and VMT and encourage alternative modes of transportation for patrons and employees.
	Reduce energy use in private buildings.	**Consistent.** The Project would utilize energy efficiency appliances and equipment and would exceed the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24 Building Standards Code.
Los Angeles County Green Building Ordinance	Install a smart irrigation controller and require 65 percent of the landscaped area to use drought-tolerant plant species.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver certification.

Table 4.E-6 (Continued)

Consistency with Applicable Greenhouse Gas Reduction Strategies

Source	Category / Description	Consistency Analysis
	Achieve 65 percent waste diversion for construction waste.	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and recycle or reuse 75 percent of nonhazardous construction and demolition debris.
	Minimum of one 15-gallon tree must be planned for every 10,000 feet of developed area.	**Consistent.** The Project would meet this requirement as part of its compliance with the County's requirements.
	Install high efficiency toilets	**Consistent.** The Project would exceed this requirement as part of its compliance with the County's requirements, the CALGreen Code, and the USGBC LEED Silver Certification process and reduce indoor water usage by a minimum of 20 percent.
Los Angeles County Low Impact Development (LID) Standards	All Designated Projects (required) must retain 100 percent of Stormwater Design Volume on-site through infiltration, evapotranspiration, stormwater runoff harvest, or a combination thereof.	**Consistent.** The Project would implement stormwater BMPs consistent with the County's requirements.

Source: PCR Services Corporation, 2016

Since the Project would implement Project Design Features intended to achieve the equivalent of LEED Silver Certification and would incorporate water conservation, energy conservation, tree planting, and other features consistent with the County's Green Building Standards Code, the Project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions and impacts would be less than significant.

(a) Consistency with Executive Orders S-3-05 and B-30-15

At the State level, Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing statewide GHG emissions. Executive Orders S-3-05's goal to reduce GHG emissions to 1990 levels by 2020 was codified by the Legislature as the 2006 Global Warming Solutions Act (AB 32). As analyzed above, the Master Plan Project is consistent with AB 32. Therefore, the Project does not conflict with this component of the Executive Orders.

The Executive Orders also establish the goals to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. These goals have not yet been codified. However, studies have shown that, in order to meet the 2030 and 2050 targets, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its *Climate Change Scoping Plan*, CARB acknowledged that the "measures needed to meet the 2050 are too far in the

future to define in detail."[72] In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."[73] Due to the technological shifts required and the unknown parameters of the regulatory framework in 2030 and 2050, quantitatively analyzing the Project's impacts further relative to the 2030 and 2050 goals currently is speculative for purposes of CEQA. Moreover, CARB has not calculated and released the BAU emissions projections for 2030 or 2050, which are necessary data points for quantitatively analyzing a CEQA project's consistency with these targets.

Although the Project's emissions levels in 2030 and 2050 cannot yet be reliably quantified, Statewide efforts are underway to facilitate the State's achievement of those goals and it is reasonable to expect the Project's incremental emissions to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's emissions total at New Hospital Tower buildout represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Orders' goals.

As discussed previously, CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions. While the 2020 cap would remain in effect post-2020,[74] the Cap-and-Trade Program is not currently scheduled to extend beyond 2020 in terms of additional GHG emissions reductions. However, CARB has expressed its intention to extend the Cap-and-Trade Program beyond 2020 in conjunction with setting a mid-term target. The "recommended action" in the First Update to the Climate Change Scoping Plan for the Cap-and-Trade Program is: "Develop a plan for a post-2020 Cap-and-Trade Program, including cost containment, to provide market certainty and address a mid-term emissions target."[75] The "expected completion date" for this recommended action is 2017.[76] In addition to CARB's First Update, in January 2015, during his inaugural address, Governor Jerry Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions: (1) increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030, (2) cutting the petroleum use in cars and

[72] *California Air Resources Board, Climate Change Scoping Plan, December 2008, page 117.*

[73] *California Air Resources Board, First Update to the Climate Change Scoping Plan, May 2014, page 32.*

[74] *California Health & Safety Code § 38551(a) ("The Statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.").*

[75] *CARB, First Update to the Climate Change Scoping Plan, op. cit,. page 98.*

[76] *Ibid.*

trucks in half, and (3) doubling the efficiency of existing buildings and making heating fuels cleaner.[77] These expressions of Executive Branch policy may be manifested in adopted legislative or regulatory action through the State agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change.

Further, recent studies shows that the State's existing and proposed regulatory framework can allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the State to meet the 2030 and 2050 targets.[78]

For the reasons described above, the Project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the establishment of the 2030 and 2050 targets.

4. CUMULATIVE IMPACTS

The emissions of a single project will not cause or exacerbate global climate change. It is possible that a substantial increase in GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs from even relatively small (on a global basis) increases in GHG emissions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant. A cumulatively considerable impact is the impact of a proposed project in addition to the related projects. However, in the case of global climate change, the proximity of the project to other GHG-generating activities is not directly relevant to the determination of a cumulative impact. Although the State requires Metropolitan Planning Organizations and other planning agencies to consider how region-wide planning decisions can impact global climate change, there is currently no established non-speculative method to assess the cumulative impact of proposed independent private-party development projects.

The land use sector can accommodate growth and still be consistent with statewide plans to reduce GHG emissions. To that end, various agencies have developed programs to guide future building and transportation development towards minimized resource consumption and lowered resultant pollution. The County's CCAP provides goals and strategies that would achieve a reduction target of at least 11 percent

[77] *Transcript: Governor Jerry Brown's January 5, 2015, Inaugural Address, www.latimes.com/local/political/la-me-pc-brown-speech-text-20150105-story.html#page=1. Accessed March 2, 2015.*

[78] *Energy and Environmental Economics (E3), "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios," April 2015; Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions," Vol. 78, pages 158-172. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.*

below 2010 levels for unincorporated areas of the County, although the reductions are not expected to occur uniformly from all sources or sectors of GHG emissions (refer to Table 4-1 of the CCAP). This target is consistent with the recommendations in the AB 32 Scoping Plan. Additionally, the County continues to develop programs to reduce GHG emissions including the Green Building Code and LID Ordinance.

Additionally, CARB has set targets specific to the transportation sector (land use-related transportation emissions), for example, and under SB 375 SCAG must incorporate these GHG-reduction goals into the Regional Transportation Plan and demonstrate that its Sustainable Communities Strategy or Alternative Planning Strategy is consistent with the Regional Housing Needs Assessment. One of the goals of this process is to ensure that the efforts of State, regional and local planning agencies accommodate the contemporaneous increase in population and employment with a decrease in overall GHG emissions. For example, adopting zoning designations that reduce density in areas which are expected to experience growth in population and housing needs, is seen as inconsistent with anti-sprawl goals of sustainable planning. Although development under a reduced density scenario results in lower GHG emissions from the use of that land compared to what is currently or hypothetically allowed (by creating fewer units and fewer attributable vehicle trips), total regional GHG emissions will likely fail to decrease at the desired rate or, worse, increase if regional housing and employment needs of an area are met with a larger number of less-intensive development projects. Additionally, many of the Project-related GHG emissions source sectors, such as electricity generated in-state or imported and combustion of transportation fuels, are covered-entities under the Cap-and-Trade Program and would be reduced sector-wide. Therefore, it is not simply a cumulative increase in regional development or the resultant GHG emissions that threatens GHG reduction goals.

As discussed in Table 4.E-3 and Table 4.E-6, the Project would be consistent with applicable GHG reduction strategies recommended by the County and State. In addition, the project would support and be consistent with relevant and applicable GHG emission reduction strategies in SCAG's Sustainable Communities Strategy. These strategies include locating uses within a relatively short distance of existing transit stops; providing employment near current transit stops; and improving the Medical Center Campus to be more pedestrian and bicycle friendly. As a result, the project would be consistent with the County and State goals. Furthermore, the overwhelming majority of the Project-related GHG emissions are from source sectors that include electricity generated in-state or imported and the combustion of transportation fuels. These sectors are already covered entities under the Cap-and-Trade Program and as such would be reduced sector-wide in accordance with the goals of AB 32, in addition to the previously discussed GHG emissions reductions from the Project-specific energy efficiency design features and VMT-reducing characteristics. Given that the Project would generate GHG emissions that are less than significant, and given that GHG emission impacts are cumulative in nature, the project's incremental contribution to cumulatively significant GHG emissions would be less than cumulatively considerable, and impacts would be less than significant.

5. MITIGATION MEASURES

The Master Plan Project would result in less than significant impacts with respect to emissions of GHGs and consistency with applicable GHG emissions reductions plans, policies, or regulations. Therefore, no mitigation measures would be required.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts regarding emissions of GHGs and consistency with applicable GHG emissions reductions plans, policies, or regulations would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
F. HAZARDS AND HAZARDOUS MATERIALS

1. INTRODUCTION

This section analyzes the potential impacts associated with hazards and hazardous materials that could result from implementation of the Project. The analysis considers potential impacts associated with the historical use of hazardous materials on the Project Site and the transport, use, or disposal of hazardous materials that could occur during construction and operation of the Project. The analysis included in this section is based on the Phase I Environmental Site Assessment (Phase I Assessment) and Hazardous Building Material Survey prepared for the Project, which collectively identify the potential environmental concerns (PECs) and recognized environmental conditions (RECs), as defined in established professional standards, on the Project Site. The Phase I Assessment and Hazardous Building Material Survey contain more detailed information than is summarized below and are provided in Appendix E of this Draft EIR.

One other hazards-related topic, groundwater, is addressed in detail in Section 4.G., Hydrology and Water Quality, of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Historical Site Uses

The Harbor-UCLA Medical Center, originally named the Los Angeles County Harbor General Hospital from 1951 to 1978, was founded in 1943 as the U.S. Army's Port of Embarkation Station Hospital, a receiving point and hospital for servicemen returning from the Pacific during World War II. Facilities included an administration building, a collection of Army barracks and cottages, and a hospital that provided medical services for servicemen and their families living in the area. By 1946, the facility was sold as war surplus by the federal government to the County for the development of Los Angeles County Harbor General Hospital (Harbor General Hospital), to provide County-based medical care and hospital services to the increasingly populous southwestern part of the County.

The existing hospital building (Existing Hospital Tower), located in the eastern portion of the Campus, was developed on previously vacant land and completed in 1962. The Hospital replaced a number of the original Army facility's wooden barracks and cottages. Nearly one-third of the original barracks remain in use today as clinics, offices, shops, storage, laboratories and related facilities, augmented by temporary modular buildings and trailers.

The first major expansion of the 1962 Hospital building, the Surgery and Emergency Room Replacement Project, was completed in 2013. The Project increased the size of the existing emergency room and added surgery suites, adult and pediatric triage, a new entrance lobby, and a waiting area, as well as a new helistop and 544-space parking structure.

b. Existing Conditions

The existing 72-acre Harbor-UCLA Campus is currently developed with approximately 1,279,284 square feet of developed floor area. The central campus facilities were constructed prior to 1960, including the wood-frame barracks and temporary buildings. The Project Site still closely follows the original east-west-oriented street grid established in the 1940s. The Hospital, related treatment facilities, and the majority of Campus support facilities (i.e., facilities management and utilities) occupy the eastern third of the Harbor-UCLA Campus, while outpatient services, including MFI and the related Imaging Center, CII, and other facilities, occupy the western end of the Campus. Patient diagnostic facilities, administration offices, and facilities management functions are scattered throughout the Campus.

Tenants on the Harbor-UCLA Campus include LA BioMed, the Harbor-UCLA Professional Building, and the Children's Institute, Inc. (CII). LA BioMed occupies a number of older buildings throughout the 16.5-acre area encompassing the central portion of the Harbor-UCLA Campus and is consolidating its operations within a smaller 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Campus. The Harbor-UCLA Professional Building houses nine clinical departments that provide a range of clinical specialties, a laboratory, radiology, nuclear medicine and a pharmacy. CII occupies a 23,435-square-foot facility known as the Burton E. Green Campus in the northwestern corner of the Campus.

Harbor-UCLA Medical Campus is surrounded by urban uses. Commercial uses (mostly neighborhood retail businesses), medical/dental services, the Harbor-UCLA Medical Center Employee Children's Center, a multifamily residential apartment complex, and single-family residential neighborhoods ate located to the north, across Carson Street. Neighborhood retail uses, medical services, condominium complexes, two mobile home parks, and wholesale and light industrial uses are located east of the Project Site. Single-family and multi-family residential neighborhoods, the abandoned Union Pacific Railroad right-of-way, and an off-site surface parking lot serving LA BioMed are to the south and west of the Project Site.

(1) Hazardous Materials Database Site Listings

As part of the Phase I Assessment, environmental agency databases that log known hazardous site conditions were reviewed to ascertain whether the Project Site or any adjacent properties were listed on Federal, State, or local databases. These databases list properties by location and provide historic information regarding past use and presence of hazardous conditions. Identification of the databases searched and the findings regarding the Project Site and adjacent sites follows.

(a) Project Site

The Harbor-UCLA Medical Center was listed in the Federal Resource Conservation and Recovery Act (RCRA) Large-Quantity Generator (LQG) list in 2008 for several chemicals including metals, nitroglycerine, formaldehyde, ignitable hazardous wastes, acids, and non-halogenated solvents. There were no violations for this listing. Harbor-UCLA Diagnostic Imaging at 21828 South Normandie Avenue, which is on the Harbor-UCLA Campus, was listed as a small quantity generator (SQG) by RCRA in 1996. The listing showed no violations.

The State Water Resources Control Board GeoTracker lists several Leaking Underground Storage Tanks (LUSTs) on the Harbor-UCLA Campus. Regulatory activities related to these LUSTs, including tank removals,

UST sampling reports, soil and water investigation work plans, and site assessment reports, date back to 1994 and continued until 2000.

Specifically, the GeoTracker database identifies a site on the eastern side of the Harbor-UCLA Campus, near the central plant (aka power plant) with a cleanup status of "Open – Site Assessment" as of March 17, 2015. Additional reports and investigations cited in the database between 1994 and 2000 identify additional soil contamination associated with diesel USTs near the then-proposed Emergency Room expansion loading dock; at a fuel station near Building T-1; near the diesel and amber fuel USTs associated with the central plant; near five USTs located near the Hospital's hazardous waste storage area that were removed in 1994; and in several other on-site locations. Soil detection levels ranged from non-detect to low to moderate, and while site closures, soil excavations, and soil vapor remediation were recommended for some of these sites in the regulatory documentation cited by the GeoTtracker database, it is not known whether all recommended actions were taken and therefore the closure status of these sites is uncertain, as discussed further below.

The Emergency Response Notification System (ERNS) List cites two listings for an approximately 30-gallon gasoline storage tank leak in 1994. Based on the date and activity, it is assumed these were related to the removal of five USTs in 1994.[1]

The Harbor-UCLA Medical Center was listed in the following non-ASTM databases: Historical UST, California Hazardous Material Incident Report System (CHMIRS), Hazardous Waste Information System (HAZNET) Facility and Manifest Data, California Facility Information Database (FID) UST, and Statewide Environmental Evaluation and Planning System (SWEEPS) UST. Based on the listings in multiple environmental databases, primarily for USTs and hazardous waste, the Phase I Assessment concluded that the LUSTs cited in these databases, and the uncertain status of related cleanup and closure, constitute recognized environmental conditions on the Harbor-UCLA Campus.

The HAZNET database lists that Harbor-UCLA had over 1,000 listings from 1993 to 2013 of various chemicals being removed from the site under hazardous waste manifests. HAZNET does not track violations and the presence of a facility on the database does not necessarily indicate that a concern exists at the Project Site at this time. Accordingly, the Phase I Assessment determined the HAZNET listing is not, in itself, considered to represent an environmental concern.

According to information contained on the South Coast Air Quality Management District (SCAQMD) Facility INformation Detail (FIND) Database,[2] Harbor-UCLA's address is listed as LA Co Harbor-UCLA Medical Center with an active status. Equipment with an active permit status include two emergency generators, three low nitrogen oxide burners, and three boilers, all of which had an issued date in 2013. The site address is also listed as LA Co Dept Health Srv, UCLA Harbor Med Ho., with active permits for two "Ethylene Oxide (ETO) Sterilization Hospital" issued in 2000, four emergency generators issued in 1999, and a "Control ETO Sterilization Hospital" issued in 2000. No violations regarding use of this equipment have been recorded.

[1] *See Section 7.2, State Water Resources Control Board GeoTracker Website, in the Phase I Hazardous Materials Assessment Report, provided in Appendix E, for a more detailed summary on the actions taken between 1994 and 2000.*

[2] *http://www.aqmd.gov/home/tools/public/find*

Based on the nature of the equipment and regulatory status, SCAQMD records did not reveal the presence of recognized environmental conditions at the property.

(b) Adjacent Properties

The State Leaking Underground Storage Tank (LUST) database lists four out of 10 facilities adjacent to the Harbor-UCLA Medical Center Campus as potential environmental concerns due to the presence of gasoline in underlying soil and/or groundwater:

- Unocal #4944 at 1259 West Carson Street, located adjacent to the northwest, is reported to have groundwater flow towards the site.
- Tony's Unocal at 1259 West Carson Street, located adjacent to the northwest, is reported to have groundwater flow away from the site.
- Mobil #11-MAF at 21700 South Vermont Avenue, located adjacent to the east, is reported to have soil and groundwater data that shows low to non-detect concentrations of total petroleum hydrocarbons (TPHs) and volatile organic compounds (VOCs).
- Shell at 911 West Carson Street, located adjacent to the northeast, is reported to have groundwater flowing tangential to the site.

Based on the varying groundwater flow directions and proximity of several LUST cases to the site, there is a possibility that groundwater beneath the site is impacted with petroleum hydrocarbons from off-site facilities. Groundwater depths beneath the Harbor-UCLA Campus are between 48 and 60 feet below grade surface (bgs), with a historic high groundwater depth of 30 feet bgs; shallower perched groundwater may periodically be encountered in the area. The remaining six sites are reported as not being an environmental concern to the site. For addresses and listings of the sites, refer to Section 6.14, State Leaking Underground Storage Tank (LUST) Lists: Distance Searched – ¼ mile, of the Phase 1 Hazardous Materials Assessment Report, provided in Appendix E.

Several properties in the Project vicinity were listed on the RCRA database. ExxonMobil Oil Corp. at 21700 South Vermont Avenue, to the east and down-gradient of the site, was listed as a LQG in 2002 and a SQG in 2009. Norge Village Cleaners, located at 1161 West Carson Street, adjacent to the northwest and up to cross-gradient of the site, and Shell Service Station, located at 911 West Carson Street, adjacent to the north and cross-gradient of the site, were listed as SQGs in 1993 and 2002. Violations were not found for any of these three facilities. Based on the absence of reported violations, the Phase I Assessment determined that presence of the property on the RCRA database was not considered to represent a concern to the Project Site.

Several adjacent properties were also listed on the UST Registration List. Tosco/Unocal #30769 at 1259 West Carson Street, located adjacent to the northwest and cross-gradient of the site (e.g., at the same elevation), Mobil Oil Corp S/S #18-MAG at 21700 South Vermont Avenue located adjacent to the northeast and downgradient of the site, and Torrance Harbor Shell at 911 West Carson Street located adjacent to the northeast of the site are all listed on the UST database. These listings alone are not indicative of a release and would not be considered a recognized environmental concern to the site.

(2) Potentially Hazardous Materials on the Project Site

Small quantities of hazardous substances are currently used on the portion of the Project Site occupied by the Harbor-UCLA Medical Center. These substances include common hospital materials (e.g. rubbing alcohol, carbon dioxide cylinders, needles), central plant secondary containment necessities (e.g. anti-foam, bleach, pressure oil), and other cleaning agents (e.g. bleach, clout drums, phosphoric acid drums). Significant evidence of releases or spills was not observed at the site and is therefore not considered an environmental concern. See **Table 4.F-1**, *Hazardous Materials Stored at the Harbor-UCLA Campus*, for a detailed list of hazardous materials and their locations.

Table 4.F-1

Hazardous Materials Stored at the Harbor-UCLA Campus

Building	Location	Storage	Contents	Comments
Hospital	Pharmacy (1st floor)	Small fire closet	Rubbing alcohol	Used to clean surfaces
		RCRA container	Needles	
	Pathology lab (2nd floor)	Fire closets	Bleach, alcohols, reaction buffers, diaminobenzene, acids, methanol	
		Lab area	Three carbon dioxide cylinders	
	Dark room (Basement)	10-gallon bucket	Film fixer	Used for radiation therapy
	In-patient pharmacy (basement)	RCRA containers	Epinephrine, Coumadin, chemotherapy chemicals	Restricted area, pictures not allowed
	Stock room (basement)	Fire closet	Phenol solution, acetic acid, tincture benzoin, isopropyl alcohol	Small quantity (less than 5-gallon) containers
	Loading dock	Enclosure	CO_2, oxygen, medical oxygen, medical nitrogen, empty cylinders	
		Exterior	Approximately 80 new car batteries	Placed on pallets, no secondary containment
Power Plant	Medical gas storage area	Enclosure	NOS, CO_2, helium, argon, sulfur	hexafluoride, nitrogen, oxygen cylinders
	Nitrogen and NOS room S	Enclosure	Nitrogen and NO cylinders	
	Boiler room	Corner of room	Oxygen/acetylene cylinders, 5-gallon buckets and 30- to 55- gallon drums of potassium hydroxide, boiler antifoam, chemical cleaner, corrosion inhibitor, oxygen scavenger	Secondary containment
	Boiler chemical storage area	ASTs	Morpholine, sodium glucoheptonate, sodium metabisulfite	See Section 3.5

Table 4.F-1 (Continued)

Hazardous Materials Stored at the Harbor-UCLA Campus

Building	Location	Storage	Contents	Comments
	Equipment room	Corner of room	5-gallon bucket of pressure oil, 10 50-lb bags of absorbent	Secondary containment
	Exterior	Fire closet	Alcohols	Secondary containment
	Cooling tower	Storage shed	Anti-foam, pressure oil, microbicide, degreaser, bleach, lighter fluid, sulfuric acid	Secondary containment
		Chemical storage area (ASTs)	Microbicide, polymaleic acid, sodium hydroxide	See Section 3.5
LA BioMed	Buildings B1, C1, C3, E1, E6, F1, RB2, RB2 annex, RB3 (2nd floor), HH	Fire closets	Alcohols, acids, acetone, xylenes, chloroform, petroleum ether, hexanes, toluene, 2-propanol, ethanol, film fixer, potassium chloride, glycerin, pyridine, bleach	Small quantity (less than 5-gallon) containers, two 5-gallon buckets of ethyl alcohol in Building HH,
	Building F1	Chemical storage area	Two 135-pound hydrogen peroxide containers	Secondary containment
	Building RB2 annex	Cage washing area	Two 30-gallon clout (soap) drums, two 30 gallon phosphoric acid drums, four 2-gallon spray buckets of bleach and acid	Used to sterilize animal cages, secondary containment
	Buildings C1, C3, D1, E1, RB2, RB3 (2nd floor), HH	Gas cylinders	Oxygen, argon, nitrogen, CO_2, NOS, helium	

ASTs – aboveground storage tanks
CO_2 – carbon dioxide
NOS – nitrous oxide
RCRA – Resource Conservation and Recovery Act

Source: Ninyo & Moore, 2015

Small quantities of hazardous waste were observed in designated buildings on the site. Six storage sheds with secondary containment were labeled for flammable, corrosive, oxidizing, and poisonous materials. Five of the sheds contained fire closets with small quantities of acid, ammonium sulfate, methanol, etc. The last shed contained used fluorescent light bulbs. Several gasoline canisters and, empty drums, an empty nitrogen tank, and an electrical transformer were seen on the site. Staining or signs of release were not observed in or adjacent to the hazardous waste storage area and is therefore not considered an environmental concern.

(a) Underground Storage Tanks (USTs)

Four USTs are present in the central plant area of the Campus; two supply boilers and hold amber fuel and two support emergency backup generators and hold diesel fuel. A fifth UST identified as an interceptor is located beneath the helistop and is used as an emergency spill collection system for potential helicopter fuel release. The presence of these USTs at the central plant represents a potential environmental concern for the site. Details about these USTs can be found in **Table 4.F-2**, *USTs on the Harbor-UCLA Campus*.

Table 4.F-2

USTs on the Harbor-UCLA Campus

Area	Location	Tank Capacity (Gallons)	Contents	Construction	Comments
Power Plant	Northern portion	10,000	Amber Fuel	Double-walled fiberglass	Used for boilers, installed in 1999
		25,000		Single-walled fiberglass	
	Southern portion	15,000	Diesel Fuel	Double-walled fiberglass	Used for emergency backup generators, installed in 1999
		15,000			
Helistop	Adjacent to the south	Unknown	Two empty interceptors	Unknown	Emergency spill collection system for potential helicopter fuel release, no staining observed

Source: Ninyo & Moore, 2015

(b) Aboveground Storage Tanks (ASTs)

ASTs were observed in the central plant area and adjacent to LA BioMed buildings. A total of 12 ASTs were observed in the central plant's boiler chemical storage area, cooling tower chemical storage area, cooling tower storage shed, adjacent to the cooling tower storage shed, the eastern edge, and outside the power station. The contents varied from sulfuric acid to liquid oxygen. The ASTs adjacent to the LA BioMed buildings contained diesel fuel. Detailed AST information can be found in **Table 4.F-3**, *ASTs on the Harbor-UCLA Campus*. No indications of spills, leaks, or staining were observed.

(c) Polychlorinated Biphenyls (PCBs)

PCBs are hazardous materials that were formerly used in such applications as hydraulic fluids, plasticizers, adhesives, fire retardants, etc. Several on-site facilities are considered potential contenders for containing PCBs. Pole-mounted transformers were observed along Medical Foundation Drive, Medical Center Drive, South Drive, and between several buildings at the site. Pad-mounted transformers were also observed at the power station and adjacent to LA BioMed buildings. Staining or signs of release was not observed.

Table 4.F-3

ASTs on the Harbor-UCLA Campus

Area	Location	Tank Capacity (Gallons)	Contents	Comments
Power Plant	Boiler Chemical Storage Area	75	Morpholine	Chemicals used for maintaining boilers, secondary containment, no staining observed
		100	Sodium Glucoheptonate	
		75	Sodium Metabisulfite	
		Unknown	Empty	Empty propane tanks, no secondary containment, no staining observed
	Cooling Tower Chemical Storage Area	75	Microbicide	Chemicals used for corrosion protection, secondary containment, no staining observed
		75	Polymaleic Acid	
		75	Sodium Hydroxide	
	Cooling Tower Storage Shed	300	Sulfuric Acid	Planned to be removed this year, secondary containment, no staining observed
	Adjacent to Cooling Tower Storage Shed	4,000	Empty	Baker tank, originally planned to store water, never used
	Eastern edge	9,000	Liquid Oxygen	No secondary containment, no staining observed
		900		
	Outside Power Station	N/A	Two Autoclaves	One of the autoclave was never put into use, no staining observed
LA BioMed Buildings	Various	Approximately 200 to 250, one is 500	Diesel Fuel	Eight exterior emergency generators, no staining observed, no secondary containment [a]

Notes:

[a] *Secondary containment is a means of surrounding one or more primary storage containers to collect any potential hazardous material spillage in the event of loss of integrity or container failure. Hazardous materials are stored in secondary containment to prevent or minimize the possibility of accidental release.*

Source: Ninyo & Moore, 2015

Transformers were observed in the power station building of the power plant. According to Mr. Juan Oliva of the Los Angeles County Department of Public Works, PCBs are not used in the power station transformers.

Light ballasts, used as building material for the site, manufactured until the late 1970s commonly contained PCBs. Because the building was constructed before the 1970s, it is assumed that there will be PCBs present in the light ballasts on the site. No leaks or damage was observed in association with the electrical equipment. The LADWP would be responsible for the clean-up of any PCBs on the site.

(d) Asbestos-Containing Materials (ACMs)

Asbestos is a naturally-occurring mineral made up of microscopic fibers that has been widely used in the building industry for a variety of uses. Such uses include acoustic and thermal insulation and fireproofing. It is often found in ceiling and floor tiles, linoleum, and pipes, as well as on structural beams and asphalt. However, asbestos can become a hazard when the fibers separate and become airborne. Asbestos has been linked with lung diseases caused by inhalation of airborne asbestos fibers, and its use in building was banned by 1978.

Based on the age of the building construction (prior to 1980), it is possible that ACM is present in the structures. ACMs observed at the Harbor-UCLA Medical Center includes drywall, joint compound, vinyl floor tile, mastic, insulation, cloth tape, coating, caulking, acoustic ceiling tile, gray carpet, buttonboard, transite pipe, linoleum, duct tape, vent tape, white cove base, glue, asphalt shingles, thermal system insulation, silver paint, and sealant. (Detailed results from an asbestos survey are provided in Table 1 of the Harbor-UCLA Hazardous Building Material Survey in Appendix E.) Prior to renovation or demolition activities which would disturb identified ACMs, a licensed abatement removal contractor shall be contacted to remove the ACMs and perform stabilization activities as required.

(e) Lead-Based Paint (LBP)

Lead is a naturally occurring element and heavy metal that was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. Lead compounds continued to be used as corrosion inhibitors, pigments, and drying agents from the early 1950s to 1972, when the Consumer Products Safety Commission specified limits on lead content in such products. Lead-based paint (LBP) is of concern both as a source of exposure and as a major contributor to lead in interior dust and exterior soil. Based on the date of building construction, it is possible that LBP has been used on the property in the past. For the purposes of identifying LBP on the site and for the Lead-Containing Surfaces (LCS) Survey, any lead-based surface is considered a LCS. (Detailed results from the LCS survey are provided in Table 2 of the Harbor-UCLA Hazardous Building Material Survey in Appendix E.) Identified LCSs shall not be disturbed. Prior to renovation or demolition activities which would disturb identified LCSs, a licensed abatement removal contractor should be contacted to remove the LCSs and perform stabilization activities as required.

(f) Mold

Review of site documentation revealed no documented cases of mold or water intrusion events occurring at the Project Site, and no mold was observed during site reconnaissance.

(3) Other Potential Hazardous Materials on the Project Site

The Phase I Assessment also analyzed potential hazards related to radon and lead in drinking water. Radon is a naturally-occurring, colorless, odorless gas that is a by-product of the decay of radioactive materials potentially present in bedrock and soil. Based on a review of statistical and testing data in Los Angeles

County, radon is not considered to represent an environmental concern at the Project Site and no additional investigation was recommended. Potable water supplied to the Project Site meets or exceeds all drinking water standards, including those for lead, in accordance with applicable drinking water quality standards (refer to Section 4.M.1, Water Supply, of this Draft EIR for further discussion). As such, lead in drinking water testing was not conducted.

According to the City of Los Angeles Department of Building and Safety, the Project is not located within a methane hazard site or buffer zone.[3] Furthermore, according to the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) records, no oil wells are located on the Project Site.[4]

c. Regulatory Setting

(1) Federal

(a) Hazardous Materials Management

The use, storage, and disposal of hazardous materials are subject to Federal, State, and local regulations as further discussed below.

The Federal Resource Conservation and Recovery Act (RCRA) (42 U.S.C. secs. 6901-6992k) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, generators of hazardous waste must register and obtain a hazardous waste activity identification number. RCRA allows individual states to develop their own program for the regulation of hazardous waste as long as it is at least as stringent as RCRA. The State of California has developed the California Hazardous Waste Control Law (HWCL) (Health and Safety Code sec. 25100 et seq. and 22 California Code of Regulations [CCR] sec. 66260.1 et seq.) and the U.S. Environmental Protection Agency (USEPA) has authorized RCRA enforcement to the State of California. Primary authority for the statewide administration and enforcement of HWCL rests with California EPA's (Cal-EPA) Department of Toxic Substances Control (DTSC).

The Federal Occupational Safety and Health Act of 1970, which is implemented by the Federal Occupational Safety and Health Administration (OSHA), contains provisions with respect to hazardous materials handling. Federal OSHA requirements, as set forth in 29 Code of Federal Regulations (CFR) Section 1910, et. seq., are designed to promote worker safety, worker training, and a worker's right–to-know. The U.S. Department of Labor has delegated the authority to administer OSHA regulations to the State of California. The California OSHA program (Cal-OSHA) (codified in the CCR, Title 8, or 8 CCR generally and in the Labor Code secs. 6300-6719) is administered and enforced by the Division of Occupational Safety and Health (DOSH). Cal-OSHA is very similar to the Federal OSHA program. Among other provisions, Cal-OSHA requires employers to implement a comprehensive written Injury and Illness Prevention Program (IIPP) for potential workplace hazards, including those associated with hazardous materials.

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[3] *City of Los Angeles Department of Public Works, LAMC, Methane Ordinance Map A-20960. City Ordinance No. 175,790. (February 4, 2004).*

[4] *California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOC) http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx, Accessed January 12, 2016.*

The Safe Drinking Water and Toxic Enforcement Act (22 CCR sec. 12000 et seq.), Proposition 65, lists chemicals and substances believed to have the potential to cause cancer or deleterious reproductive effects in humans, restricts the discharges of listed chemicals into known drinking water sources at levels above the regulatory levels of concern, requires public notification of any unauthorized discharge of hazardous waste, and requires that a clear and understandable warning be given prior to a known and intentional exposure to a listed substance.

At the local level, the County of Los Angeles Fire Department Health Hazardous Materials Division administrates hazardous waste inspections for generators and monitors their activities, including handling, storage, transportation, and disposal. Specifically, business and facilities that handles hazardous waste and/or materials at any one time during a year equal to, or greater than a total volume of 55 gallons, a total weight of 500 pounds, or 200 cubic feet of a compressed gas will be constituted as a hazardous materials handler and must report hazardous waste information to the California Environmental Reporting System (CERS).[5] The Health Hazardous Materials Division's Hazardous Waste Program provides a detailed Generator Requirements Summary Chart to give inspectors a list of requirements as they apply to Large Quantity Generators (LQGs), Small Quantity Generators (SQGs), and more.[6] Different documentation required include manifests, biennial reports, personnel training plans, and contingency plans.

(b) Polychlorinated Biphenyls

PCBs are regulated by the EPA under the Toxic Substances Control Act (TSCA). These regulations ban the manufacture of PCBs although the continued use of existing PCB-containing equipment is allowed. TSCA also contains provisions controlling the continued use and disposal of existing PCB-containing equipment. The disposal of PCB wastes is also regulated by TSCA (40 CFR 761), which contains life cycle provisions similar to those in RCRA. In addition to TSCA, provisions relating to PCBs are contained in the HWCL, which lists PCBs as hazardous waste.

(c) Airport Safety Provisions

The Federal Aviation Administration (FAA) has established an advisory circular with regard to safety concerns associated with the construction of high-rise buildings since such buildings may present a hazard to aircraft operations.[7] Federal Aviation Regulations Title 14 Part 77, Objects Affecting Navigable Airspace, establishes minimum standards to ensure air safety by regulating the construction or alteration of buildings or structures that may affect airport operations.[8]

The FAA requires that Form 7460-1, Notice of Proposed Construction or Alteration be filed with the FAA regional office prior to construction of buildings that are 200 feet or greater in height from the graded terrain. Any structure that exceeds an overall height of 200 feet above ground level should generally be

[5] *http://cers.calepa.ca.gov/*
[6] *http://www.fire.lacounty.gov/wp-content/uploads/2014/03/Hazardous-Waste-Generator-Summary-Requirements.pdf*
[7] *FAA Advisory Circular 70/7460-1L (December 4, 2015).*
[8] *14 C.F.R. Part 77 (2001).*

marked and/or lighted.[9] However, this determination is made by FAA and depends on terrain features, weather patterns, geographic location, number of structures, and overall layout of design.[10]

(2) State

(a) Underground Storage Tanks (USTs)

Underground Storage Tanks are regulated under Subtitle I of RCRA and its regulations which establish construction standards for new UST installations (those installed after December 22, 1988), as well as standards for upgrading existing USTs and associated piping. Since 1998, all non-conforming tanks were required to be either upgraded or closed.

The State regulates USTs pursuant to Health and Safety Code, Division 20, Chapter 6.7, and CCR Title 23, Division 3, Chapter 16 and Chapter 18. The State's UST program regulations include among others, permitting USTs, installation of leak detection systems and/or monitoring of USTs for leakage, UST closure requirements, release reporting/corrective action, and enforcement. Oversight of the statewide UST program is assigned to the State Water Resources Control Board (SWRCB) which has delegated authority to the Regional Water Quality Control Board (RWQCB) and typically on the local level, to the fire department. The LAFD administers and enforces Federal and State laws and local ordinances for USTs at the Project Site. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD inspectors. If a release is documented that affects groundwater, the project file is transferred to the RWQCB for oversight.

(b) Oil and Gas Fields

The California Division of Oil, Gas and Geothermal Resources (DOGGR) is the State agency responsible for the oversight of drilling, operation, maintenance, plugging and abandonment of gas, oil and geothermal wells. DOGGR established a regulatory program for the management of these resources, emphasizing their responsible development through sound engineering practices that protect the environment, prevent pollution and ensure public safety. DOGGR recommends that construction of buildings over or in the proximity of plugged and abandoned oil wells should be avoided, and if not feasible, then plugging or re-plugging wells should be performed to current DOGGR standards. The Project Site does not contain active or abandoned gas, oil or geothermal wells.

(c) Asbestos-Containing Materials

In California, any facility known to contain asbestos is required to have a written asbestos management plan (also known as an Operations and Maintenance Program [O&M Program]). Removal of ACMs must be conducted in accordance with the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1403. Rule 1403 regulations require that the following actions be taken: (1) a survey of the facility prior to issuance of a permit by SCAQMD; (2) notification of SCAQMD prior to construction activity; (3) asbestos removal in accordance with prescribed procedures; (4) placement of collected asbestos in leak-tight containers or wrapping; and (5) proper disposal.

[9] *FAA Advisory Circular 70/7460-1L (December 4, 2015).*
[10] *Ibid.*

(d) Lead-based Paint

Cal-OSHA has established limits of exposure to lead contained in dusts and fumes. Specifically, CCR Title 8, Section 1532.1 establishes the rules and procedures for conducting demolition and construction activities and establishes exposure limits, exposure monitoring, and respiratory protection for workers exposed to lead.

(3) Local

(a) Methane Gas

The County of Los Angeles Methane Gas Mitigation Standards, Title 26, Ordinance 110.3 and Ordinance 110.4 establishes requirements for buildings and enclosed structures located in areas classified as being either in a methane zone or methane buffer zone. The Landfill Gas Protection System ensures the safety of buildings and their occupants from gas generation/migration that exists on a site. Requirements for new construction within such zones include a gas control system, gas monitoring system, gas monitoring program, contingency plan, and a covenant and agreement. The County has prepared a Methane Package that details the codes and laws that pertain to methane gas for the County of Los Angeles.[11] The County also provides maps of major waste systems and oil/gas well locations within the County of Los Angeles. Pursuant to the County mapping, the Project Site is not located in a methane zone or methane buffer zone.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The evaluation of hazardous conditions and materials associated with construction and/or operation of the Project is based on the Project's Phase I Hazardous Materials Assessment, contained in Appendix E, prepared by Ninyo & Moore in April 2015. The Phase I Assessment identified the potential presence of hazardous materials occurring on the Project Site. The Phase I Assessment methodology included a site survey, visual observation, interviews regarding current property usage and conditions, review of historical information (historic records sources, historic aerial photographs and topographic maps, historic city directories, property tax files, Los Angeles County Department of Public Works (Building and Safety Division) records, and Sanborn Fire Insurance Rate Maps) and review of regulatory agency databases and files pertaining to the Project Site. The findings of the various reports and data base searches were reviewed to identify the potential hazardous impacts for construction and/or operation of the Project.

Impacts regarding potential impacts associated with oil fields and methane were evaluated by review of State regulatory guidelines and mapping of the location of such fields and zones. Impacts regarding high-rise building effects on air operations were based on review of FAA regulations.

b. Thresholds of Significance

The potential for hazards and hazardous materials impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

(IX) Hazards and Hazardous Materials. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release ot hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The County determined in the NOP/IS prepared for the Project (see Appendix A of this Draft EIR) that the proposed Project would have no impact with respect to Checklist question h). Accordingly, this environmental topic is not evaluated in this EIRBased on the above factors, the Project would have a potentially significant impact on Hazards and Hazardous Materials if it would:

HAZ-1 Ccreate a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

HAZ-2 Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

HAZ-3 Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

[11] *https://dpw.lacounty.gov/epd/swims/docs/pdf/methane/Methane%20Packet.pdf*

HAZ-4 Result in a safety hazard for people residing or working in the project area, for projects located within an airport land use plan; or where such a plan has not been adopted, within two miles of a public airport or public use airport; or within the vicinity of a private airstrip.

HAZ-5 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

c. Project Characteristics or Design Features

The Project would include demolition and renovation activities associated with different buildings on the Harbor-UCLA Medical Center Campus, leading to an increase of approximately1,178,071 square feet of developed floor area. The Project would also introduce ongoing operations that would involve the use of common chemicals/materials associated with normal hospital and medical research uses. As cited in the Regulatory Section above, improvements to the Harbor-UCLA Medical Center Campus would be implemented in compliance with regulatory compliance measures that provide safety from potential contact with hazardous materials. Demolition/construction activities would be implemented pursuant to compliance measures that address potential contamination of earth and other on-site utility facilities, and Project operations would be subject to compliance measures for the handling of common household hazardous waste materials, and non-use of hazardous materials.

See Chapter 2.0, Project Description, in this Draft EIR for more information, including but not limited to: Figure 2-4, Existing Campus Buildings; Figure 2-6, Harbor-UCLA Medical Campus Master Plan Site Plan; and Table 2-1, Harbor-UCLA Master Plan Project - Existing and Proposed Land Use Summary.

d. Project Impacts

(1) Hazardous Materials Management

Threshold HAZ-1: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Statement HAZ-1: *Project construction involves the demolition of existing buildings, grading, and excavation, which could result in the potential release into the environment of hazardous materials during removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, or the disturbance of on-site soil that may be contaminated by past USTs on the Campus or underlying groundwater that may be contaminated by nearby off-site LUSTs. These represent potential environmental concerns on the Harbor-UCLA Campus and their disturbance is considered a potentially significant impact. Project operations would require the storage, use, and disposal of limited quantities of hazardous materials and waste routinely used in hospitals and related facilities, in a manner consistent with manufacturer's recommendations and applicable regulatory requirements. The potential for upset and accidental conditions resulting in the release of these materials is low and related impacts are considered less than significant.*

The Harbor-UCLA Medical Center Campus Master Plan Project would include the following: (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including

administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; (5) new Bioscience Tech Park; and (6) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements. Some existing buildings would be demolished and replaced while others, such as the Existing Hospital Tower, would be modified for different uses. Project construction, to be implemented in phases over the course of approximately 15 years, would require the remediation of buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LAFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Nonetheless, construction-related activities have the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact.

Construction also would involve the short-term use and disposal of hazardous substances such as paint, adhesives, surface coatings, finishing materials, and cleaning agents during building finishing activities. The use and disposal of such materials would take place in accordance with applicable federal, state, and local regulations governing health and safety and such activities are not anticipated to create a significant hazard to the public or environment. Related impacts would be less than significant.

Project operations would involve the use and storage of limited quantities of hazardous materials such as cleaning solvents, painting supplies, and pesticides used for landscaping. Additionally, wast generated by general hospital operations typically includes regulated medical waste, "sharps" containers, pharmaceutical waste, chemo waste, and pathological waste, and the nature of future hospital operations on the Campus will not significantly differ from existing daily operations. Furthermore, future expanded LA BioMed operations and operation of the proposed Biotech Science Campus on the Harbor-UCLA Campus would involve the use of limited quantities of potentially hazardous materials typical of those used in biomedical research facilities. All potentially hazardous materials and waste handled on the Harbor-UCLA Campus would be used, stored, and disposed of in accordance with manufacturer instructions and applicable federal, state, and local health and safety regulations. Accordingly, impacts related to the routine transport, use, and disposal of such materials would be less than significant.

Mold, radon, and lead in drinking water were not considered to represent an environmental concern at the Project Site. The Project Site is also not located within a methane hazard site or buffer zone. Project implementation would, therefore, result in less than significant impacts with respect to these hazards.

Threshold HAZ-2: Would the Project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?

Impact Statement HAZ-2: *As discussed under Threshold/Impact Statement HAZ-1, Project construction has the potential to result in the accidental release of hazardous materials related to the removal and/or remediation of existing on-site USTs, ASTs, PCBs, ACMs, and LBP, as well as the disturbance of on-site*

soil and/or groundwater that may be contaminated by nearby off-site LUSTs, which represent potential recognized environmental concerns on the Harbor-UCLA Campus. There are no schools within a quarter-mile of the Harbor-UCLA Campus and impacts related to the emissions or handling of hazardous materials in close proximity to schools would be less than significant. However, a child care facility located immediately north of the Medical Center Campus, which could be potentially affected by accidental releases of hazardous materials. As such, impacts in this regard are considered potentially significant.

There are 11 public schools within a three-mile radius of the Harbor-UCLA Campus, but no public or private schools within a quarter-mile. Although Project construction activities could result in the release of hazardous materials, such releases would not take place within a quarter-mile of an existing or proposed school and the potential for impacts on schools would be less than significant. Although no public or private schools are located in proximity to the Medical Center Campus, the Harbor-UCLA Kindercare child care center is located along the north side of Carson Street approximately 200 feet north of the Medical Center Campus. Since construction activities would have a limited potential to result in the incidental release of existing sources of contamination, and thus could affect children and staff at the facility, impacts to the existing child care facility would be considered potentially significant. However, implementation of applicable mitigation measures identified below would reduce the potential for adverse effects on the existing child care center to acceptable levels.

Threshold HAZ-3: Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment?

Impact Statement HAZ-3: *Harbor-UCLA is listed on several environmental databases due to inconclusive documentation regarding proper remediation and site closure following 1994 removal of five on-site USTs, as well as the presence of Large and Small Quantity Generators of hazardous waste on the Campus. Four adjacent off-site properties to the east were also listed due to the potential for LUST petroleum hydrocarbon contamination of underlying groundwater. As stated under Threshold/Impact Statement HAZ-1, construction could result in the release of hazardous materials due to disturbance of potentially contaminated on-site soil and/or groundwater; this is a potentially significant impact. Hazardous waste generated during Project operations is not considered a hazard to human health or the environment and related impacts would be less than significant.*

At the locations of five USTs removed in 1994, some staining and moderate hydrocarbon contamination of nearby soil samples were observed, according to the Phase I Assessment prepared for the Harbor-UCLA Campus. Documentation of cleanup activities at this location does not extend past 2000 and it is not clear whether proper soil excavation, soil vapor remediation, and site closure were completed. Moreover, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, although the potential for Project-related excavation to intercept groundwater at depths of 48-60 feet bgs, or historic high groundwater at 30 bgs, is low. Nonetheless, Project construction activities have the potential to result in a significant hazard to the public or environment as the result of disturbance of potentially contaminated soil and groundwater due to the unknown cleanup status of the documented USTs. This is considered a potentially significant impact.

(2) Airport Safety Provisions

Threshold HAZ-4: Would the Project result in a safety hazard for people residing or working in the project area if the Project Site is located within an airport land use plan; or where such a plan has not been adopted, within two miles of a public airport or public use airport; or within the vicinity of a private airstrip?

Impact Statement HAZ-4: *Harbor-UCLA is not located within an airport land use plan or the vicinity of a private airstrip; the nearest public airports are between four and 11 miles away. The Project proposes relocation of the existing helistop to a temporary and, ultimately, permanent location on the Harbor-UCLA Campus during Master Plan Project buildout. Helistop operations during construction and following buildout would not differ substantively from existing helistop operations in terms of the number of flights, composition of the helicopter fleet, or proposed flight paths. Project-related safety hazards due to airport or helistop operations would be less than significant.*

The nearest airports to the Harbor-UCLA Campus include Zamperini Field in Torrance (four miles away), Hawthorne Municipal Airport (seven miles away), Compton/Woodley Airport (nine miles away), and Los Angeles International Airport (eleven miles away). Because of this distance, Project operations, including helicopter operations, are not anticipated to interfere with operations of these or any other airports or airstrips.

(3) Emergency Response Plans

Threshold HAZ-5: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Statement HAZ-5: *Impacts regarding emergency response plans would be less than significant. The Project would not use hazardous materials or have on-site hazardous conditions that would conflict with or obstruct implementation of any emergency response plans. Further, the Project would not interfere with emergency access routes.*

There are no current or anticipated future conditions on the Harbor-UCLA Campus that would impair implementation of any existing emergency response plans or evacuation plans. The presence of potential and recognized environmental conditions such as PCBs, ACMs, and LBP in on-site buildings and the removal of ASTs and USTs and any associated soil or groundwater contamination, would be adequately addressed through required compliance with regulations governing public health and safety, as previously discussed under Threshold/Impact Statement HAZ-1.

The Project would not require the use of hazardous materials for construction, other than such materials as as paint, surface coatings, and other materials during building finishing activities, as discussed under Threshold/Impact Statement HAZ-1. With respect to operations, the use and disposal of such hazardous materials as cleaning solvents, painting supplies, and pesticides, as well as medical waste and hazardous materials associated with biomedical operations, would take place in accordance with applicable federal, state, and local regulations governing health and safety and such activities are not anticipated to create a significant hazard to the public or environment. Related impacts would be less than significant.

The Project would implement on-site provisions for public safety, including plans to address on-site emergency incidents. For further discussion, refer to Section 4.K.1, Fire Protection and Emergency Medical Services, and Section 4.K.2, Police Protection.

Implementation of the Master Plan Project would not adversely affect existing emergency access routes. Although Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street as well as an unsignalized staff entrance on Vermont Avenue would be created. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision of on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures. Such occurrences would be implemented in accordance with a construction traffic management plan, as stated in Section 4.L., Transportation and Traffic, of this Draft EIR which would allow for responses to emergency accessibility needs. The existing helistop would be temporarily relocated to the western end of the Campus during construction of the New Hospital Tower, and accommodations would be made to patient transport between the temporary helistop and Existing Hospital, until such time as the new permanent helistop is operational as part of the New Hospital Tower.

These Project features, together with regulatory compliance, would avoid the need to generate new emergency plans beyond those that would normally be implemented to address on-site emergency situations, and would avoid adverse impacts regarding the implementation of existing evacuation plans. Related impacts would be less than significant.

e. Cumulative Impacts

As described under Existing Conditions, the Phase I Assessment identified all potentially hazardous conditions in the Project vicinity and concluded that based on distance, topography, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the sites surrounding the Project Site listed in agency databases are considered to represent a likely past, present, or material threat of release that would adversely affect the Project Site. This would also be the case for development on nearby properties.

All development in the Project vicinity would be subject to the same local, regional, State, and Federal regulations pertaining to hazards and hazardous materials as the Harbor-UCLA Master Plan. Therefore, with adherence to such regulations, the Project's incremental contribution to cumulatively significant impacts, considered together with related projects, would be less than cumulatively considerable.

Implementation of Project Design Feature PDF-TRAF-1, which requires the development of a construction traffic management plan for Project components that could require off-site lane closures and traffic detours, would ensure the Project's contribution to cumulatively significant emergency or evacuation plans would be less than cumulatively considerable.

4. MITIGATION MEASURES

The following mitigation measures are required to reduce potential impacts described in the Impact Statements HAZ-1, HAZ-2, and HAZ-3 to a less than significant level.

MM-HAZ-1: The abatement of ACMs, LBP, and PCBs in existing on-site buildings shall be conducted in accordance with the recommendations of the Hazardous Building Materials Survey prepared for the Harbor-UCLA Campus, which are as follows:

- The identified ACMs and surfaces containing LBP shall not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor shall remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor must maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities.
- The identified surface containing LBP shall not be disturbed. Any LBP in a non-intact condition shall be abated or the component properly removed or encapsulated. Lead containing ceramic tiles shall be removed prior to demolition activities. Any lead related removal activities shall be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1.
- Proper LBP waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LBP material (ceramic tiles and loose and flaking paint) shall be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LBP waste material must be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample must be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample must be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA- (California-) Hazardous waste.
- Miscellaneous hazardous building materials shall be removed and properly recycled or disposed by the licensed abatement contractor prior to renovation or demolition activities. Contractor shall provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements.
- Abatement monitoring consulting services shall be performed by a third-party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities.

MM-HAZ-2 Prior to initiation of excavation and grading activities in the areas identified in the Phase I Assessment as containing potential soil contamination or for which site closure is not confirmed (from either on- or off-site USTs/LUSTs or ASTs), Harbor-UCLA shall retain a

qualified environmental consultant to prepare a Soils Management Plan for each development phase to be submitted to the Los Angeles County Fire Department for review and approval. The Soils Management Plan shall be implemented during excavation and grading activities for proposed improvements in the areas identified in the Phase I assessment as containing potential soil contamination to ensure that site closure is property implemented and any contaminated soils encountered are properly identified, removed and disposed of off-site. The plan shall include the following:

- A qualified environmental consultant shall be present as necessary during grading and excavation activities to monitor compliance with the Soils Management Plan and to actively monitor the soils and excavations for evidence of contamination.
- Any soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or any other contamination shall be evaluated, based upon appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility.
- All identified contaminated soils shall be properly removed, handled and transported to an appropriately licensed disposal facility, in accordance with the Soils Management Plan prepared for each respective development phase.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potentially significant impacts related to hazards and hazardous materials would be less than significant with compliance with applicable regulatory requirements and implementation of the required mitigation measures.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
G. HYDROLOGY AND WATER QUALITY

1. INTRODUCTION

This section describes the affected environment and regulatory framework associated with hydrology and water quality on the Harbor-UCLA Campus and in the Project vicinity. It also describes impacts on hydrology and water quality that would result from implementation of the proposed project. Since plans for buildout of the Master Plan Project are presently conceptual, analysis and determination of potential impacts are based on the general concept and layout described in Section 2.0, Project Description, of this Draft EIR rather than a detailed, fixed plan. Information in this section is based on documents including the Harbor-UCLA Master Plan (2012), Los Angeles County General Plan Update (2015) and associated EIR (2015).

2. ENVIRONMENTAL SETTING

a. Surface Water Quality

The Project site is currently developed with a 72-acre Medical Center Campus which includes the Harbor-UCLA Medical Center and three other major tenants; LA BioMed, the largest tenant, the Harbor-UCLA Medical Foundation, Inc., and the Children's Institute International. A number of other County departments, including offices of the Department of Mental Health, occupy buildings on the Medical Center Campus. Land cover on-site consists primarily of buildings and pavement with limited and discontinuous landscaping located throughout the campus. Land uses at the site include a mix of commercial, transportation, institutional and landscape. Land uses around the medical center include commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor-UCLA Medical Center Employee Children's Center and a multifamily residential apartment complex are located on Carson Street. The area north of Carson Street is a predominantly single-family residential neighborhood. Vermont Avenue is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block is developed with a condominium complex and mobile home parks. Wholesale and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast. Single-family and multi-family residential neighborhoods border the Medical Center Campus to the south as well as to the west. The abandoned Union Pacific Railroad right-of-way area along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Medical Center Campus.

The Project site does not appear to include water quality or Stormwater controls, such as Stormwater BMPs, LID features, or hydromodification management facilities. According to the Harbor-UCLA Master Plan, previously approved drainage plans for the emergency/surgery replacement indicate that several dry wells are utilized in the new development area. Rainfall and stormwater runoff on-site are managed by roof drains, catch basins, drain inlets, underground pipes, curbs, gutters, overland sheet flows, driveways, or other means of conveyance to the on-site storm drain system.

(1) Stormwater Runoff (Typical Pollutants from Project Site)

Stormwater runoff from the Project site is typical of urbanized areas and includes pollutants from motor vehicles and other transportation related uses (parking lots). Pollutants include hydrocarbons, oil, grease, sediment and heavy metals. Pollutants associated with landscape maintenance are also likely to be present in Stormwater runoff. These pollutants include nutrients from fertilizers and herbicides and pesticides. As the site is a medical center, and has a high volume of visitors, trash is also expected to be a potential pollutant. Fecal coliform bacteria and other pollutants are typically found in Stormwater runoff from land uses similar to those at the site.

Landscaping throughout the Medical Center Campus is limited and discontinuous. There are several landscaped courtyards, predominantly at the western end of the Campus, surrounding the MFI and CII buildings, and on the LA BioMed Campus, and in scattered locations in the north-central Campus. In addition, the main entrance to the Hospital on Carson Street is planted with mature trees, shrubs, and a lawn setback. The Vermont Avenue frontage, adjacent to the new parking structure and Hospital parking lot, and the corner of the Campus at Carson Street and Vermont Avenue, are the most heavily landscaped portions of the Medical Center Campus perimeter, with mature trees and a landscape setback from the sidewalk.

Table 4.G-1, *Pollutants of Concern by Land Use*, summarizes typical pollutants of concern according to land use. The majority of the pollutants listed are from the February 2014 County of Los Angeles Department of Public Works *Low-Impact Development Standards Manual*. Other pollutants the EPA recognizes as typically associated with the land uses present on the Project site are also included in the table.

(2) Pollutants of Concern Based on Receiving Water Impairment

The Project site is located within Region 4 (Los Angeles Region) of the RWQCB. The Los Angeles Region encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the Coast of Western Ventura County) and the eastern Los Angeles County line, as well as the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina, and San Clemente). The region also includes all coastal waters within three miles of the continental and island coastlines. The Project site falls within the Dominguez Watershed which encompasses approximately 133 square miles in southwestern Los Angeles; 120 square miles is land and the rest is the Los Angeles/Long Beach Harbors. The watershed is composed of three subwatershed drainage areas; Upper Dominguez Channel, Lower Dominguez Channel and Estuary, and Los Angeles and Long Beach Harbors including Machado Lake[1]. The subwatersheds drain primarily via an extensive network of underground storm drains. The Upper Dominguez Channel drains into the Dominguez Channel while the Lower Dominguez Channel drains directly into the Los Angeles and Long Beach Harbor Area. The headwaters of the Dominguez Channel consist of an underground storm drain system which daylights approximately 0.25 miles north of the Hawthorne Municipal Airport. The Dominguez Channel drains approximately 62 percent of the watershed before discharging to Los Angeles Harbor. Within the watershed, approximately 93 percent of the land is developed. Residential development covers nearly 40 percent of the watershed with another 41 percent is covered with industrial, commercial, and transportation

[1] *Dominguez Channel Watershed Management Area Group, 2014. Draft Coordinated Integrated Monitoring Program For The Dominguez Channel Watershed Management Area Group. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DominguezChannel_CIMP.pdf, accessed 12/12/15.*

Table 4.G-1

Pollutants of Concern by Land Use

Land Use	Pollutants of Concern													
	Suspended Solids	Total Phosphorus	Total Nitrogen	Total Kjeldahl Nitrogen[b]	Cadmium, Total[b]	Chromium, Total[b]	Copper, Total[b]	Lead, Total[b]	Zinc, Total[b]	Biological Oxygen Demand (BOD)[d]	Chemical Oxygen Demand (COD)[d]	Fecal Coliform[d]	Hydrocarbons[d]	Trash[d]
Commercial	X	X	X	X	[c]	[c]	X	X	X					
Industrial	X	X	X	X	[c]	[c]	X	X	X					
Streets, Roads	X	X	X	X	[c]	[c]	X	X	X					
Educational Facilities	X				[c]	[c]	X		X					
Project Site	X	X	X	X	X	X	X	X	X	X	X	X	X	X

[a] *Adapted from Table A-3 of the Technical Manual for Stormwater Best Management Practices in the County of Los Angeles (February 2004) and the Southern California Coastal Water Research Project Land Use-Specific Stormwater Monitoring Data. X = exceedance of "standard" by observed median/average concentration; blank = no exceedance of "standard" by observed median/average concentration.*

[b] Derived from *Table* 11 of the 2012 Los Angeles County ms4 permit (page 104).

[c] No available data to determine if these pollutants of concern originate from land use. Pollutant is assumed to be produced by this land use unless otherwise proven by the project applicant.

[d] Based on 2006 EPA Guide to Stormwater Pollutant Concentrations.

Source: PCR Services Corporation, Inc., 2015

uses. With a population of nearly one million, water supply is limited and the majority of water use is from imported sources.

There are several pollutants of concern related to the receiving body of water. The Project site is located in the lower Dominguez Channel and Estuary subwatershed drainage area. Water quality in the watershed was assessed using available monitoring data, Total Maximum Daily Loads (TMDLs), 303(d) listed impairments, water quality thresholds listed in the Basin Plan for the Coastal Watersheds of the Los Angeles and Ventura Counties (Basin Plan) and the California Toxics Rule (CTR). Water-body pollutant combinations (WBPCs) were then categorized using the TMDLs, 303(d) listed impairments, and exceedance data for the Dominguez

Channel Estuary. WBPCs for which there were monitoring data were placed into one of the following three categories as outlined in the NPDES Permit:

- **Category 1 (Highest Priority):** Water body-pollutant combinations for which TMDLs have been established.
- **Category 2 (High Priority):** Pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy).
- **Category 3 (Medium Priority):** Pollutants for which there are insufficient data to indicate water quality impairment in the receiving water according to the State's Listing Policy, but which exceed applicable receiving water limitations.

Table 4.G-2, *Dominguez Estuary Water Body Pollutant Categorization*, lists the categorized WBPCs.

Table 4.G-2

Dominguez Estuary Water Body Pollutant Categorization[a]

	Category 1	Category 2	Category 3
Dominguez Estuary (Unlined portion below Vermont)	Cadmium (sed.), Copper (diss. & sed.), Lead (diss., sed., & tissue), Zinc (diss. & sed.) DDT (tissue & sed.) PCBs (sed.) Chlordane (tissue & sed.) PAHs (sed.) Benthic Community Effects Sediment Toxicity	Ammonia Coliform Bacteria	Arsenic (sed.) Chromium (sed.) Silver (diss. & sed.) Nickel (diss.) Mercury (sed.) Thallium (diss.)

[a] *Adapted from Table A-6 Water Body Pollutant Categorization. Dominguez Channel Watershed Management Area Group, 2014. Draft Coordinated Integrated Monitoring Program For The Dominguez Channel Watershed Management Area Group. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DominguezChannel_CIMP.pdf, accessed 12/12/15.*

Source: PCR Services Corporation, Inc., 2015

(3) Water Supply

Based on the information included in the master plan, there are three water providers in the vicinity of the Harbor-UCLA Medical Center Campus; the Metropolitan Water District (MWD), the California Water Service Company's Rancho Dominguez District (CWS), and the City of Los Angeles Department of Water and Power (LADWP). The CWS owns and maintains distribution mains within the roadways around the Campus that range from six inches to 33 inches in diameter. CWS currently provides water to the Project site from CWS mains at four connection points, with a backup system connection off of the LADWP main that is not

continuously operational. CWS uses a combination of local groundwater and water purchased from MWD, which is imported from the Colorado River and the State Water Project in northern California. Reclaimed water is currently not provided to the Project site and the three area water suppliers do not have reclaimed water pipelines in the area.

(4) Hydrology

Based on information included in the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), the project site is located in the Torrance coastal plain west of the Los Angeles River and north of the Los Angeles Harbor. Topography of the site slopes gently down toward the east ranging from an approximate elevation of 40 feet above mean sea level (MSL) near the eastern portion of the project area to an approximate elevation of 50 feet above MSL in the western part of the project area. Off-site flows into and through the site are minimal as are ponding and flooding on-site. Natural surface waters are not located on-site. The Dominguez Channel is located approximately 2.7 miles north of the site and runs southeast.

The site does not appear to have water quality or stormwater controls, such as stormwater BMPs, LID features, or hydromodification management facilities. Stormwater detention via dry wells was implemented for the emergency/surgery replacement project. Rainfall and other stormwater runoff are managed by existing roof drains, catch basins, drain inlets, underground pipes, curbs, gutters, overland sheet flows, driveways, or other means of conveyance to the on-site storm drains.

(5) Storm Drainage

Rainfall and other stormwater runoff are managed by existing roof drains, catch basins, drain inlets, underground pipes, curbs, gutters, overland sheet flows, driveways, or other means of conveyance to the on-site storm drains. According to the Harbor-UCLA Campus Master Plan[2], The County of Los Angeles Flood Control District owns and maintains the 208th Street Storm Drain which runs through Harbor-UCLA in a 15-foot wide easement. This storm drain line runs through the site in the north-south direction as an 8-foot high by 4-foot wide reinforced concrete box culvert (RCB). Near 220th Street, it turns westerly and flows as an open channel in an easement toward Normandie Avenue. It joins with the 15.7 mile long Dominguez Channel which begins in the City of Hawthorne and eventually discharges to the east basin of the Los Angeles Harbor. Staining was not observed at the catch basins, drains, or channel on a site visits by Nino & Moore on March 4 and 18, 2015 as discussed in the Phase 1 Hazardous Materials Assessment Harbor-UCLA Medical Center (Appendix E of this Draft EIR).

On-site storm drain systems flow into the box culvert discussed above. The on-site storm drain network is operated and maintained by site staff. There are currently minimal problems with ponding and flooding. There were drainage issues previously in the southwest corner of the campus that were alleviated by a new connection to the County channel and some re-routing of the on-site drains. Staff has indicated that the on-site drainage system is very brittle and difficult to connect to. It is likely that proposed project would require an overhaul of the on-site drainage system. New connection to the RCB or open channel owned by the Flood Control District will require a connection permit. This permit will require a proposed hydrology analysis

[2] *County of Los Angeles, 2012. Harbor-UCLA Medical Center Campus Master Plan. http://ridley-thomas.lacounty.gov/PDFs/20120630_HARBOR%20UCLA%20MASTER%20PLAN.pdf, accessed 12/11/15*

and a comparison with the design peak flow rate of the existing facility. If the calculated peak flow rate exceeds the design peak flow rate of the facility, the District will generally require detention to mitigate the increase in peak flow rates.

(6) Groundwater

The Coastal Plain of Los Angeles County is made up of two groundwater basins, the Central Basin and the West Coast Basin. These basins are comprised of Quaternary age sediments of gravel, sand, silt, and clay that were deposited from the erosion of nearby hills and mountains, and from beaches and shallow ocean floors that covered the area in the past. Underlying these sediments are basement rocks such as the Pliocene Pico Formation that generally do not provide sufficient quantities of groundwater. Separating the Central Basin from the West Coast Basin is the Newport-Inglewood Uplift, a series of discontinuous faults and folds that form a prominent line of northwest trending hills including the Baldwin Hills, Dominguez Hills, and Signal Hill.[3] The Project site is located within the West Coast sub-basin of the Los Angeles Coastal Groundwater Basin.

The West Coast Basin covers approximately 140 square miles and is bounded on the north by the Baldwin Hills and the Ballona Escarpment, on the east by the Newport-Inglewood Uplift, to the south by San Pedro Bay and the Palos Verdes Hills, and to the west by the Santa Monica Bay. Aquifers in the West Coast Basin are generally confined and receive the majority of their natural recharge from adjacent groundwater basins or from the Pacific Ocean (seawater intrusion). Groundwater flow in the vicinity of the site is generally towards the East.[4] The Project site is not located near existing stormwater spreading grounds as shown in **Figure 4.G-1**, *Stormwater Spreading Grounds*. As such, stormwater runoff from the site would not recharge the existing stormwater spreading ground or introduce pollutants into the spreading ground.

(a) Depth to Groundwater

According to the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), historic groundwater monitoring well data from the State of California Water Resources Control Board's GeoTracker Website[5] were reviewed for wells located on adjacent properties east and north of the Project site. Based on the groundwater measurements in these wells from 2007 to 2014, groundwater levels at these locations have ranged from approximately 48 to 60 feet below the ground surface. The Los Angeles County Safety Element indicates that the historic high groundwater in the vicinity of the Project site is approximately 30 feet deep. Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present on-site.

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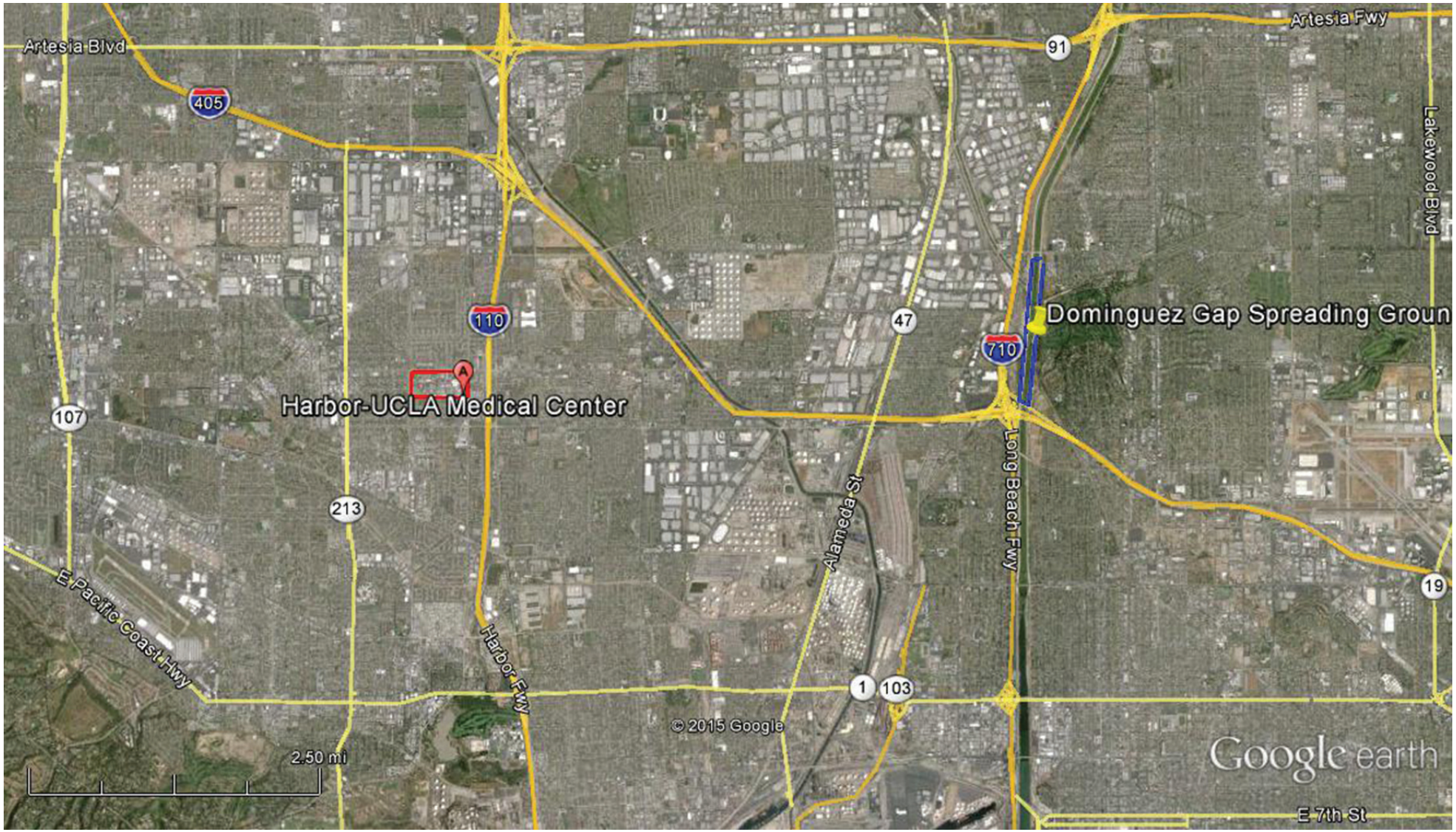
[3] *http://www.wrd.org/engineering/introduction-groundwater-basins-los-angeles.php. Accessed 12/13/15.*

[4] *Ibid.*

[5] *State of California Water Resources Control Board. http://geotracker.waterboards.ca.gov/gama/gamamap/public/default.asp?CMD=runreport&myaddress=harbor+ucla+medical+center%2C+carson%2C+ca. Accessed, April, 2015*



PCR

N

0 2.50 Miles

Stormwater Spreading Grounds

Harbor-UCLA Medical Center Master Plan

Source: Google Earth, Data: Los Angeles County Department of Public Works http://dpw.lacounty.gov/wrd/spreadingground/SpreadingGroundMap.pdf.

FIGURE

4.G-1

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(b) Groundwater Contamination

According to the April 2015 Phase I Hazardous Materials Assessment Harbor-UCLA Medical Center prepared by Nino & Moore, based on the varying groundwater flow directions and proximity of several closed leaking underground storage tank cases adjacent to the site, there is a possibility that groundwater beneath the site is impacted with petroleum hydrocarbons from off-site facilities. This is considered a recognized environmental condition for the site.

(c) Groundwater Recharge

According to the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), exposed materials at the surface of the Project site include clays and silty sandy soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together. Based on this report, soil textures appear to be in the Type C soil group. This classification has typically low saturated hydraulic conductivity rates, normally in the range of 0.04 to 0.13 inch per hour. With the site's impervious cover, minimal recharge to the West Coast Basin occurs.

(7) Flooding/Dam Failure/Tsunamis/Seiches

Based on the *Preliminary Geotechnical Evaluation for the Harbor-UCLA Medical Center Master Plan*, prepared by Ninyo & Moore (Appendix C), and maps on the California Department of Conservation website[6], the project site is not located in a potential inundation area resulting from a dam failure, tsunami or seiche, nor is it located in a landslide/mudslide hazard zone. The proposed Project is not within a 100 year flood hazard area. A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Project site is located approximately 5.3 miles inland from the Pacific Ocean and 4.1 miles inland from the Los Angeles/Long Beach Harbor area. A seiche is a wave that oscillates in an enclosed water body, such as a reservoir, lake, or pond. There are no enclosed water bodies close to the Project site. The Project site is not located close to a dam, so dam failure is not an issue.

b. Regulatory Setting

The following subsections discuss the various codes, regulations and polices applicable to hydrology and water quality at the federal, state and local levels.

(1) Federal

(a) Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It is based on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. The CWA requires states to adopt water quality standards for receiving waters. Water quality standards designate beneficial uses for receiving waters (e.g., wildlife habitat, agricultural supply, fishing), and include the criteria required to support those uses. Water quality criteria are either narrative

[6] *http://www.conservation.ca.gov/cgs/maps/Pages/Maps.aspx. Landslide and Tsunami Inundation Maps accessed 12/13/15.*

statements related to the quality of the water that support a particular use or maximum concentration levels for pollutants (i.e., lead, suspended sediment, bacteria, etc.). As part of the CWA, when monitoring data indicate that a concentration level for a pollutant has been exceeded, the receiving water is classified as impaired and placed on the CWA Section 303(d) List of Water Quality–Limited Segments Requiring TMDLs (303[d] list). A Total Maximum Daily Load (TMDL) is then developed for the pollutant(s) that caused the impairment. A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a "margin of safety"). The purpose of the TMDL is to limit the volume of pollutants discharged into the receiving water from all sources (i.e., Stormwater runoff, wastewater, agriculture).

(b) National Pollutant Discharge Elimination System Construction General Permit

The National Pollutant Discharge Elimination System (NPDES) was established per 1972 amendments to the Federal Water Pollution Control Act to control discharges of pollutants from point sources[7] (Section 402). The 1987 amendments to the CWA created a section devoted to Stormwater permitting (Section 402[p]), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The State Water Resources Control Board (SWRCB) issues both Construction General Permits and Individual Permits under this program.

Projects that will disturb more than one acre of land during construction are required to file a Notice of Intent (NOI) with the SWRCB to be covered under the NPDES Construction General Permit for discharges of Stormwater associated with construction activity. The project proponent must develop measures that are consistent with the Construction General Permit. Furthermore, a Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered under the Construction General Permit. The SWPPP describes the best management practices (BMPs) the discharger will use to protect Stormwater runoff and reduce potential impacts on surface water quality through the construction period. The SWPPP must contain the following:

- A visual monitoring program
- A chemical monitoring program for nonvisible pollutants (to be implemented if a BMP failure occurs)
- A sediment monitoring plan if the site discharges directly to a water body on the 303(d) list for sediment

The area that would be disturbed under the proposed Project exceeds one acre; therefore, the project would be required to comply with the Construction General Permit.

(c) Federal Antidegradation Policy

The Federal Antidegradation Policy was released in 1968 and was included in the USEPA's first Water Quality Standards Regulation. The Antidegradation Policy represents a three-tiered approach to maintaining and protecting water quality. First, all existing beneficial uses and levels of water quality necessary to protect those uses must be preserved and protected from degradation. Second, water quality must be protected in areas where the quality cannot support the propagation of fish, shellfish, and wildlife and recreation ("fishable/swimmable"). Third, the policy provides special protection of waters for which the

[7] *Point sources are discrete water conveyances such as pipes or man-made ditches.*

ordinary water quality criteria are not sufficient. These waters are called "Outstanding National Resources Waters" and have been designated as unique or ecologically sensitive.

If an activity is going to be allowed to degrade or lower water quality (in situations where existing water quality is higher than that needed to maintain established beneficial uses), the Antidegradation Policy requires that proposed projects meet the criteria below:

- The activity is necessary to accommodate important economic or social development in the area.
- Water quality is adequate to protect and fully maintain existing beneficial uses.

(d) National Flood Insurance Act

The National Flood Insurance Act of 1968 established the National Flood Insurance Program, which is based on the minimal requirements for floodplain management and is designed to minimize flood damage within Special Flood Hazard Areas. FEMA is the agency that administers the National Flood Insurance Program. Special Flood Hazard Areas (SFHA) are defined as areas that have a one-percent chance of flooding within a given year, also referred to as the 100-year flood. Flood Insurance Rate Maps were developed to identify areas of flood hazards within a community.

(2) State

(a) Porter-Cologne Water Quality Act

California's Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act) established the SWRCB and divided the state into nine regional basins, each with a Regional Water Quality Control Board (RWQCB). The Project site is located within the jurisdiction of the Los Angeles RWQCB. The SWRCB is the primary state agency with responsibility to protect surface water and groundwater quality. The Porter-Cologne Act authorizes the SWRCB to draft policies regarding water quality in accordance with CWA Section 303. In addition, the Porter-Cologne Act authorizes the SWRCB to issue waste discharge requirements (WDRs) for projects that would discharge to state waters. These requirements regulate discharges of waste to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

The Porter-Cologne Act requires the SWRCB or the RWQCBs to adopt water quality control plans (basin plans) and policies for the protection of water quality. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State Water Policy. The Basin Plan must:

- Identify beneficial uses for the water to be protected,
- Establish water quality objectives for the reasonable protection of the beneficial uses, and
- Establish an implementation program for achieving the water quality objectives.

Basin plans also provide the technical basis for determining WDRs, taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every 3 years in accordance with Article 3 of Porter-Cologne and CWA Section 303(c).

(b) California Toxics Rule

The California Toxics Rule (40 CFR 131.38) is a USEPA-issued federal regulation that provides water quality criteria for potentially toxic constituents in California surface waters with designated uses related to human health or aquatic life. The rule fills a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans containing water quality criteria for priority toxic pollutants. These federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. The California Toxics Rule establishes two types of aquatic life criteria:

- Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time8 without harmful effects, and
- Chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects.

Due to the intermittent nature of stormwater runoff (especially in southern California), the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria.

(c) State Antidegradation Policy

Under the State's Antidegradation Policy (as set forth in SWRCB Resolution No. 68-16), whenever the existing quality of waters is better than what is needed to protect present and future beneficial uses, such existing quality must be maintained. This State policy has been adopted as a water quality objective in all the State's Basin Plans. The State policy establishes a two-step process to determine if discharges with the potential to degrade the water quality of surface or groundwater will be allowed.

The first step requires that, where a discharge would degrade high-quality water, the discharge may be allowed only if any change in water quality would:

- Be consistent with the maximum benefit to the people of the State;
- Not reasonably affect present and anticipated beneficial uses of such water;
- Result in water quality that is not less than that which is prescribed in State policies (i.e., Basin Plans).

The second step (as set forth in SWRCB Resolution No. 68-16) states that any activity resulting in discharge to high-quality waters is required to use the best practicable treatment or control of the discharge necessary in order to avoid the occurrence of pollution or nuisance and to maintain the "highest water quality consistent with the maximum benefit to the people of the state". The State policy applies to both surface and groundwater, as well as to both existing and potential beneficial uses of the applicable waters.

In 1999, the SWRCB issued and subsequently amended the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ), which governs discharges from construction sites that disturb one acre or more of surface area. Again, on September 2, 2009, the SWRCB adopted a new General Construction Permit that substantially alters the approach taken to regulate construction discharges through (1) requiring the

[8] *The rule does not specify timeframe for "acute". Standard practice would likely imply that any condition that is permanent or semi-permanent is chronic; all else would be short-term.*

determination of risk levels posed by a project's construction discharges to water quality and (2) establishing numerical water quality thresholds that trigger permit violations. These new permit regulations took effect on July 1, 2010.

(3) Local

(a) Water Quality Control Plan, Los Angeles Region

As required by the California Water Code, the LARWQCB has adopted the "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (LA Basin Plan). Specifically, the LA Basin Plan designates beneficial uses for surface water and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's Antidegradation ppolicy, and describes implementation programs to protect all waters in the Los Angeles region. In addition, the LA Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the LA Basin Plan.[9]

(b) Municipal Storm Water Permitting

As part of its NPDES Program, the Los Angeles RWQCB adopted a new Municipal Separate Storm Sewer Permit (MS4 Permit, sometimes referred to as a Stormwater Permit) in 2012. MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (between 100,000 and 250,000 people) and large (more than 250,000 people) municipalities. As part of Phase II, the SWRCB adopted a General Permit for small MS4s (than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and prison and hospital complexes (WQ Order No. 2003-0005-DWQ).

The Los Angeles RWQCB's 2012 MS4 Permit named 84 incorporated cities, the County, and the Los Angeles County Flood Control District as permittees. The MS4 Permit imposes a number of basic programs, called Minimum Control Measures, on all permittees in order to maintain a level of acceptable runoff conditions through the implementation of practices, devices, or designs generally referred to as BMPs, that mitigate stormwater quality problems. As an example, the development construction program requires the implementation of temporary BMPs during a project's construction phase to protect water resources by preventing erosion, controlling runoff, protecting natural slopes and channels, storing fluids safely, managing spills quickly, and conserving natural areas.

(c) Los Angeles County Low-Impact Development Ordinance

In December 2012, the Los Angeles County Board of Supervisors updated the County Low Impact Development (LID) Ordinance (Chapter 12.84 of the County Code [LACC]) for compliance with the 2012 LARWQCB MS4 Permit. The updated LID Ordinance requires the integration into project design an array of feasible design features and operational practices for the retention, detention, storage, and filtration of stormwater and urban runoff, prior to discharge off-site. LID generally relies on an integrated system of

[9] *California Regional Water Quality Control Board, Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted June 13, 1994 http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/. Accessed June 16, 2015.*

decentralized, small-scale control measures that can be implemented at a project site, using structural devices, engineered systems, vegetated natural designs, and other techniques to control stormwater and urban runoff on-site and not solely through off-site conveyance or at an off-site collection point.

(d) Los Angeles County General Plan Update (2035)

The California Government Code Section 65300 requires general plans to include "a conservation element, which includes evaluation of water resources for supply and demand. As such, the Los Angeles County General Plan Update (2035) Conservation and Natural Resource Element (Chapter 9, Section IV, Local Water Resources) addresses water management as an invaluable resource and effective management and preservation of local water resources are vital to preserving a high quality of life for residents and businesses, as well as for sustaining the functioning of watersheds and the natural environment. Applicable goals and polices from the Safety Element are identified below:

Goal C/NR 5: Protected and useable local surface water resources.

- **Policy C/NR 5.1:** Support the Low Impact Development (LID) philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.

- **Policy C/NR 5.3:** Actively engage with stakeholders in the formulation and implementation of surface water preservation and restoration plans, including plans to improve impaired surface water bodies by retrofitting tributary watersheds with LID types of BMPs.

- **Policy C/NR 5.4:** Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

Goal C/NR 6: Protected and usable local groundwater resources.

- **Policy C/NR 6.1:** Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.

- **Policy C/NR 6.2:** Protect natural groundwater recharge areas and regional spreading grounds.

- **Policy C/NR 6.3:** Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at regional, neighborhood, infrastructure, and parcel-level scales.

- **Policy C/NR 6.5:** Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils.

Goal C/NR 7: Protected and usable local groundwater resources.

- **Policy C/NR 7.1:** Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.

- **Policy C/NR 7.3:** Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans, ecosystem restoration projects, and other related natural resource conservation aims, and support the implementation of existing efforts, including Watershed Management Programs and Enhanced Watershed Management Programs.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Surface Hydrology and Drainage

The analysis of hydrology impacts is based on post project runoff rates during storm events calculated for the Harbor-UCLA Master Plan. Potential impacts to the storm drain system were analyzed by comparing the calculated pre-project runoff rates to the calculated post-project runoff rates, taking into consideration the capacity of the existing storm drain systems serving the site.

(2) Water Quality

Water quality impacts were assessed by considering the types of pollutants and/or effects on water quality likely to be associated with construction and operation of the project, project design features to treat contaminants, and expected contaminant flows with project implementation. Project consistency with relevant regulatory permits/requirements, including BMPs and applicable plans, is evaluated to demonstrate how compliance would ensure that the project would not significantly degrade existing water quality.

(3) Flooding

Flooding impacts were addressed in consideration of applicable safety policies of the County's General Plan Safety Element and the design requirements within the County's Municipal Code. A determination was made as to whether such policies, procedures, and regulatory requirements would adequately address potential flooding hazards on the site.

(4) Groundwater

Groundwater impacts were evaluated by estimating the domestic water demands of the proposed project, a portion of which is provided by local groundwater basins, relative to the safe yield of affected aquifers.

b. Thresholds of Significance

The potential for hydrology and water quality impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are in part based on Appendix G of the State CEQA Guidelines. These questions are as follows:

(IX) Hydrology and Water Quality. Would the project:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100 year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

The Initial Study determined that the Project would have less than significant impacts with respect to Checklist questions IX.g), h), i), and j. Accordingly, these environmental topics are not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Hydrology and Water Quality if it would:

HWQ-1: Violate any water quality standards or waste discharge requirements.

HWQ-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to

a level which would not support existing land uses or planned uses for which permits have been granted)

HWQ-3: Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

HWQ-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

HWQ-5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

HWQ-6: Otherwise substantially degrade water quality.

c. Project Characteristics or Design Features

The Project would comply with all applicable requirements and permits related to stormwater management and water quality. As part of this, construction plans for individual components of the Harbor-UCLA Medical Center Master Plan Project would be reviewed by the County to confirm implementation of the appropriate temporary construction and permanent operational BMPs for compliance with the SWRCB's Construction General Permit, the County-administered MS4 permit, and the County's LID ordinance.

d. Project Impacts

Threshold HWQ-1: Would the Project violate any water quality standards or waste discharge requirements?

Impact Statement HWQ-1: *With compliance with regulatory requirements governing stormwater management and water quality during construction and following buildout of master Plan Project components, impacts on water quality or related to waste discharge (i.e., construction dewatering) would be less than significant.*

(1) Construction

Construction activities would include the use of heavy equipment and construction-related chemicals, such as fuels, oils, grease, solvents, and paints that would be stored in limited quantities on-site. In the absence of proper controls, these construction activities could result in accidental spills or disposal of potentially harmful materials that could wash into and pollute surface waters or groundwater. During construction, portions of the Harbor-UCLA Campus would be subject to ground-disturbing activities (e.g., removal of the existing structures and pavement, excavation and grading, foundation and infrastructure construction, and the installation of utilities). These activities would expose soils for a limited time, allowing for possible erosion and sediments to enter into sheet flow runoff, which could enter the existing storm drain system untreated. Therefore, surface water quality could be temporarily affected by construction activities.

However, the Project would be subject to existing regulations governing water quality. Construction General Permits would be required from the SWRCB for individual Project components of the. The Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate NMPs, as well as associated monitoring and reporting. Stormwater BMPs are intended to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. BMPs could include, but are not limited to, the use of or implementation of water bars, silt fences, staked straw bales, and avoidance of water bodies during construction. Additional source-control BMPs might also be required to prevent runoff contamination by potentially hazardous materials and eliminate non-stormwater discharges.

Compliance with the Construction General Permit, SWPPP, and NPDES requirements that require construction phase BMPs are considered protective of water quality during construction and would, therefore, prevent a substantial violation of water quality standards and minimize the potential for contributing additional sources of polluted runoff during construction of the project. These existing regulations, programs, and policies would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site, and therefore ensure construction activities would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles RWQCB and/or other regulatory agencies or affect the beneficial uses of receiving waters. Compliance with regulatory requirements would ensure that construction of Master Plan Project components would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to the Dominguez Channel. In addition, the topographic gradients on the Harbor-UCLA Campus are relatively gentle.

The potential for any spill or release of construction related chemicals during Project construction would be generally small because of the localized, short-term nature of the releases. Furthermore, the NPDES Construction General Permit and SWPPP require measures regarding the handling of these types of materials and action protocols if a spill or release does occur. Therefore, potential soil erosion and sedimentation impacts during construction would be less than significant and no mitigation is required.

According to the *Preliminary Geotechnical Report* prepared for the Project (Appendix C), groundwater levels have ranged from approximately 48 to 60 feet below ground surface (bgs). Based on the depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Compliance with these regulatory requirements would ensure that dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Based on the above, construction-related dewatering impacts would be less than significant.

(2) Operations

Stormwater discharge is generated by rainfall that runs off the land and impervious surfaces such as paved streets, parking lots, and rooftops. Stormwater discharge may include pollutants of concern, which are those that are expected to be generated by the project and that could impact stormwater. During operation of the Project, pollutants of concern within runoff may include, but are not limited to, pollutants such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash.

This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats.

Reducing natural resource demands is a key goal of the Master Plan Project. By utilizing landscape in strategic ways it can perform a variety of tasks beyond aesthetics including lowering potable water demands, reducing heat island effects, and mitigating building cooling demands. Landscape plans call for the use of native or culturally native (adaptive) low-maintenance species, which would be maintained by workers who are trained to work with native California landscapes. In addition, the Project would rely on its landscape to reduce dependency on natural resources by reducing water demands, capturing and cleaning stormwater runoff, and shading buildings to help reduce cooling demands. The Project would convert more than three acres of existing turf area to low water use plants, saving an estimate seven million gallons of water per year over current usage. The Project would introduce new trees in surface parking areas to create a dense canopy of shade which will reduce the asphalt's solar absorption rate, allowing surrounding buildings to cool down earlier in the evening, reducing the urban heat island effect. Furthermore, the Project proposes to incorporate green roofs, which will help reduce buildings' solar absorption and cooling demands during warmer daytime hours. The Project would avoid the use of pollutants, chemicals, or soil amendments that could harm the human or ecological health. Organic maintenance methods or Integrated Pest Management may be used.

Any proposed new storm drain connections to the RCB or open channel owned by the Flood Control District will require a connection permit. This permit will in turn require a proposed hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeds the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates.

As discussed, the Harbor-UCLA Campus is currently fully developed and would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious,) where feasible based on the LID Standards. The County also requires that the 0.75-inch rainfall event be treated to remove urban stormwater pollution. Based on information provided in the Harbor-UCLA Master Plan, the required treatment flow rate is approximately 0.17 cubic feet per second (cfs) per acre based on a flow rate design and the required treatment volume is approximately 2,200 cubic feet per acre based on a volume design. The excess volume to be infiltrated, reused, or stored is approximately 1,940 cubic feet per acre. Previously approved grading plans for the emergency/surgery replacement building indicate that several dry wells were constructed in the area of new construction to meet this requirement; this approach is likely to be implemented for future areas to be redeveloped on the Campus.[10]

Additionally, the incorporation of LID requirements is a significant element of the proposed site sustainability approach and LID features would meet the requirements found in the County's *Low-Impact Development Standards Manual*. The LID features would provide treatment control through physical, biological, and chemical processes to remove pollutants from stormwater runoff. Potential LID features

[10] *Campus Master Plan Addendum, County Of Los Angeles Harbor-UCLA Medical Center, Phase 04-F, Civil – Facilities and Utilities Assessment, page F-10.*

include: bioretention/rain gardens, strategic grading, resource conservation, flatter wider swales, flatter slopes, long flow paths, tree/shrub depression, turf depression, landscape island storage, rooftop detention/retention, roof leader disconnection, parking lot/street storage, smaller culverts/pipes/inlets, amended soils, alternative materials, tree box filters, alternative impervious surfaces, reduce impervious surface, rain barrels/cisterns/water use, catch basins/seepage pits, sidewalk storage, vegetative swales/buffers and strips, infiltration swales and trenches, eliminate curb and gutter, dry well, maximize sheet flow, maintain drainage patterns, green roofs, and permeable pavement. An illustration of the type and location of the Project's proposed BMPs is provided in **Figure 4.G-2,** *Potential LID Strategies*. The Project will also increase the amount of pervious area on the Harbor-UCLA Campus, which will reduce the calculated peak flow of stormwater runoff.

Provided that LID features (especially the design of any bioretention features) include modifications to address the potential leaching of nutrients, compliance with County LID criteria and other state and local regulations that require post-construction BMPs would ensure that operations on the Harbor-UCLA Campus would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies or impair the beneficial uses of the receiving waters.

Following buildout of Project components, materials such as fuels or solvents may be stored on-site, similar to existing conditions. This is not anticipated to be a source of polluted stormwater runoff or dry-weather runoff. As under existing conditions, Harbor-UCLA would continue to adhere to all applicable regulations.

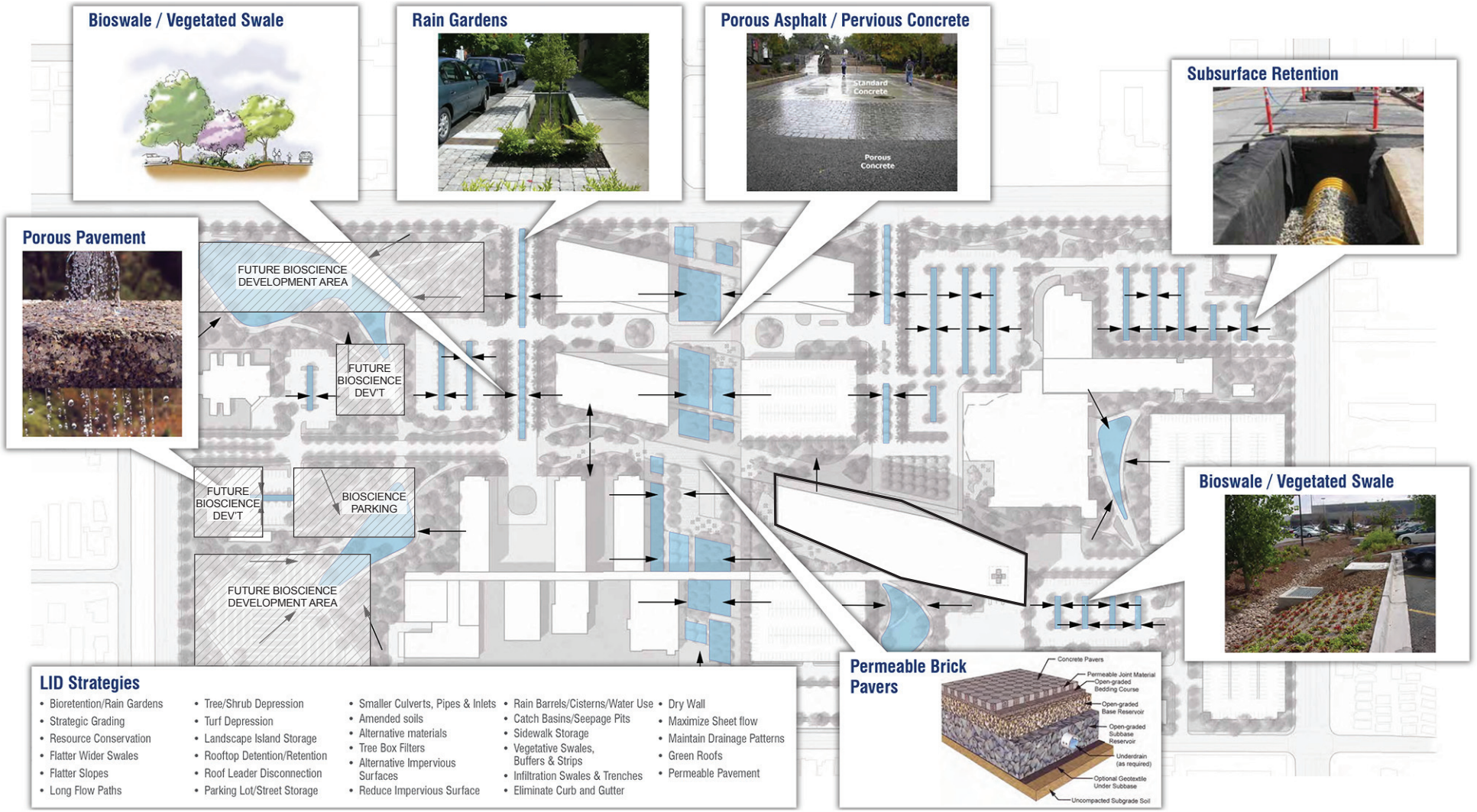
Accordingly, operations would not result in a violation of any water quality standards or waste discharge requirements, would not create substantial additional sources of polluted runoff, and would not substantially degrade water quality, and would therefore be less than significant.

Threshold HWQ-2: Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge?

Impact Statement HWQ-2: *Project-related excavation is not expected to extend to the depth of groundwater beneath the Harbor-UCLA Campus, with only temporary dewatering anticipated in the event seepage is encountered at shallower depths than anticipated. Project implementation would increase pervious area on the Campus over existing conditions through the introduction of more landscaped area and does not propose withdrawal of groundwater to meet water demand. The Project's indirect employment-related population growth would not substantially increase demand on groundwater supplies serving the Project Site, thus impacts regarding groundwater supplies would be less than significant.*

(1) Construction

Construction activities are not expected to require excavation below the normal or seasonally high groundwater levels. However, if seepage is encountered during construction, dewatering may be necessary. Any seepage encountered during construction would be mitigated, as needed, by constructing small drainage swales from the base of the excavations to temporary sump pits or existing LID features on-site.



PCR

Stormwater Spreading Grounds

Harbor-UCLA Medical Center Master Plan

Source: County of Los Angeles, Harbor-UCLA Medical Center Campus Master Plan, June 2012.

FIGURE
4.G-2

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Any discharge of groundwater during construction would be implemented in compliance with applicable NPDES permit requirements. The Project would also comply with all applicable federal, state, and local requirements concerning the handling, storage, and disposal of hazardous materials to reduce the potential for a release of contaminants into the groundwater as a result of project construction. Thus, construction activities would not degrade groundwater quality or interfere with recharge and impacts would be less than significant.

(2) Operation

Under the Master Plan Project, water demand is projected to increase as the result of intensified use of facilities and a greater amount of landscaping on the Campus. Water usage is likely to increase following Project buildout because of the increased number of employees and, potentially, patients using Harbor-UCLA Medical Center facilities. However, increased regional water demand is primarily a function of population growth, and as the Project would not directly or indirectly result in substantial population growth in the area, it would not significantly increase demand for water supplies, including groundwater serving the Project area. Additionally, indoor fixtures would comply with applicable Municipal Codes requirements related to reducing indoor water consumption through maximum flow rates for indoor water fixtures. These requirements would limit potential increases in indoor water usage on the Campus. See Section 4.M.1, Water Supply, of this Draft EIR for further discussion of Project-related water demand and supply.

As previously stated, Harbor-UCLA receives its water supplies from CWS, which draws on a combination of local groundwater (i.e., the Central Basin) and water purchased from MWD. At Project buildout, the amount of pervious area on the Campus will be increased, which may incrementally increase recharge of the West Basin through infiltration based on the LID features implemented to reduce off-site discharge of stormwater and dry weather runoff. However, the increase in landscaped area on the Campus is expected to increase the need for irrigation over existing conditions. Current lawn areas will be reduced and planted with drought-tolerant plants reducing water usage. The proposed plant palette would include drought-tolerant and California native plants in compliance with the County's landscape ordinance, and therefore the use of plant species with high to moderate water needs would be limited.

Reclaimed water is currently not provided to the Project Site and the irrigation system is supplied by the CWS municipal domestic water system. Future opportunities for potential water sources for irrigation use include continuing with the municipal water supply, a future municipal recycled water supply, an on-site integrated stormwater management system, and/or an on-site recycled water system. Any of proposed recycled water systems or the on-site integrated stormwater management system would reduce the use of potable water.

The Master Plan Project would not involve any groundwater extraction or other activities that could result in direct withdrawal or depletion of groundwater supplies. As noted above, a portion of the Medical Center's water supply is provided by groundwater from local aquifers, and as such the implementation of the proposed Project would indirectly increase demands on the groundwater basins. However, the Project would not result in any adverse impacts to the local water supplies, including groundwater resources, as although the proposed development was not specifically accounted for in the most recently adopted Urban Water Management Plan (UWMP) for the Medical Center Campus service area, the Water Supply Assessment prepared for the Master Plan Project (included in Appendix I of this Draft EIR) demonstrates that adequate water supplies are available to meet projected demands. As the Project would not directly affect

groundwater resources, and indirect demands on local groundwater supplies would not exceed available supplies, impacts on groundwater resources would be less than significant.

Threshold HWQ-3: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

Impact Statement HWQ-3: *The Project would redevelop the already fully developed Harbor-UCLA Campus, and, with compliance with NPDES regulations and County LID requirements governing construction and post-project stormwater management and water quality, would not substantially alter existing drainage patterns in a manner that would result in substantial erosion or siltation.*

(1) Construction

Grading and excavation would be required for building foundations, which could affect drainage on the sites of specific Master Plan Project components. However, as the site is currently fully developed, the proposed Project would not substantially alter the existing drainage pattern of the site or result in substantial erosion or siltation. Standard construction phase BMPs required for compliance with NPDES requirements would decrease the potential for any significant erosion or sedimentation from soil disturbance associated with construction. There are no streams or rivers nearby whose course would be altered by the proposed Project.

Any potential impacts on water quality arising from erosion and sedimentation are expected to be localized and temporary (i.e. during construction). NPDES compliance would require contractors to implement measures to minimize and contain erosion and sedimentation and be required to submit a grading plan to the County for approval prior to the commencement of any construction activities. In addition, where proposed construction for a specific Master Plan Project component would disturb more than one acre, the project proponent would be required to obtain and comply with the NPDES Construction General Permit. The permit would require a SWPPP and compliance with County requirements to meet state water quality objectives. Pending possible revisions as of this writing, the NPDES permitting process may also require development of a rain-event action plan prior to permit approval. Construction-related erosion and sedimentation impacts resulting from soil disturbance would be less than significant after implementation of the SWPPP (see MM-HWQ-1) and the BMPs required to control erosion and sedimentation.

(2) Operation

As previously stated, the amount of landscaped area would increase following Project buildout over existing conditions. Moreover, for each Project component, Harbor-UCLA would be required to identify and implement appropriate LID compliance features and practices include structural BMPS such as filtration, runoff-minimizing landscaping for common areas, and energy dissipaters, which would reduce peak runoff volumes as well as the overall amount of runoff discharged compared to existing conditions. Therefore, over time, Project implementation is expected to improve stormwater management conditions on the Harbor-UCLA Campus and reduce the potential for erosion and sedimentation.

Threshold HWQ-4: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Impact Statement HWQ-4: *The Project would redevelop the already fully developed Harbor-UCLA Campus and would not substantially alter existing topography or affect the course of any streams or rivers. Neither construction nor operations would increase surface runoff in a manner that would result in flooding. Therefore, impacts on existing drainage patterns of the Project site would be less than significant.*

(1) Construction

The Harbor-UCLA Campus is already developed and proposed grading and excavation would not substantially alter its overall topography. Water used during construction (e.g. for dust compression) would be mechanically and precisely applied and would infiltrate or evaporate. Project-related excavation is not expected to intercept groundwater, and in the event of possible seepage within excavations, temporary dewatering would be conducted in accordance with NPDES requirements governing such discharges.

(2) Operation

As previously stated, Project buildout would not substantially alter the existing drainage patterns on the Harbor-UCLA Campus, Project area, or receiving waters, or result in substantial erosion or siltation on- or off-site. Future Project hydrologic boundaries and off-site storm drain infrastructure serving the Campus will closely match existing conditions. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. As such, the project would not result in a substantial increase in the rate or amount of surface runoff or result in flooding on-or-off-site. Impacts would be less than significant.

Threshold HWQ-5: Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Impact Statement HWQ-5: *With adherence to County connection permit requirements and compliance with County LID requirements, the volumes of runoff discharged to the County's storm drain system following Project buildout would be similar or reduced compared to existing conditions and would not provide additional sources of polluted runoff; impacts would be less than significant.*

(1) Construction and Operation

As previously stated, future Campus hydrologic boundaries and off-site storm drain infrastructure serving the Campus will closely match existing conditions. The backbone of the drain system will continue to be the County-owned and operated 208th Street Storm Drain, an 8-foot by 4-foot RCB culvert which runs beneath the Medical Center in a north-south 15-foot wide easement, daylighting into an open culvert that parallels 220th Street and discharges to the underground network at Normandie Avenue to the west. Since the design of future Project facilities is presently conceptual, it is unknown whether new connections to the 228th

Street Storm Drain may be required as part of the Project, but it is considered likely due to the age and brittle condition of the system. However, future connections would require a connection permit from the County Flood Control District, which will in turn require a hydrology analysis and comparison with the design peak flow rate of the facility. As previously discussed, the County will require stormwater detention if the calculated peak flow rate exceeds the facility's design peak flow rate. Stormwater management infrastructure constructed for individual Project components would be constructed in compliance with permit and LID requirements and include upgraded infrastructure sized for future stormwater volumes.

The County of Los Angeles determines the allowable amount of runoff that can enter its system based on historical records. It is likely that the flow rate allowed at connections to the County Storm Drains will be required to match the original system design flow rate. As previously stated, new development in Los Angeles County is required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (i.e. 0 percent impervious) where technically feasible. In addition, a developed site is required to treat the entire 0.75-inch rainfall to remove urban stormwater pollution. In addition to the LID requirements set for the LID manual, the County also establishes hydromodification requirements that require the difference in peak flow rate, flow velocity, total volume, and depth/width of flow for the 2-, 5-, 10-, 25-, and 50-year storm with several exceptions. One exception is for proposed projects that do not add net new impervious area. Since the Harbor-UCLA Campus is fully developed and highly impervious, the hydromodification requirement will likely not apply to the Project.

With the increase in pervious area, an integrated stormwater management approach and the implementation of the County LID Standards, the requirements to detain flows to meet existing design flow rates will be minimized. Peak flow rates and runoff volumes from the Campus would be the same or lower compared to existing rates/volumes and would not affect the capacity or hydraulic integrity of the existing County storm drain system. Impacts related to the volume of runoff from the Harbor-UCLA Campus on the capacity of the County's storm drain infrastructure, and related to the potential for additional polluted runoff compared to existing conditions, would be less than significant.

Threshold HWQ-6: Would the Project otherwise substantially degrade water quality?

Impact Statement HWQ-6: *With compliance with County NPDES and LID requirements, the Project is not anticipated to substantially degrade water quality.*

(1) Construction

Impacts HWQ-1 though HWQ-5 discuss potential impacts associated with the degradation of water quality during construction. During construction, the Project would be required to adhere to the NPDES Construction General Permit to control erosion and protect water quality. Therefore, the Project would not create or contribute runoff that would exceed the capacity of drainage systems or provide substantial sources of polluted runoff. There are no other methods by which water quality could be degraded as a result of construction on the Project site, and impacts would be less than significant.

(2) Operation

Impacts HWQ-1 through HWQ-5 discuss potential impacts associated with degradation of water quality during Project operations. Prior to the start of individual Project component construction activities, Harbor-UCLA would be required to prepare and submit drainage plans for County approval, which would include post-Project structural and nonstructural BMPs. There are no other methods by which water quality could be degraded as a result of operations on the Project site. Impacts associated with potential degradation of water quality during Project operations would be less than significant.

e. Cumulative Impacts

The geographic scope for cumulative impacts related to water quality and hydrology encompasses the project site and the land uses within a 1-mile radius of the Project site. Other projects in the general vicinity of the proposed Project include a variety of housing, (apartments, condos, single-family), mixed-use, retail, and office and medical spaces. All of these projects have the potential to result in construction-period water quality impacts, which could result in cumulatively significant impacts. However, compliance with the Construction General Permit, SWPPP, and NPDES requirements, and local regulations that require construction phase BMPs would ensure that construction activities would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles RWQCB or other regulatory agencies or impair the beneficial uses of the receiving waters. Construction would not result in a violation of any water quality standards or waste discharge requirements, would not provide substantial additional sources of polluted runoff, and would not substantially degrade water quality. Compliance with construction phase permits and standard construction phase BMPs would decrease the potential for any significant erosion or sedimentation from soil disturbance associated with construction of the projects. During construction the amount of stormwater runoff is also anticipated to be less than or equal to the amount under existing conditions. Therefore, the cumulative effects would be less than significant.

Compliance with County LID criteria as well as state and local regulations that require post construction BMPs would ensure that the operation of related projects would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles RWQCB or other regulatory agencies or impair the beneficial uses of the receiving waters. The Project would also be required to comply with all applicable federal, state, and local requirements concerning handling, storage, and disposal of hazardous materials to reduce the potential for the release of contaminants into groundwater as a result of project construction or operation. Therefore, construction and operation activities would not degrade groundwater quality or interfere with recharge and the cumulative effects would be less than significant.

4. MITIGATION MEASURES

Potential impacts related to hydrology and water quality would be less than significant with compliance with applicable regulatory requirements. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts related to hydrology and water quality would be less than significant with compliance with applicable regulatory requirements.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
H. LAND USE AND PLANNING

1. INTRODUCTION

Development on the Harbor-UCLA Campus is guided by the policies and regulations of several regional and Los Angeles County (County) plans. The provisions set forth in these plans and regulations have been adopted to promote orderly land use development and eliminate or reduce the potential land use conflicts from development. This section describes the existing land use conditions on and in the vicinity of the Harbor-UCLA Campus, identifies the existing land use plans and regulations applicable to the Project, and evaluates Project consistency with these plans and regulations and compatibility with adjacent land uses. The information in this section is based primarily on County 2035 General Plan Update and associated EIR, County Planning and Zoning Code (Title 22 of the Los Angeles County Code or LACC), and the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016RTP/SCS).

For evaluation of the consistency of the Project with applicable land use regulations pertaining to air quality, see Sections 4.B., Air Quality, and 4.E., Greenhouse Gas Emissions, of this Draft EIR. For evaluation of the consistency of the Project with applicable land use regulations pertaining to population/housing and transportation/parking, see Sections 4.J., Population and Housing, and 4.L., Transportation and Traffic, respectively, of this Draft EIR. For evaluation of the growth-inducing impacts of the Project, see Chapter 6.0, Other CEQA Considerations, of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Project Site

The 72-acre Harbor-UCLA Campus is located in the unincorporated Los Angeles County community of West Carson, which in turn is located in the County's South Bay Planning Area. The South Bay Planning Area occupies the southwestern portion of the County from the City of Inglewood in the north to the cities of Rancho Palos Verdes and San Pedro in the south, and from the 710 Freeway in the east to the Pacific Ocean to the West. The West Carson Community is centrally located within the South Bay Planning Area, encompassing the roughly 2.3-square-mile area between Del Amo Boulevard on the north and Lomita Boulevard on the south, and the Harbor Freeway (I-110) on the east and Normandie Avenue on the west. As indicated in **Figure 4.H-1**, *Project Site and Surrounding Land Uses*, the Project Site lies within a fully urbanized area bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. Unincorporated area lies immediately north, south and east of the Project Site. The City of Los Angeles lies immediately west of the Project Site, across Normandie Avenue, while the City of Carson lies one block east of the Project Site, across the Harbor Freeway. Local vehicular access to the Project Site is provided by each of the four streets bordering the site, while regional vehicular access is provided by the Harbor Freeway via Carson Street, and by the San Diego Freeway (I-405), which lies approximately two miles to the north and east, via Vermont Avenue, Normandie Avenue, and Carson

Street. The Metro Transit Station (Silver Line) is located on Carson Street, approximately 0.10 miles to the east along the Harbor Freeway.

The Project Site is generally flat and developed with 1,279,284 square feet of floor area, including the Harbor-UCLA Medical Center and multiple medical and research tenants. Harbor-UCLA is a County-owned and -operated tertiary-care medical center and one of only five Level 1 Trauma Centers in the County. It serves southwestern County of Los Angeles and plays a particularly critical role in meeting the healthcare needs of the more than 700,000 residents of the greater South Bay region within 15 miles of the Campus, the catchment or service region for the Medical Center. Harbor-UCLA Medical Center is licensed for 453 inpatient beds and houses more than 70 primary and secondary care clinics. A premiere teaching hospital with a strong research focus, the Hospital employs full- and part-time faculty physicians, volunteer faculty physicians, and both residents and fellows completing graduate studies at the Hospital. The three major tenants collocated on the Project Site together with the Hospital include the following:

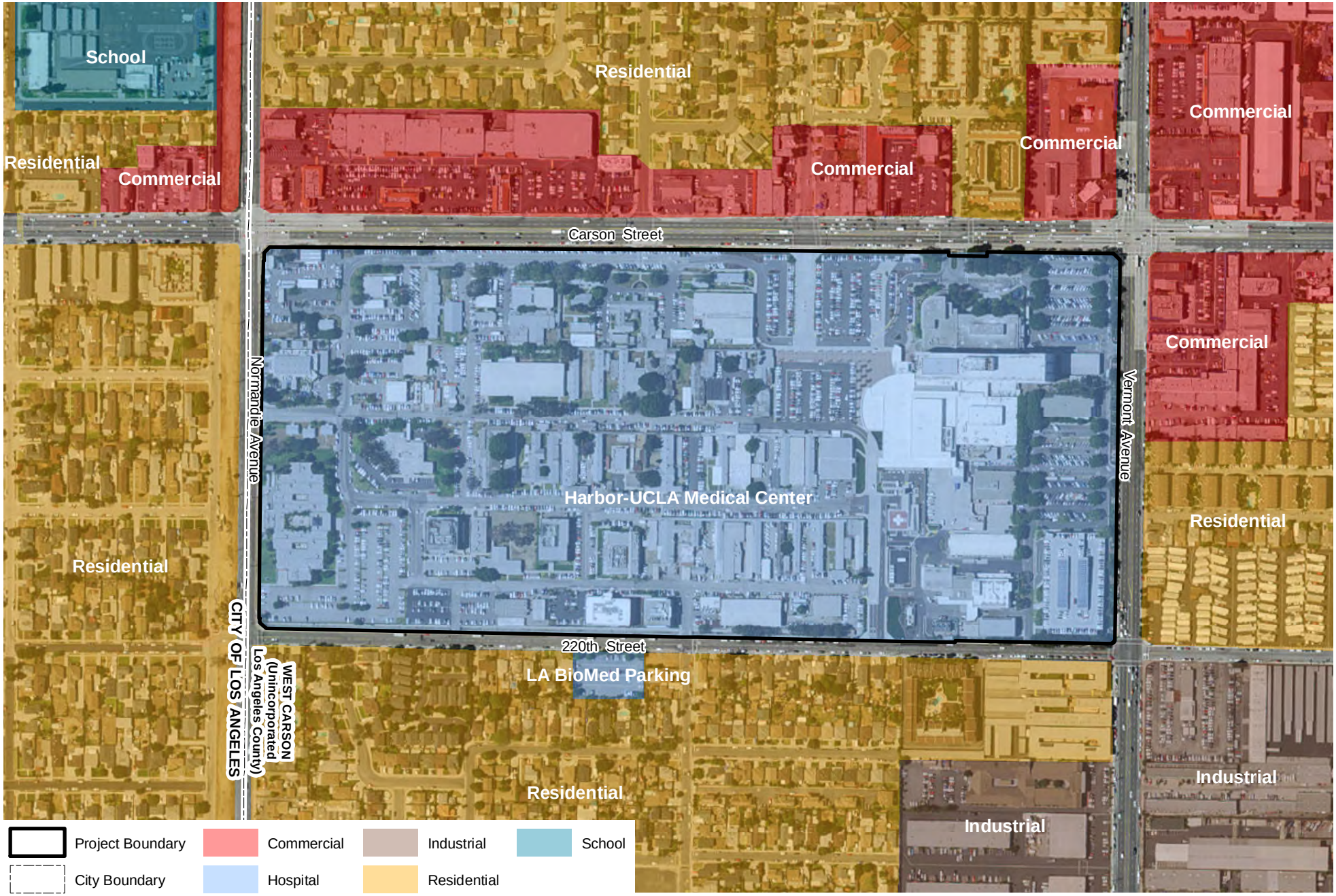
- LA BioMed: LA BioMed, the largest tenant, was founded as the Harbor-UCLA Research and Education Institute in 1952 and is currently one of the largest independent not-for-profit biomedical research institutes in the nation. It conducts and supports research, training, and education activities, provides community services including childhood immunization and nutrition assistance, and maintains an affiliation with the Harbor UCLA Medical Center, with many faculty members serving as both researchers and clinicians; this affiliation helps attract top residency candidates to Harbor UCLA Medical Center.
- Harbor-UCLA Medical Foundation, Inc. (MFI): MFI was founded in 1963 as a nonprofit organization dedicated to clinical patient care, the revenue from which is used to fund clinical, research, and educational activities at the Harbor-UCLA Medical Center.
- Children's Institute International (CII): CII, which specializes in the treatment and prevention of child abuse and neglect, operates its Burton E. Green Campus and provides services to families throughout the South Bay and adjacent communities. CII is headquartered near downtown Los Angeles and operates several facilities throughout the region.

A number of County departments, including offices of the Department of Mental Health, also occupy buildings on the Campus.

Existing buildings heights at the Project Site range from one to eight floors, with the existing Hospital Tower in the northeast portion of the Site representing the tallest building. The existing floor-area ratio (FAR) at the Site is 0.40:1, while total existing employment at the site (including the Hospital and both major and minor tenants) is approximately 5,500. See Figure 2-3, Existing Campus Buildings, in Chapter 2.0, *Project Description*, of this Draft EIR for an illustration of the layout of the existing buildings, parking areas, and internal streets at the Project Site.

(2) Surrounding Uses

As indicated in Figure 4.H-1, the Project Site is fully surrounded by urban uses. These include commercial uses with a small amount of high-density residential across Carson Street to the north; residential uses and a surface parking lot across 220th Street to the south; commercial and residential uses across Vermont Avenue



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Project Site and Surrounding Land Uses

Harbor-UCLA Medical Center Master Plan
Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE
4.H-1

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to the east, and residential uses across Normandie Avenue in the west. A more detailed description of the surrounding land uses is provided below:

- North: Carson Street to the north is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. The Harbor-UCLA Medical Center Employee Children's Center (daycare center) and a multifamily residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of Vermont Avenue. The area north of the commercial uses on Carson Street is a predominantly single-family residential neighborhood.
- East: Vermont Avenue, bordering the Harbor-UCLA Campus to the east, is developed with a mix of neighborhood retail uses and medical services just north and south of Carson Street, while the southern half of the block facing the Harbor-UCLA Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and Starlite Trailer Park and Rainbow Mobile Home Park, which back up to the Harbor Freeway on the west. Wholesale and light industrial uses, primarily warehouses and truck distribution centers, are located to the southeast along 220th Street.
  - South and West: Single-family and multi-family residential neighborhoods border the Harbor-UCLA Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles; the abandoned Union Pacific Railroad right-of-way area along the west side of Normandie Avenue serves as a setback for residential uses to the west. An off-site surface parking lot serving LA BioMed is located across 220th Street from the Harbor-UCLA Campus.

(3) Existing General Plan Land Use Designations and Zoning

As indicated in **Figure 4.H-2**, *County of Los Angeles – General Plan Land Use Designations*, the Project Site is designated "P" (Public and Semi-Public) by the County of Los Angeles 2035 General Plan Update (General Plan Update). The "P" General Plan Land Use (GPLU) designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major utilities at a maximum FAR of 3:1.[1] Also, in the event that the public or semi-public use of mapped facilities is terminated, alternative uses that are compatible with the surrounding development, in keeping with community character, are permitted.[2]

In addition, the General Plan Update indicates that the western two-thirds of the Project Site fall within the boundaries of the 110 Freeway/Carson Station Transit Overlay District (TOD) due to its proximity to the Metro Transit Station (Silver Line) located on Carson Street, approximately 0.10 miles to the east.[3] TODs are areas within a ½-mile radius of a major transit stop that have development/design standards and incentives to facilitate transit-oriented development specifically tailored to the unique characteristics and needs of the local community.[4] However, the West Carson TOD Specific Plan, which is to specify the development/design

[1] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

[2] *Ibid.*

[3] *Ibid, Figure 6.5 and page 72.*

[4] *Ibid.*

standards and incentives for the 110 Freeway/Carson Station TOD, has not yet been prepared or adopted.[5] Therefore, the West Carson TOD Specific Plan is not addressed further in this section.

Finally, the Project Site is not located within an adopted community plan area.

As indicated in **Figure 4.H-3**, *County of Los Angeles – Zoning*, the Project Site is zoned C-3 (Unlimited Commercial) by the LACC. The C-3 zone permits a broad range of commercial uses, including but not limited to offices, universities/colleges, medical clinics, and medical research/laboratories (LACC §22.28.180), as well as hospitals and helistops. The maximum FAR in the C-3 zone is 13:1 (LACC §22.52.050), and the maximum height is 13 times the buildable area (LACC §22.52.050).

Hospital and ancillary uses on the Harbor-UCLA Campus are currently consistent with the current GPLU designation and zoning of the Project Site.

b. Regulatory Framework Summary

Development on the Project Site is guided by the policies and regulations of several regional and local plans, as well as by the County's 2035 General Plan Update and Zoning Ordinance (Title 22 of the LACC). The provisions set forth in these plans and regulations have been adopted to promote orderly land use development and to eliminate or reduce potential land use conflicts from development. What follows is a discussion of the land use provisions of these plans and ordinances applicable to the Project.

(1) Federal and State

No federal or State land use regulations are applicable to the proposed Project and the land use impact analysis.

(2) Regional

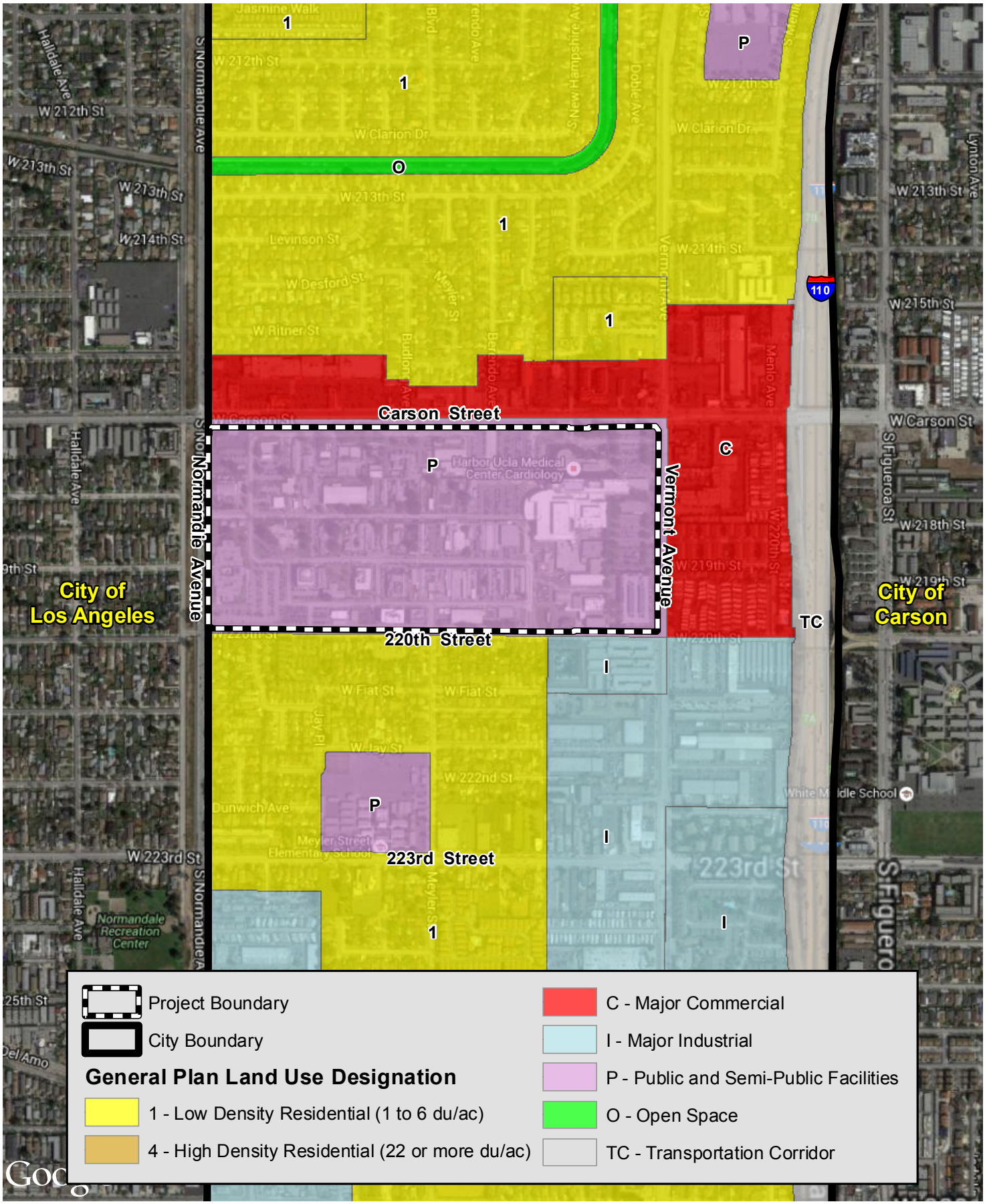
(a) SCAG - 2008 Regional Comprehensive Plan

SCAG is designated by the federal government as the Metropolitan Planning Organization and Regional Transportation Planning Agency for the Southern California region. SCAG's, a joint powers agency with responsibilities pertaining to regional planning issues and a jurisdiction covering Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. SCAG addresses regional planning issues through various plans and programs, including the Regional Comprehensive Plan (RCP), Compass Growth Visioning (including the Compass Blueprint 2% Strategy)[6], and the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

SCAG's 2008 RCP, the most recent RCP, was accepted by SCAG for use as an advisory document that may be voluntarily used by local jurisdictions when developing local plans and addressing local issues of regional

[5] *According to the County's website (http://planning.lacounty.gov/tod/plans), the County is planning to prepare a West Carson TOD Specific Plan and associated EIR commencing in Spring 2016, with public hearings on these documents anticipated in Spring 2017.*

[6] *The Compass Blueprint 2% Strategy is a guideline for how and where the Growth Vision for Southern California's future can be implemented. It calls for changes to current land use and transportation trends on only 2 percent of the land area of the region.*



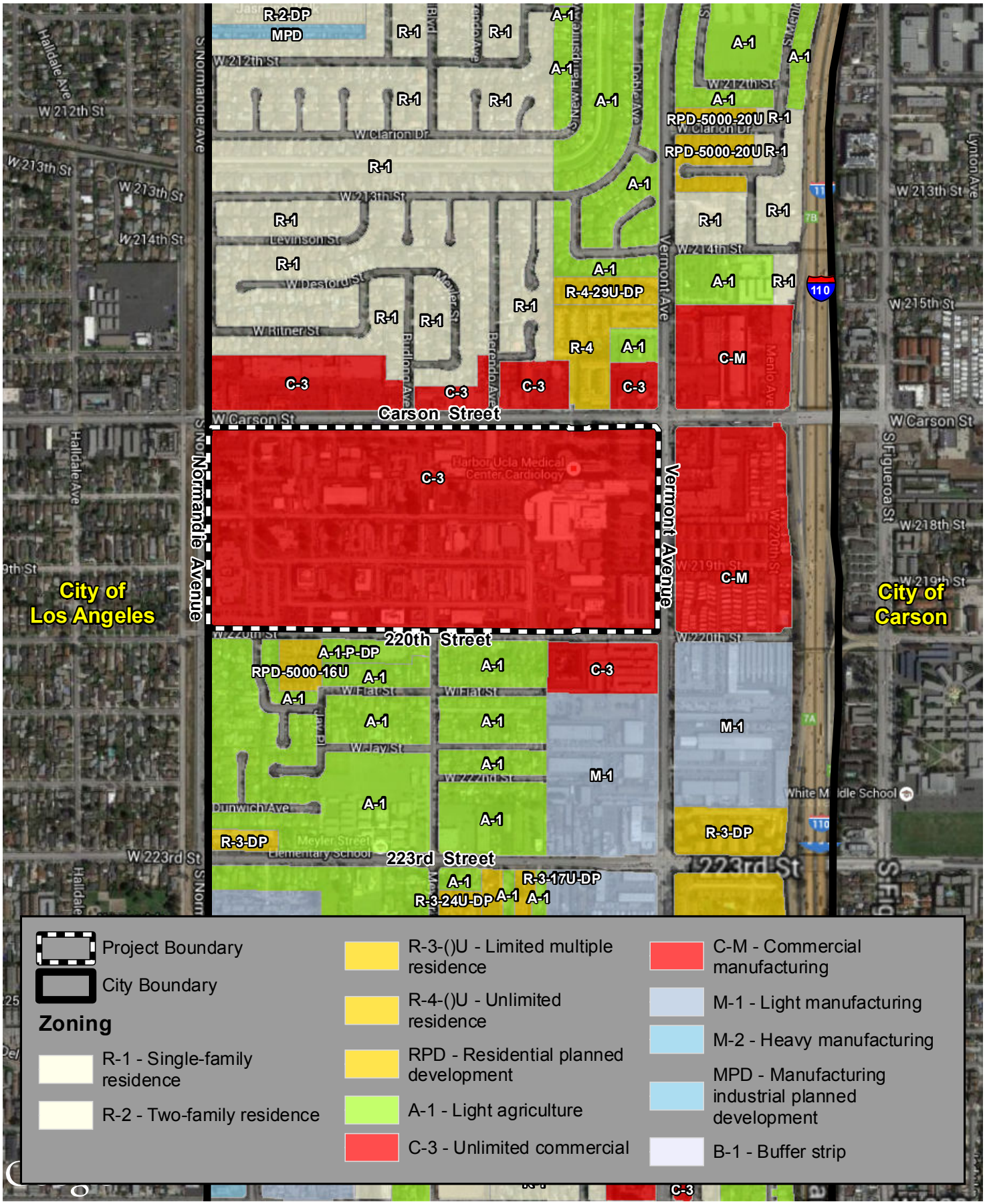
County of Los Angeles - General Plan Land Use Designations

Harbor-UCLA Medical Center Master Plan

Source: Google Maps, 2015 (Aerial); County of Los Angeles, 2015; PCR Services Corporation, 2015.

FIGURE

4.H-2



0 750 1,500 Feet

County of Los Angeles - Zoning

Harbor-UCLA Medical Center Master Plan

Source: Google Maps, 2015 (Aerial); County of Los Angeles, 2015; PCR Services Corporation, 2015.

FIGURE

4.H-3

significance. The RCP addresses issues related to housing, traffic/transportation, water, and air quality. Local governments are asked to consider the RCP's recommendations in the preparation of local plans and approval of development projects. The RCP is also closely linked to, and serves as a basis for, the preparation of SCAG's RTP/SCS and Compass Plan. The RCP contains the following land use and air quality goals relevant to the Project:

- Land Use: Successfully integrate land and transportation planning, and achieve land use and housing sustainability, by implementing the Compass Blueprint 2% Strategy, which includes following:
  - Focus growth in existing and emerging centers and along major transportation corridors;
  - Create significant areas of mixed-use development and walkable, "people-scaled" communities;
  - Target growth in housing, employment, and commercial development within walking distance of existing and planned transit stations;
  - Inject new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots;
  - Preserve existing stable single-family neighborhoods; and
  - Protect important open space, environmentally sensitive areas, and agricultural lands from development.
- Air Quality:
  - Minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to toxic air contaminants, particulates (PM<10, PM2.5, ultrafine), and carbon monoxide; and
  - Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to business and residents.

(b) SCAG - 2008 Compass Growth Visioning (including Compass Blueprint 2% Strategy)

SCAG also engages in the Compass Growth Visioning effort that addresses the regional development pattern so as to accommodate future development and provide land use patterns that improve mobility, reduce vehicle miles traveled, and support the goals and polices established in the RTP. The Growth Vision is driven by four key principles: mobility – getting where we want to go; livability - creating positive communities; prosperity - long-term health for the region; and sustainability - preserving natural surroundings. To realize these principles on the ground, the Growth Vision encourages:

- Focusing growth in existing and emerging centers and along major transportation corridors
- Creating significant areas of mixed-use development and walkable communities
- Targeting growth around existing and planned transit stations
- Preserving existing open space and stable residential areas

As part of the visioning effort, the Compass Blueprint 2% Strategy provides guidance for how and where SCAG can implement the Growth Vision for Southern California's future. It calls for modest changes to current land use and transportation trends on only 2% of the land area of the region. Directing the changes to the selected 2% of the land identified produces the greatest policy achievement for the least land affected.

The Growth Visioning effort encourages clustering/densification of population activity in proximity to certain transportation facilities.

(c) SCAG - 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016- RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. Also, the 2016 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG's transportation planning and the provision of services by other regional agencies. The SCS portion presents an overall land use concept for the region with increasing focus on densification of urban areas and development around transit stations and increased focus on use of transit and active transportation. The goals of the 2016 RTP/SCS are as follows:

- Align plan investments and policies with improving regional economic development and competitiveness;
- Maximize mobility and accessibility for all people and goods in the region;
- Ensure travel safety and reliability for all people and goods in the region;
- Preserve and ensure a regional transportation system;
- Maximize the productivity of our transportation system;
- Protect the environment and health of residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking);
- Actively encourage and create incentives for energy efficiency, where possible;
- Encourage land use and growth patterns that facilitate transit and non-motorized transportation.; and
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

(d) SCAQMD - 2012 Air Quality Management Plan

The South Coast Air Quality Management District's (SCAQMD's) administers the Air Quality Management Plan (AQMP). The 2012 AQMP, the most recent AQMP, presents strategies for achieving the air quality planning goals set forth in the Federal and California Clean Air Acts (CCAA), including a comprehensive list of pollution control measures aimed at reducing emissions. The SCAQMD, which was established in 1977 pursuant to the Lewis-Presley Air Quality Management Act, is responsible for bringing air quality in the South Coast Air Basin (Basin) into conformity with federal and State air pollution standards. The SCAQMD is also responsible for monitoring ambient air pollution levels throughout the Basin and for developing and implementing attainment strategies to ensure that future emissions will be within federal and State standards. Project consistency with the AQMP is addressed in Section 4.B., *Air Quality*, of this Draft EIR.

(e) Metro - 2010 Congestion Management Program

The County of Los Angeles Metropolitan Transportation Authority (Metro) administers the Congestion Management Program (CMP), a State-mandated program designed to provide comprehensive long-range traffic planning on a regional basis. The 2010 CMP, the most recent CMP, summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. CMP implementation guidelines for local jurisdictions are also contained in the 2010 CMP. The primary goal of the CMP is to reduce traffic congestion in order to enhance the economic vitality and quality of life for affected communities. CMP guidelines specify that those freeway segments to which a proposed project could add 150 or more trips in each direction during the peak hours be evaluated. The guidelines also require evaluation of designated CMP roadway intersections to which a proposed project could add 50 or more trips during either peak hour. Project consistency with the CMP is addressed in Section 4.L., *Transportation and Traffic*, of this Draft EIR.

(3) Local

(a) County of Los Angeles - 2035 General Plan Update

California law requires that every city and county prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. The County of Los Angeles 2035 General Plan Update was approved and adopted by the Board October 6, 2015. The General Plan Update serves as a document to provide decision-makers with a policy framework to guide specific, incremental decisions to achieve the Plan's stated goals and objectives which focus on fostering healthy, livable, and sustainable communities. It contains nine elements, including Land Use, Mobility, Air Quality, Conservation and Natural Resources, Parks and Recreation, Noise, Safety, Public Services and Facilities, and Economic Development.

The Project Site is located in County's South Bay Planning Area, one of 11 Planning Areas which make up the County, but is not located within an adopted County Specific Plan area. The Project Site is designated P (Public and Semi-Public) by the General Plan Update which permits a broad range of public and semi-public uses, including but not limited to hospitals, universities/colleges, offices, medical clinics, and medical research/laboratories, at a maximum FAR of 3:1[7]. The western two-thirds of the Project Site is designated as a TOD by the General Plan Update due to its proximity to the Metro Transit Station (Silver Line), which has associated with it development and design standards and incentives to facilitate transit-oriented development.[8]

(b) County of Los Angeles - Planning and Zoning Code (LACC Title 22)

The County of Los Angeles Planning and Zoning Code (LACC Title 22) sets forth zoning designations and other regulations pertinent to land use. Title 22.12 establishes individual zoning designations, area requirements, density of land occupancy, and the necessary, proper and comprehensive groupings and arrangements of the various industries, businesses and population of the County in policy established by the Land Use Element of the General Plan. As discussed previously, the Project Site is zoned C-3, General Commercial. The C-3 zone permits a broad range of commercial uses, including but not limited to offices,

[7] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

[8] *Ibid, p.72.*

universities/colleges, medical clinics, and medical research/laboratories (LACC §22.28.180), as well as hospitals and helistops. Within the C-3 zone: the maximum FAR in the C-3 zone is 13:1 (LACC §22.52.050); the maximum height is 13 times the buildable area (LACC §22.52.050)[9]; there are no minimum building setbacks[10]; and the maximum permitted lot coverage is 90% of net lot area, with 10% of net lot area landscaped (LACC §22.28.220).

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of potential land use impacts in this section of the Draft EIR evaluates: (1) Project consistency with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect; and (2) Project compatibility with existing adjacent land uses.

The evaluation of Project consistency with applicable land use plans, policies and regulations is based upon a review of the land use plans identified above. State *CEQA Guidelines* Section 15125(d) requires that an EIR discuss inconsistencies with applicable land use plans that the decision-makers should address. Evaluations are made as to whether a Project would further plan provisions or actively obstruct their implementation. The intention of the evaluation is to determine whether any noncompliance would result in a significant adverse physical impact on the environment. Accordingly, the criterion for determining significance with respect to a land use plan emphasizes substantive conflicts with plans adopted for the purpose of avoiding or mitigating an environmental effect, recognizing that a mere inconsistency with a plan, policy, or regulation does not necessarily equate to a significant impact on the environment.

The evaluation of Project compatibility with existing adjacent off-site land uses focuses on whether the nature (type, scale, height, location) of existing on-site land uses would substantially change under the Project, and if yes, whether this would adversely impact the character of the area as perceived by the existing adjacent off-site land uses.

b. Thresholds of Significance

The potential for land use and planning impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. These questions are as follows:

(XI) Land Use and Planning. Would the project:

a) Physically divide an established community?

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[9] *The height of buildings, except where otherwise provided, shall be determined as follows: The total floor area in all the buildings on any one parcel of land shall not exceed 13 times the buildable area of such parcel of land. Cellar floor space, parking floor space with necessary interior driveways and ramps thereto, or space within a roof structure or penthouse for the housing of building operating equipment or machinery shall not be considered in determining the total floor area within a building.*

[10] *County of Los Angeles website: http://planning.lacounty.gov/luz/summary/category/commercial_zones/. Accessed December 1, 2015.*

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The Initial Study determined that the Project would have a less than significant impact with respect to Checklist question XI.a). Accordingly, this environmental topic is not evaluated in this EIR.

Based on the above factors, the Project would have a potentially significant impact on Land Use and Planning if it would result in any of the following:

LU-1: Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

LU-2: Would the Project be incompatible with existing adjacent land uses?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Master Plan Project encompasses construction of a new Hospital tower (New Hospital Tower) on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Medical Center Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. The Campus-wide floor area would increase from 1,279,284 square feet to 2,457,355 square feet. The redesigned Harbor-UCLA Campus would consolidate outpatient facilities and locate them in proximity to the New Hospital Tower in the north-central Campus. It would also engage Carson Street by orienting Hospital-related services used by the community along this major thoroughfare. Courtyards, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Campus and connect the new Hospital Tower and outpatient facilities with the other major tenants on the Campus, including Los Angeles Biomedical Research Institute (LA BioMed) in the south-central Campus and the Children's Institute International (CII) Burton E. Green Campus in the northwest Campus. Patient and visitor vehicle access and parking would be realigned off Carson Street and staff vehicle access would be concentrated in the eastern and southeastern Campus off Vermont Avenue and 220th Street.

The western side of the Campus would be used for the development of a biotechnical research campus (Biosciences Campus). Implementation of the Master Plan Project is expected to meet short-term needs of the Hospital, associated facilities, and other tenants of the Campus, as well as long-term needs beyond 2030. It is anticipated that implementation of the Project would occur in approximately six phases, with construction commencing in 2017 and anticipated to be completed by 2030.

Under the proposed Project:

- Campus-wide floor area would increase from 1,279,284 sf to 2,457,355 sf (a net increase of 1,178,071 sf), due largely to the development of a new hospital tower, three new outpatient buildings, and the Bioscience Tech Park;
- Campus-wide FAR would increase from 0.40:1 to 0.78:1;
- The number of licensed in-patient hospital beds would decrease slightly from 453 to 446;
- Building heights across much of the Project Site would increase from an average of one to an average of four stories, with the tallest existing on-site building (the existing eight-floor Hospital Tower) retained and a second larger eight-floor building (New Hospital Tower) developed;
- Campus-wide parking would increase from 3,186 spaces (including 281 spaces in an off-site parking lot) to 4,240 spaces (including the spaces in the Bioscience Tech Park and in the off-site parking lot), due largely to the replacement of several on-site surface parking lots with three- to five-floor parking structures; and
- The number of Campus-wide employees would increase from approximately 5,464 to approximately 7,494.

See Chapter 2.0, *Project Description*, in this Draft EIR for more information, including but not limited to: Figure 2-4, Existing Campus Buildings; Figure 2-6, Harbor-UCLA Medical Campus Master Plan Site Plan; and Table 2-1, Harbor-UCLA Master Plan Project - Existing and Proposed Land Use Summary.

(a) Sign Program

Proposed signage will include identification and wayfinding to aid visitors and patients in finding their ultimate destinations into and within the Project Site. This would include signage at the two proposed public entryways into the Project Site on Carson Street, one proposed public entryway into the Project Site on Normandie Avenue, one staff and emergency ambulance entryway into the Project Site on Vermont Avenue, and two staff entryways into the Project Site on 220th Street, along with street, directional, and parking signage within the Project Site. All signage would be intended to serve the on-site uses and activity; no off-site signage (e.g., billboards, etc.) is proposed. The Project Sign Program would be reviewed by the Regional Planning Department (Director) to ensure Program consistency with applicable sign regulations (including LACC Section 6502.2. Permits would be obtained for signs and electrical permits for lighting in accordance with the Code.

(b) Sustainability Features

Long-term sustainability is an important principle guiding the Master Plan Project. The current County policy requires LEED Silver-level certification, or the equivalent, for any public facility over 10,000 square feet in floor area. Green building practices would be integrated into all building design, construction, and operation and would be integrated with Campus infrastructure and include integrated stormwater and wastewater treatment. Sustainability criteria include (1) green building metrics; (2) reduction of energy demand; (3) reduction of thermal energy needs; (4) water balance; and (5) use of healthy building materials. As the Master Plan Project is implemented, one or more of the following systems would be used for environmental performance certification.

- LEED for Healthcare Rating System / Green Guide for Healthcare: Campus Buildings are designed to meet the requirements of the USGBC's LEED for Healthcare, [Platinum] certification and incorporates LEED Pilot credits on healthy materials selection.
- LEED Application Guide for Multiple Buildings and On-Campus Building Projects: Utilize to exploit economies of scale and the unique challenges and opportunities inherent in Campus projects.
- Living Building Challenge: Achieve a majority of "petals" of the International Living Building Institute's Living Building Challenge 2.0.
- 2030 Challenge: Goals of each project to meet the 2030 Challenge relative to reduction requirements for the year constructed.
    - Targeting 100!: Utilize tools and approaches from research to meet the 2030 Challenge for the Hospital.

(c) Required Approvals

Implementation of the Master Plan Project would require the following approvals:

(i) State of California

- California Office of Statewide Health Planning and Development Approval
- Caltrans Division of Aeronautics Helistop Permit Approval

(ii) County of Los Angeles

- Certification of the Final EIR
- Project approval
- Approval of permits as may be required for component buildings and other structures
- Funding approval

(iii) Other Approvals

- Approval of permits for temporary construction activities associated with off-site infrastructure and/or traffic system improvements within other jurisdictions (if such improvements are ultimately necessary), including the cities of Los Angeles, Carson, and Torrance.

The Project has been designed to be consistent with the existing County General Plan land use designation (GPLU) and zoning of the Project Site, and would not include the subdivision of land. Therefore, no General Plan Amendments, Rezones, or Subdivisions are proposed or required.

(2) Project Design Features

The Master Plan Project does not include any specific Project Design Features (PDFs) that would apply to land use and planning.

d. Project Impacts

(1) Project Consistency with Applicable Land Use Plans, Policies, and Regulations

Threshold LU-1: Would the Project conflict with any applicable land use plan, policy, or regulation of an

agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Statement LU-1: *The Project would be substantially consistent with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, land use impacts associated with Project consistency with applicable land use plans, policies and regulations would be less than significant.*

Project consistency with applicable land use plans, policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect are addressed below. This include analysis of Project consistency with the SCAG RCP, SCAG Compass Growth Visioning (including the Compass 2% Blueprint Strategy), SCAG RTP/SCS, County 2035 General Plan Update (including the GPLU designation of the Project Site), and the County Planning and Zoning Code (including the zoning of the Project Site).

Project consistency with two other applicable land use plans adopted for the purpose of avoiding or mitigating an environmental effect are addressed in other sections of this Draft EIR. These include the SCAQMD AQMP which is addressed in Section 4.B., *Air Quality*, and the Metro CMP which is addressed in Section 4.L., *Transportation and Parking*.

As indicated in the following subsections, the Project would be substantially consistent with applicable regional and local land use plans, policies and regulations. Therefore, impacts with respect to Threshold LU-2 would be less than significant.

(a) SCAG - 2008 Regional Comprehensive Plan

Table 4.H-1, *Comparison of the Project to Applicable Policies of the SCAG 2008 Regional Comprehensive Plan*, evaluates the consistency of the Project with applicable policies of the RCP. As discussed, the Project would be consistent with applicable RCP policies, including focusing growth in existing urban centers, creating walkable mixed-use development, targeting commercial and employment growth within walking distance of existing transit stations, injecting new life into under-used areas, preserving established neighborhoods, and protecting open space, environmentally-sensitive areas, and farmland. The Project would also include sustainability features in accordance with the County's Green Building Program to reduce energy consumption, GHG emissions and pollution.

Table 4.H-1

Comparison of the Project to Applicable Policies of the SCAG 2008 Regional Comprehensive Plan

Goal/Policy	Analysis of Project Consistency
Land Use and Housing	
Policy: Focus growth in existing and emerging centers and along major transportation corridors	**Consistent:** The Project would focus growth within an existing urban center and along transportation corridors by nearly doubling urban density (from 0.40:1 to 0.78:1 FAR) on the Project Site which is located within a designated TOD and 0.10 miles of both a Metro Transit Station (Silver Line) and the Harbor Freeway.
Policy: Create significant areas of mixed-use development and walkable, "people-scaled"	**Consistent:** The Master Plan would create a significant area of walkable, "people-scaled" mixed use development by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail, green areas,

Table 4.H-1 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2008 Regional Comprehensive Plan

Goal/Policy	Analysis of Project Consistency
communities.	etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized, and signed internal pedestrian circulation system; providing frontage improvements (sidewalk enhancements, street trees, benches) and internal landscaped pedestrian paths to increase foot traffic within the hospital Campus, and between the hospital Campus, the surrounding community, and the Metro Station located 0.10 mile to the east; and providing bicycle parking in accordance with LACC requirements.
Policy: Target growth in housing, employment, and commercial development within walking distance of existing and planned transit stations.	**Consistent:** The Project would target growth in employment within walking distance of the existing transit by nearly doubling commercial density (from 0.40:1 to 0.78:1 FAR) and increasing employment by approximately 37 percent (from approximately 5,464 to approximately 7,494) at the Project Site which is located approximately 0.10 mile from the Carson Street Metro Transit Station.
Policy: Inject new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots.	**Consistent:** The Project would inject new life into the 72-acre Project Site by: (1) redeveloping an existing under- and inefficiently-utilized site, portions of which contain many old World Word II barracks, with new state of the art hospital and medical buildings; (2) consolidating hospital and major tenant functions in fewer buildings to increase efficiency; (3) replacing a piecemeal and confusing internal vehicular and pedestrian circulation system with a clear, well organized and well signed internal circulation system; and (4) potentially providing ground-floor retail, as well as outpatient facilities, and other community-serving uses along Carson Street to increase foot traffic between the hospital site, the surrounding community, and the Metro Station.
Policy: Preserve existing stable, single-family neighborhoods.	**Consistent:** The Project would be consistent with this policy because it would not displace residential uses or create new barriers to circulation to or within residential neighborhoods.
Policy: Protect important open space, environmentally sensitive areas, and agricultural lands from development.	**Consistent:** The Project would be consistent with this policy because it would represent redevelopment of an already fully developed urban property, which is surrounded on all sides by urban development, rather than the development of open space, environmentally sensitive areas, or agricultural lands.
Air Quality	
Policy: Minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to toxic air contaminants, particulates (PM10, PM2.5, ultrafine), and carbon monoxide.	**Consistent:** The Project would not include industrial, utility, mining, or other land uses most often associated with the emission of large quantities of toxic air contaminants (TACs), particulates or carbon monoxide. Furthermore, the Project would represent redevelopment of an already fully developed site, which is already a source of air emissions, rather than the development of a vacant site which is not currently a source of air emissions. Finally, as indicated in the analysis in Section 4.B, *Air Quality*, of this EIR, the Project would not result in significant unavoidable pollution-related health impacts associated with the emissions of TACs, particulates, or carbon monoxide.
Policy: Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to businesses and residents.	**Consistent:** Per the current County policy requiring LEED Silver-level certification or the equivalent for any public facility over 10,000 square feet in floor area, the Project would be designed and constructed to achieve LEED Silver-level certification or its equivalent. Green building practices would be incorporated into all building design, construction, and operation, and would be integrated with Campus infrastructure and stormwater/wastewater treatment.

Source: PCR Services Corporation, 2016.

(b) SCAG - 2008 Compass Growth Visioning (Including Compass 2% Blueprint Strategy)

Table 4.H-2, *Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (Including Compass 2% Blueprint Strategy)*, evaluates the consistency of the Project with applicable policies of the SCAG's Compass Growth Visioning (including the Compass 2% Blueprint Strategy). As discussed, the Project would be consistent with applicable policies of these plans as it would improve mobility for all residents by providing an infill development along established transportation corridors, as well as in proximity to transit options and existing housing. Moreover, the Project would provide pedestrian walkways and landscaped setbacks to provide a "people-scaled" project. Lastly, the Project would include sustainability features in accordance with the County's Green Building Program to reduce energy consumption, reduce GHG emissions, and reduce pollution.

Table 4.H-2

Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (including Compass 2% Blueprint Strategy)

Goal/Policy	Analysis of Project Consistency
Principle #1: Improve mobility for all residents.	**Consistent:** The Project would represent infill development that would increase urban density along established transportation corridors (with existing bus service) and within 0.10 miles of both a Metro Transit Station (Silver Line) and the Harbor Freeway. The Project would allow for the continued provision of hospital and outpatient services and additional employment opportunities within the West Carson community and larger South Bay Planning Area, thereby reducing the need for residents to travel outside the local area for health care and work. Finally, the Project would create a significant area of walkable, people-scaled mixed use development by including a mix of community-serving uses oriented towards a major thoroughfare (Carson Street), providing a clear, well organized, and signed internal pedestrian circulation system, and providing frontage improvements along the bordering streets to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Therefore, the Project would improve mobility for all residents
Policy: Locate new housing near existing jobs and new jobs near existing housing.	**Consistent:** The Project would increase employment by approximately 37 percent (from approximately 5,464 to approximately 7,494) at a site near multiple residential neighborhoods and the Carson Street Metro Transit Station. Furthermore, the Project would allow for continued operation of the Harbor-UCLA Medical Center, thereby maintaining existing jobs near existing housing and avoiding the need for residents to travel outside the local area for health care services.
Policy: Promote a variety of travel choices.	**Consistent:** As discussed above, the Project would be developed within close proximity to several established transportation routes, the Harbor Freeway, and the Carson Street Metro Transit Station. Furthermore, the Project would create a walkable development by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, potentially ground floor retail, green areas, etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized, and signed internal pedestrian circulation system; and providing frontage improvements (sidewalk enhancements, street trees, benches) and internal landscaped pedestrian paths to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Finally, the Project would implement transportation demand management (TDM) measures as required by the County, and would provide bicycle parking in accordance with LACC requirements. Therefore, the Project would promote a variety of travel

Table 4.H-2 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (including Compass 2% Blueprint Strategy)

Goal/Policy	Analysis of Project Consistency
	choices (e.g., car, carpooling, vanpooling, mass transit, pedestrian, bicycle).
Principle #2: Foster livability in all communities.	**Consistent:** The Project would increase employment from approximately 5,464 to approximately 7,494 at a site near multiple residential neighborhoods and the Carson Street Metro Transit Station. The Project would allow for continued operation of the Harbor-UCLA Medical Center, thereby maintaining existing jobs near existing housing and reducing the need for residents to travel outside local area for work and health care services. Finally, the Project would provide a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail or other limited commercial services, green areas, etc.) to the local community. Therefore, the Project would foster livability in the West Carson community and larger South Bay Planning Area.
Policy: Promote infill development and redevelopment to revitalize existing communities.	**Consistent.** The Project would represent infill development and the redevelopment of an existing underutilized site, and together with the community-serving uses discussed above, would help revitalize the local West Carson community.
Policy: Promote developments that provide a mix of uses.	**Consistent.** The Project would provide a mix of uses, including hospital/inpatient, outpatient, medical office, administrative office, R&D, medical laboratory, retail, library, daycare, and outdoor green space uses.
Policy: Promote "people-scaled" pedestrian-friendly communities.	**Consistent.** The Master Plan would promote a "people-scaled" pedestrian-friendly community by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail or other limited commercial services, green areas, landscaped setbacks, etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized, and signed internal pedestrian circulation system; providing frontage improvements (sidewalk enhancements, street trees, benches) and internal landscaped pedestrian paths to increase foot traffic within the hospital Campus, and between the hospital Campus, the surrounding community, and the Metro Station located 0.10 mile to the east; and providing bicycle parking in accordance with LACC requirements.
Policy: Ensure environmental justice regardless of race, ethnicity, or income class.	**Consistent.** The Project would provide a range of employment opportunities that would adhere to all applicable federal, State, and local regulations prohibiting discrimination in employment. In addition, the Project would not displace low-income people, and would not introduce industrial, airport, rail, landfill, or other uses to the West Carson community most often associated with substantial amounts of pollution, toxic air contaminants, odors, noise, or visual blight.
Principle #4: Promote sustainability for future generations. **Policy:** Develop strategies to accommodate growth that use resources efficiently, eliminate pollution, and significantly reduce waste.	**Consistent.** The Project would constitute infill commercial development along established transit corridors that would allow for nearby residents to find jobs, health care services, and goods and services in their immediate vicinity, thereby reducing vehicle miles travelled (VMT) and avoiding urban sprawl. Furthermore, per the current County policy requiring LEED Silver-level certification or the equivalent for any public facility over 10,000 square feet in floor area, the Project would be designed and constructed to achieve LEED Silver-level certification or its equivalent. Green building practices would also be incorporated into all building design, construction, and operation, and would be integrated with Campus infrastructure and both stormwater and wastewater treatment. A Waste Management Center would also be developed as part of the new Hospital Tower

Table 4.H-2 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2008 Compass Growth Visioning (including Compass 2% Blueprint Strategy)

Goal/Policy	Analysis of Project Consistency
	where among other things, sorting of waste would occur for recycling.
Policy: Utilize "green" development techniques.	**Consistent.** As discussed above, the Project is required to meet the standards for LEED® Silver-level certification or the equivalent in accordance with the County's Green Building Program. Some key Project features intended to contribute to energy efficiency include high-efficiency fixtures and appliances; the use of drought-tolerant and water-efficient landscaping; water conservation measures including installation of low-flow fixtures and smart irrigation controls; and of stormwater retention and treatment onsite.

Source: PCR Services Corporation, 2016.

(c) SCAG - 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy

The 2016 RTP/SCS provides a guiding vision for development in the region and a basis for planning infrastructure improvements. **Table 4.H-3**, *Comparison of the Project to Applicable Policies of the SCAG 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy*, evaluates the consistency of the Project with policies of SCAG's 2016 RTP/SCS. As discussed therein, the Project would be consistent with applicable RTP/SCS goals and policies. The Project would encourage economic development by providing a mix of commercial uses on an infill site well served by an existing transportation network, including mass transit to provide an alternative to private automobiles. Further, the Project would enhance the pedestrian environment within the Project Site and along Carson Street, and improve pedestrian connectivity between the Project Site, the surrounding community, and the Carson Street Metro Transit Station (Silver Line). The Project would implement design features and mitigation measures to reduce air quality impacts, including the incorporation of energy-saving features (see Sections 4.B., Air Quality, and 4.E., Greenhouse Gas Emissions, of this Draft EIR). Active transportation, including pedestrian connections and close proximity to transit options, would encourage alternative transit modes and improve air quality. The Project would support energy efficiency through design and operation in accordance with LEED-Silver certification or its equivalent. Based on the analysis presented in Table 4.H-3, the Project would be consistent with applicable RTP/SCS policies. No significant impacts with respect to RTP/SCS policies, many of which were adopted for the purpose of avoiding or mitigating an environmental effect, would occur.

Table 4.H-3

Comparison of the Project to Applicable Policies of the SCAG 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy

Goal/Policy	Analysis of Project Consistency
Goal: Align the plan investments and polices with improving regional economic development and competitiveness.	**Consistent:** The Project would enable Harbor-UCLA Medical Center to continue to provide health care services to the region, and to enhance these services. In addition, the Project would allow for the retention of the existing jobs at the Harbor-UCLA campus, and would provide new jobs (i.e., short-term construction jobs and long-term operation) in close proximity to existing housing. Finally, the project would represent infill development of an existing underutilized site, and increased urban density, that would take advantage of the existing

Table 4.H-3 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2012-2035 Regional Transportation Plan and Sustainable Communities Strategy

Goal/Policy	Analysis of Project Consistency
	transportation options in the area, including the Carson Street Metro Transit Station and Harbor Freeway, both located 0.10 mile to the east. Hence, the Project would increase regional economic development and competitiveness.
Goal: Maximize mobility and accessibility for all people and goods in the region.	**Consistent:** The Project would represent infill development and increased density along established transportation corridors (with existing bus service) and within 0.10 miles of both a Carson Street Metro Transit Station and Harbor Freeway. The Project would allow for the continued provision of hospital and outpatient services, retention of existing campus jobs, and additional employment opportunities within the area, thereby reducing the need for residents to travel outside the area for health care and work. The Project would also represent walkable mixed use development by including a mix of community-serving uses oriented towards a major thoroughfare (Carson Street), providing a clear, well organized, and signed internal pedestrian circulation system, and providing frontage improvements along the bordering streets to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Therefore, the Project would improve mobility for all residents
Goal: Ensure travel safety and reliability for all people and goods in the region.	**Consistent:** The Project would represent infill development along established transportation routes and within 0.10 mile of the Harbor Freeway and the Carson Street Metro Transit Station, for safe and reliable access by hospital patients and employees. The internal circulation system and signage at Project driveways and within the Project Site would be improved, public and staff vehicular access to and within the Project Site would be separated, and a new public signalized public entrance to the Project Site would be provided from Carson Street, thereby increasing clarity and both vehicular and pedestrian access and safety. Further, the Project would incorporate County-required urban design standards along the transportation routes, and internal pedestrian walkways and landscaped setbacks, to maintain a safe and comfortable pedestrian environment and buffering between uses.
Goal: Preserve and ensure a sustainable regional transportation system. **Goal:** Maximize the productivity of our transportation system.	**Consistent:** The Project would represent infill development and increased urban density along established transportation routes (with existing bus service), and within close proximity to the Harbor Freeway and Carson Street Metro Transit Station, thereby taking advantage of existing vehicular and mass transit options. The Project would also allow for the continued provision of hospital and outpatient services, retention of existing campus jobs, and additional employment opportunities within the West Carson Community and greater South Bay Planning Area, thereby reducing the need for residents to travel outside the area for health care and work. The above would contribute to preserving the sustainability and maximizing the productivity of the regional transportation system.
Goal: Protect the environment and health for our residents by improving air quality and encouraging active transportation	**Consistent:** The Project would represent infill development and increased density along established transportation corridors (with existing bus service) and within 0.10 miles of both a Carson Street Metro Transit Station and Harbor Freeway. The Project would allow for the continued provision of hospital and

Table 4.H-3 (Continued)

Comparison of the Project to Applicable Policies of the SCAG 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy

Goal/Policy	Analysis of Project Consistency
(non-motorized) transportation, such as bicycling and walking.	outpatient services, retention of existing campus jobs, and additional employment opportunities within the area, thereby reducing the need for residents to travel outside the area for health care and work. The Project would also represent walkable mixed use development by including a mix of community-serving uses oriented towards Carson Street, providing a clear, well organized, and signed internal pedestrian circulation system, and providing frontage improvements along the bordering streets to increase foot traffic between the hospital Campus, the surrounding community, and the Metro Station. Lastly, the Project would implement TDM measures as required by the County, and would provide bicycle parking in accordance with LACC requirements. The above would have the effect of encouraging alternative modes of transportation, and reducing per capita VMT and per capita air emissions, and thus would be protective of the environment and the health of local residents.
Goal: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent:** In addition the energy efficiency to be realized associated with the above-discussed reduction in per capita VMT, the Project would: (1) be designed and constructed to achieve LEED Silver-level certification or its equivalent; and (2) incorporate Green building design and operation in all buildings, integrated with Campus infrastructure and both stormwater and wastewater treatment.
Goal: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent:** As indicated previously, the Project would represent infill development, the intensification of land uses within close proximity to mass transit, and the development of job-generating uses and provision of health care services within close proximity to housing,. As also discussed previously, the Project would include pedestrian improvements within the Project Site and along the streets bordering the Project Site, implementing TDM measures required by the County, and providing bicycle parking in accordance with LACC requirements. These would all have the effect of facilitating transit and non-motorized transportation.
Goal: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent:** This goal pertains to security provided by regional security agencies. Rather than adversely affecting the ability of the security agencies to perform their emergency response duties, the Project would allow these agencies to retain their response capacity by allowing the hospital to continue to operate, and would increase the response capacity of these agencies by increasing the inpatient and outpatient capacity of the hospital campus. In addition, the Project would help support improved system monitoring, rapid recovery planning, and the ability of security agencies to coordinate with one another by participating in area-wide emergency response planning and by generating increased property tax and other public revenues for use in emergency planning.

Source: PCR Services Corporation, 2016.

(d) County of Los Angeles - 2035 General Plan Update

Table 4.H-4, *Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update*, evaluates the consistency of the Project with applicable policies of the County's 2035 General Plan Update. As indicated, the Project would be consistent with applicable policies of General Plan Update as the Project would: be compatible with the existing adjacent off-site land uses; incorporate sustainable design; facilitate multiple modes of transportation (including alternative modes); provided interconnected and safe

pedestrian and bicycle circulation; provide required green space and landscaped setbacks; result in less than significant impacts to biological, aesthetic and cultural resources after mitigation; result in less than significant seismic/geotechnical and noise impacts after mitigation; be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Table 4.H-4

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
Land Use Element	
Goal LU 6: Compatible land uses that complement neighborhood character and the natural environment.	
Policy LU 6.1: Reduce and mitigate the impacts of incompatible land uses, where feasible, using buffers and other design techniques.	**Consistent:** The Project would alter the existing visual appearance of the Project Site through the development of a denser set of buildings, in some cases with greater heights, than currently exist on the campus. However, the Project would continue the existing commercial (e.g., hospital/inpatient, outpatient, medical clinic/R&D, surface and structured parking) use of the campus which has been in such use for several decades rather than introduce a new use to the Project Site Furthermore, the Project Site is located within a fully urbanized setting with commercial uses to the north and east, is separated from off-site land uses by major thoroughfares, and in the west is also separated from off-site land uses by the abandoned railroad right-of-way along the west side of Normandie Avenue. Also, the Project would provide landscaping and street trees along the Project Site street frontages where in some areas such landscaping and trees are lacking, and Project buildings would be designed in compliance with unifying design guidelines which would improve the appearance of on-site development. In addition, the area as a whole, which is located within the 110 Freeway/Carson Station TOD, is undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. For all these reasons, while the densification of land uses at the Project Site would be noticeable from adjacent off-site land uses, including from the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Project Site and the residential neighborhood to the north), the Project would not result in significant land use incompatibilities with adjacent off-site land uses.
Policy LU 6.7: Protect rural communities from the encroachment of incompatible development.	**Consistent:** The Project would include infill development within a fully urbanized setting. Therefore, rural communities would be unaffected, and in fact the Project would contribute to a reduction in the potential for urban sprawl by providing health care services and new jobs in proximity to existing housing.
Policy LU 6.8: Encourage land uses and developments that are compatible with the natural environment and landscape.	**Consistent:** The Project would include infill development on an already fully developed site and within a fully urbanized setting, and would not include development adjacent to or within the proximity of natural areas or natural features. Furthermore, the Project would implement a Landscape Master Plan that would provide landscaped buffers along the campus perimeter, street trees, and landscaped promenades, trails, courtyards and plazas on the Project Site where little such landscape features currently exist.
Policy LU 6.9: Encourage development in rural areas that is	**Consistent:** The Project would include infill development within a fully urbanized setting, on a fully developed site already served by public services and

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
compatible with rural community character, preserves open space, conserves agricultural land, and promotes efficiencies in services and infrastructure.	infrastructure. Hence, the Project would not displace open space or agricultural land, and would not result in efficiencies in services and infrastructure. Concerning encouraging development in rural areas that is compatible with rural community character, see the analysis of Project consistency with Policy LU 6.8 above.
Goal LU 9: Well-designed and healthy places that support a diversity of built environments.	
Policy LU 9.2: Design development adjacent to natural features in a sensitive manner to complement the natural environment.	**Consistent:** See the analysis of Project consistency with Policy LU 6.8 above.
Policy LU 9.3: Consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.	**Consistent:** The built environment surrounding the Project Site is currently urbanized and located within the 110 Freeway/Carson Station TOD. Densification of the area is evident in recently constructed retail malls and multi-family housing in proximity to the Project Site. Because the Project Site is already developed and contains a high-rise element (existing 8-story hospital tower), and is located within an existing urbanized area, it would be consistent with the character of the existing on-site and surrounding off-site built environment. Also, the Project Site is an approximately one-half-mile-long block, abutting three major roadways (Carson Street, and Normandie and Vermont Avenues) and is self-contained with respect to building design and interface with on-site structures. Therefore, the built environment of the Project Site is already somewhat distinct from that of the surrounding area. Finally, the Project would include proposed Design Guidelines which require that individual buildings be compatible with each other in relation to massing, materials, design, building orientation, detailing, and other features, thereby providing a more cohesive architectural style that reflect appropriate features such as massing, materials, color, detailing and ornamentation..
Policy LU 9.12: Discourage gated entry subdivisions ("gated communities") to improve neighborhood access and circulation, improve emergency access, and encourage social cohesion.	**Consistent.** The Project would not contain residential use, either subdivision or a gated community. As indicated in Figure 2-8, Vehicular Circulation Plan, in Chapter 2.0, *Project Description*, of this Draft EIR, the Project's vehicular circulation plan would: separate public and staff site access, internal circulation and parking to better pare patients, visitors and staff with their on-site destinations; provide a comprehensive signage and wayfinding plan to aid patients, visitors and staff in navigating the Campus; include a new signalized public entrance on Carson Street and a new unsignalized staff entrance on Vermont Avenue; construct sidewalk connections to the public transit system and sidewalks along primary internal routes to aid in pedestrian circulation; and providing internal emergency access lanes per LACC standards. These measures would have the effect of improving vehicular, pedestrian and emergency access to and within the Project Site.
Goal LU 10: Development that utilize sustainable design techniques.	
Policy LU 10.1: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.	**Consistent.** The Project would constitute infill development along established transit corridors that would allow for nearby residents to find jobs, health care services, and goods and services in their immediate vicinity, thereby reducing vehicle miles travelled (VMT) and fuel consumption. The Project would also employ sustainable energy practices, including being designed and constructed to achieve LEED Silver-level certification or its equivalent, and incorporating green building practices in building design and infrastructure systems (including

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
	stormwater/wastewater treatment). Also, while the Project does not specifically propose the orientation of buildings to maximize passive and active solar design techniques, in order to achieve the proposed LEED Silver-level certification, the Project would be required to incorporate energy-saving heating and cooling which could include passive solar techniques and/.or active solar technologies.
Policy LU 10.2: Support the design of developments that provide substantial tree canopy cover, and utilize light colored paving materials and reflective roofing materials to reduce the urban heat island effect.	**Consistent.** The Project does not specifically propose the provision of light colored paving materials and reflective roofing materials to reduce the urban heat island effect. However, in order to achieve the proposed LEED Silver-level certification, the Project would be required to incorporate heat island reduction measures which could potentially include the use of light colored paving and/or reflective roofing materials. Furthermore, as indicated in Figure 2-10, Landscape Master Plan, in Chapter 2.0, *Project Description*, of this Draft EIR, unlike existing on-site conditions, the Project would include extensive canopy tree plantings along all four Project Site Street frontages, along internal streets, and within proposed on-site plazas and open space areas, which would reduce the urban heat island effect.
Policy LU 10.3: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.	**Consistent.** The Project does not specifically propose the orientation of buildings to maximize passive and active solar design techniques. However, in order to achieve the proposed LEED Silver-level certification, the Project would be required to incorporate energy-saving heating and cooling, which could include building orientation to maximize solar lighting and heating/cooling.
Mobility Element	
Goal M 1: Street designs that incorporate the needs of all users.	
Policy M 1.1: Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, roads and streets.	**Consistent.** The Project would provide frontage improvements (sidewalk enhancements, street trees, benches) along the bordering streets, and an internal vehicular and pedestrian circulation system (Figures 2-8 and 2-9 in Chapter 2.0, *Project Description*, of this Draft EIR), in accordance with LACC requirements and County urban design standards to increase vehicular, pedestrian, and bicycle circulation within the Project Site and between the Project Site and the surrounding community. Furthermore, Project driveways to and within the Project Site would be improved, public and staff vehicular access to and within the Project Site would be separated, and a new public signalized public entrance to the Project Site would be provided from Carson Street, to increase clarity and both vehicular and pedestrian access and safety. Also, bicycle parking would be provided consistent with LACC requirements, and all new buildings, internal streets and sidewalks, and parking would be ADA-compliant. Therefore, the Project would improve mobility and safety for all users.
Goal M 2: Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use.	
Policy M 2.1: Design streets that accommodate pedestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban,	**Consistent.** Please see the analysis of Project consistency with Policy M 1.1 above. Furthermore, the Master Plan would create an interconnected and safe pedestrian- and bicycle-friendly environment that integrates with the surrounding community by: including a mix of community-serving uses (e.g., hospital, outpatient facilities, ground floor retail, green areas, etc.) oriented towards a major thoroughfare (Carson Street); providing a clear, well organized,

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
suburban, and rural communities.	and signed internal pedestrian circulation system (Figure 2-9 in Chapter 2*.0, Project Description*, of this Draft EIR); providing frontage improvements along the bordering streets and internal landscaped pedestrian paths, and providing bicycle parking consistent with LACC requirements. These improvements would increase pedestrian and bicycle traffic within the hospital Campus, and between the hospital Campus, the surrounding community, and the Metro Station located 0.10 mile to the east.
Policy M 2.5: Ensure a comfortable bicycling environment.	**Consistent.** According to the Los Angeles County 2012 Bicycle Master Plan, a sub-element of the County's General Plan Transportation Element, there are no existing designated bikeways along the four streets bordering the Project Site, although a Class II bike lane is planned along Vermont Avenue and a Class III bike route is planned along 220th Street.[11] The Project would not alter the Vermont Avenue or 220th Street rights-of-way, other than to provide frontage improvements (e.g., sidewalk enhancements, street trees, benches) along these streets, and thus would not interfere with the future development of these bikeways. Furthermore, the Project would provide on-site bicycle parking consistent with LACC requirements, and would include an on-site vehicular and pedestrian circulation system (Figures 2-9 and 2-10 in Chapter 2.0, *Project Description*, of this Draft EIR) that complies with LACC requirements and County Urban Design standards and could be used by bicycle traffic. Therefore, the Project would be expected to improve the local bicycling environment.
Policy M 2.9: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features.	**Consistent.** The Project would implement a Landscape Master Plan (Figure 2-10 in Chapter 2.0, *Project Description*, of this Draft EIR) that includes landscaped buffers along the campus perimeter, street trees, and on-site landscaped promenades, trails, courtyards, and plazas. This includes a central garden spine to extend through the Project Site from Carson Street to 220th Street.
Conservation and Natural Resources Element	
Goal C/NR 1: Open space areas that meet the diverse needs of County of Los Angeles**.**	
Policy C/NR 1.1: Implement programs and policies that enforce the responsible stewardship and preservation of dedicated open space areas.	**Consistent.** There is no existing dedicated open space or natural areas on the Project Site, nor does the County have open space dedication requirements applicable to the proposed Project. However, the Project would provide publically-owned on-site open space in the form of landscaped areas (see Figure 2-10, Landscape Master Plan, in Chapter 2.0, *Project Description*, of this Draft EIR). This includes landscaped buffers along the campus perimeter, and on-landscape promenades, trails, courtyards, and plazas, including a central garden spine to extend through the Project Site from Carson Street to 220th Street.
Policy C/NR 1.6: Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds, woodlands, grasslands, and/or	**Consistent.** The Project Site is fully developed and located within a fully urbanized setting. As indicated in Section IV of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), no streams woodlands, grasslands, natural watershed areas, or sensitive biological resources habitat occur on or immediately adjacent to the Project Site, nor does the Project Site serve as a

[11] *County of Los Angeles 2012 Bicycle Master Plan, Figure 3-4 and Table 3-33, adopted March 13, 2012. dpw.lacounty.gov/pda/bike/masterplan.cfm. Accessed by PCR December 29, 2015.*

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
offer linkages that enhance wildlife movements and genetic diversity.	wildlife movement corridor. Furthermore, the Project Site is not located within a County-designated open space area or Significant Ecological Area (SEA).[12] Therefore, the Project would not impact such features/areas or the ability of the County to acquire or prioritize the acquisition of such features/areas.
Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands and SEAs**.**	
Policy C/NR 3.2: Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.	**Consistent.** Please see analysis of Project consistency with Policy C/NR 1.6 above.
Goal C/NR 4: Preserved and restored oak woodlands that are conserved in perpetuity with no net loss of existing woodlands.	
Policy C/NR 4.1: Conserve and sustainably manage oak woodlands.	**Consistent.** The Project Site is fully developed and is located within a fully urbanized area. As indicated in Section IV of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), no oak woodland and no oak trees protected under the County's Oak Tree Ordinance (LACC Chapter 22.56 – Part 16) occur on the Project Site. Therefore, the Project would not interfere with the ability of the County to conserve and sustainably manage oak woodlands.
Goal C/NR 13: Protected visual and scenic resources.	
Policy C/NR 13.2: Protect ridgelines from incompatible development that diminishes their scenic value.	**Consistent.** The Project Site occurs on a valley floor rather than a ridgeline. Therefore, the Project would not affect a ridgeline or the ability of the County to project ridgelines from incompatible development that diminishes their scenic value.
Policy C/NR 13.8: Manage development in HMAs to protect their natural and scenic character and minimize risks from natural hazards, such as fire, flood, erosion, and landslides.	**Consistent.** The Project Site is not located within a County-designated Hillside Management Area (HMA).[13] Therefore, the Project would not affect the natural or scenic character of an HMA, and would not expose persons or property to HMA-related hazards.
Goal C/NR 14: Protected historic, cultural, and paleontological resources.	
Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.	**Consistent.** As indicated in Section V of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), which is based on an Historic Resources Report prepared of the Project Site, no existing on-site buildings are individually eligible for listing in the National Register or California, nor is the Site as a whole eligible for listing in these registers as an historic district. In addition, the analysis concluded that the Project Site as a whole is not historically significant despite its association with World War II military history in Los Angeles, a less than

[12] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Figure 9.1, Open Space Resources Policy Map, and Figure 9.3, Significant Ecological Areas. Adopted October 6, 2015.*

[13] *Ibid, Figure 9.8, Hillside Management Areas.*

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
	significant impact on historic resources would occur. Further discussion of historic resources is provided in Section 6.0, Other CEQA Considerations, of this Draft EIR. Also, as indicated in Section V of the Initial Study, while it is likely that any archaeological resources, paleontological resources, and/or human remains that may have been present on Site have been disturbed or removed, previously undiscovered such materials may still exist at the property and could potentially be disturbed by Project construction activities. However, the analysis determined that, with implementation of standard archaeological and paleontological mitigation requiring the handling, analysis and ultimate disposition of any finds in accordance with California Public Resources Code requirements, Project impacts on archaeological resources, paleontological resources, and human remains would be less than significant.
Policy C/NR 14.4: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).	**Consistent.** Please see the analysis of Project consistency with Policy C/NR 14.1 above.
Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.	**Consistent.** Please see the analysis of Project consistency with Policy C/NR 14.1 above.
Parks and Recreation Element	
Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.	
Policy P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.	**Consistent.** The Project Site is not currently bisected by any multi-use trails, nor are any multi-use trails designated on the Project Site by the County's General Plan Update. Therefore, the Project is under no obligation to provide a multi-purpose trail across the Project Site. Still, the Project would include a central garden spine extending through the Project Site from Carson Street to 220th Street that would, as indicated Figure 2-9, Pedestrian Circulation, in Chapter 2.0, *Project Description*, of this Draft EIR, include pedestrian linkages.

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
Noise Element	
Goal N 1: The reduction of excessive noise impacts.	
Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.	Consistent. The Project Site is already the site of an operating Medical Campus, and already generates operational noise (traffic, stationary source, and activity noise) consistent with such a campus. The Project Site is also separated from existing off-site sensitive noise receptors (e.g., residential uses) by arterial streets which are already a source of traffic noise. Therefore, as indicated in Section 4.I., *Noise*, in this Draft EIR, while the Project would intensify the existing medical commercial use of the Project Site, and result in an incremental increase in operational noise, the operational noise impacts of the Project would be less than significant with implementation of the recommended mitigation. With respect to construction noise, Project construction activities would result in significant unavoidable construction noise as indicated in Section 4.I. However, as further indicated, such noise impacts would only occur associated with construction activities in portions of the Project Site closest to existing off-site sensitive noise receptors, and would be temporary, lasting only as long as the construction activities in the subject portion of the Project Site occur.
Safety Element	
Goal S 1: An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.	
Policy S 1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.	**Consistent.** As indicated in Section VII of the Initial Study prepared for the Project (provided in Appendix A-1 of this Draft EIR), the Project Site is not located in a Seismic Hazard Zone or Alquist-Priolo Earthquake Fault Zone, and no known faults bisect the Project Site. Therefore, the Project would not be subjected to fault rupture, and no mitigation is required.
Policy S 1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landslides, in Hillside Management Areas through siting and development standards.	**Consistent.** The Project Site is not located within a County-designated Hillside Management Area (HMA).[14] Therefore, the Project would not be subjected to HMA-related geotechnical hazards, and no mitigation is required.
Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.	
Policy S 3.1: Discourage development in VHFHSZs, particularly in areas with significant biological resources.	**Consistent.** As indicated in Section IX of the Initial Study prepared for the Project (Appendix A-1 of this Draft EIR), the Project Site is not located within a Fire Hazard Severity Zone (FHSZ). Therefore, the Project would not be subjected to wildland fires or other potential very high fire risks, and no mitigation is required.
Policy S 3.4: Reduce the risk of wildland fire hazards through the use of regulations and performance	**Consistent.** Please see analysis of Project consistency with Policy S 3.1 above.

[14] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Figure 9.8, Hillside Management Areas. Adopted October 6, 2015.*

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
standards, such as fire resistant building materials and vegetation.	
Public Services and Facilities Element	
Goal PS/F 1: A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.	
Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.	**Consistent.** The Project would represent infill development within an existing urbanized area. Furthermore, the Project Site is already fully developed with similar hospital and medical uses, and already fully served by existing public services (police, fire, schools, parks, libraries) and existing public utilities (water, wastewater, electricity, natural gas, etc.). Finally, as indicated in Sections XV and XVIII of the Initial Study prepared for the Project (provided in Appendix A-1 of this Draft EIR) and Sections 4.K., Public Services, and 4.M., Utilities and Service Systems, of this Draft EIR, adequate public services and public utilities are available to serve the Project with implementation of the recommended mitigation.
Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.	**Consistent.** Please see analysis of Project consistency with Policy PS/F 1.1 above. Furthermore, during the development review and permitting stage for each phase of Project development, the applicant would coordinate with the County of Los Angeles County Department of Public Works (LACDPW) and other applicable County departments and service/utility providers, as required by the LACC, to ensure that adequate public service and utility infrastructure is in place to serve the subject development phase.
Goal PS/F 2: Increased water conservation efforts.	
Policy PS/F 2.1: Implement water conservation measures, such as drought tolerant landscaping and restrictions on water used for landscaping.	**Consistent.** As discussed in Section 4.M.1, *Water Supply*, of this Draft EIR: (1) the Project would comply with applicable provisions of the CALGreen code, Titles 20 and 24 of the California Administrative Code, and LEED to increase water efficiency and reduce water demand through the installation of drought-tolerant landscaping, low-water consumption irrigation systems, and water efficient plumbing fixtures; and (2) adequate water supplies are available to serve the Project.
Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.	
Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.	**Consistent.** As discussed in Section 4.M.3, *Solid Waste*, of this Draft EIR: (1) the Project would comply with applicable provisions of the CALGreen Code, LEED, and LACC with respect to solid waste reduction, diversion and recycling; (2) adequate landfill capacity is available to serve the Project; and (3) the Project would not impede the ability of the County to meet its AB 939 waste diversion requirements.
Policy PS/F 5.6: Encourage the use and procurement of recyclable and biodegradable materials.	**Consistent.** As discussed in Section 4.M.3, Solid Waste, of this Draft EIR, the Project would use recyclable and biodegradable materials where appropriate and economically feasible. Materials may include, but are not limited to, gypsum board, insulation, steel, ceramic tile, countertops, trim, and carpet/carpet padding.
Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by	**Consistent.** As discussed in Section 4.M.3, Solid Waste, of this Draft EIR, the Project would comply with applicable provisions of the CALGreen code to reduce resource consumption, including recycling, reusing, and/or diverting 70 percent

Table 4.H-4 (Continued)

Comparison of the Project to Applicable Policies of the County of Los Angeles 2035 General Plan Update

Goal/Policy	Analysis of Project Consistency
public and private projects.	of non-hazardous construction waste.
Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.	**Consistent.** As discussed in Section 4.M.3, Solid Waste, of this Draft EIR, the Project would comply with applicable provisions of the CALGreen code to reduce resource consumption by ensuring that trash and recyclable containers are provided to future residents, in accordance with County requirements. Furthermore, the Project would include a Waste Management Center in the New Hospital Tower where hazardous and non-hazardous solid waste would be separated, and where the non-hazardous solid waste would be sorted for recycling.
Goal PS/F 7: A County with adequate educational facilities.	
Policy PS/F 7.2: Proactively work with school facilities and education providers to coordinate land use and facilities planning.	**Consistent.** As indicated in Section 4.K.4, *Schools*, of this Draft EIR, the Project would represent infill development within an existing urbanized area, is already fully developed with similar hospital and medical uses, and already generates a demand for Los Angeles Unified School District (LAUSD) school facilities and services, such that the densification of uses at the Project Site under the Project would result in a small incremental increase in demand for. As further indicated in Section 4.K.4, with the payment of the applicable prevailing LAUSD school impact fees, adequate school facilities would be available to serve the Project.
Goal PS/F 8: A comprehensive public library system.	
Policy PS/F 8.2: Support library mitigation fees that adequately address the impacts of new development.	**Consistent.** As indicated in Section 4.K.5, *Libraries*, of this Draft EIR, the Project would represent infill development within an existing urbanized area, is already fully developed with similar hospital and medical uses, and already generates a demand for library facilities and services from the County of Los Angeles Public Library (LACPL), such that the densification of uses at the Project Site under the Project would result in a small incremental increase in demand for libraries. As further indicated in Section 4.K.5, with the payment of the applicable prevailing LACPL library impact mitigation fee, adequate library facilities would be available to serve the Project.
Economic Development Element	
Goal ED 1: An economic base and fiscal structures that attract and retain valuable industries and businesses	**Consistent.** The Project would enable Harbor-UCLA to continue to operate a hospital at the Project Site, which would otherwise require closure in response to seismic safety regulations adopted in California after the Northridge Earthquake, and would also allow the hospital and other existing medical uses at the Project Site to expand operations. Thus, the Project would help attract and retain a valuable local-serving industry and associated local jobs, increase local job opportunities, and foster economic development and growth, in the West Carson community and greater South Bay Planning Area.
Goal ED 2: Land use practices and regulations that foster economic development and growth.	**Consistent.** Please see the analysis of Project consistency with Goal ED 1.

Source: PCR Services Corporation, 2016.

(e) County of Los Angeles - General Plan Land Use Designations

(i) Permitted Land Uses

As indicated in Figure 4.H-2, the Project Site is designated "P" (Public and Semi-Public) by the County's General Plan Update. The "P" GPLU designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major. Also, in the event that the public or semi-public use of mapped facilities is terminated, alternative uses that are compatible with the surrounding development, in keeping with community character, are permitted.[15]

As indicated in Table 2-1, Harbor-UCLA Master Plan Project Existing and Proposed Land Use Summary, and in Figure 2-6, Harbor-UCLA Medical Campus Master Plan Site Plan, in Chapter 2.0, Project Description, of this Draft EIR, the Project would include a mix of uses, including: hospital/in-patient, medical office/outpatient, administrative office, retail, library, day care, biomedical R&D, warehouse/storage, and utility/infrastructure uses (including surface parking lots and parking structures). These use types, which already occur on the Project Site, are permitted under the "P" GPLU designation. Therefore, the Project would be consistent with the GPLU designation of the Project Site.

(ii) Floor Area Ratio

The maximum FAR permitted under the "P" GPLU designation is 3:1.[16] Because the Campus-wide FAR under the Project would be 0.78:1, the Project FAR would be well within the maximum FAR permitted under the "P" GPLU designation of the Project Site.

(f) County of Los Angeles - Planning and Zoning Code (LACC Title 22)

(i) Permitted Land Uses

As indicated in Figure 4.H-3, the Project Site is zoned C-3 (Unlimited Commercial) by the LACC. The C-3 zone permits a broad range of commercial uses, including but not limited to offices, universities/colleges, medical clinics, medical research/laboratories, retail stores, and utility/infrastructure uses (LACC §22.28.180), as well as hospitals and helistops.

As discussed above, the Project would include a mix of uses, including: hospital/in-patient, medical office/outpatient, administrative office, retail, library, day care, biomedical R&D, warehouse/storage, and utility/infrastructure uses (including surface parking lots and parking structures). These use types are either permitted outright by the C-3 zoning or would are already permitted. Therefore, the Project would be consistent with the zoning of the Project Site.

[15] *Ibid, Table 6.2*

[16] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

(ii) Floor Area Ratio

The maximum FAR in the C-3 zone is 13:1 (LACC §22.52.050). Because the Campus-wide FAR under the Project would be 0.78:1, the Project FAR would be well within the maximum FAR permitted under the C-3 zoning of the Project Site.

(iii) Building Height

The maximum building height in the C-3 zone is up to 13 times the buildable area of the Medical Center Campus (per LACC §22.52.050). In other words, there is no height restriction as long as the development intensity on the site does not exceed the limits of the C-3 zone. Because the Campus-wide FAR under the Project would be only 0.78:1, Project building heights (which would reach a maximum of eight floors) would be well within the maximum permitted under the C-3 Zoning of the Project Site.

(2) Land Use Compatibility

Threshold LU-2: Would the Project be incompatible with existing adjacent off-site land uses?

Impact Statement LU-2: *The Project would be compatible with existing adjacent off-site land uses because the nature (type, scale, height, location) of the existing on-site land uses would not substantially change under the Project, nor would the character of the area as perceived by the existing adjacent off-site land uses. Therefore, land use compatibility impacts would be less than significant.*

The Project would alter the existing visual appearance of the Project Site through the development of a denser set of buildings, in some cases with greater heights, than currently exist on the campus. However, the Project would continue the existing commercial (e.g., hospital/inpatient, outpatient, medical clinic/R&D, surface and structured parking) use of the Campus which has been in such use for several decades rather than introduce new use types to the Project Site. Furthermore, as indicated in Figure 4.H-1, the Project Site is located within a fully urbanized setting with commercial uses to the north and east and primarily residential uses to the south and west, is separated from off-site land uses by major thoroughfares, and in the west is also separated from off-site land uses by the abandoned railroad right-of-way along the west side of Normandie Avenue. Also, the Project would provide landscaping and street trees along the Project Site street frontages where in some areas such landscaping and trees are lacking, and Project buildings would be designed in compliance with unifying design guidelines which would improve the appearance of on-site development therefore improving the visual appearance of the Project Site. In addition, the area as a whole, which is located within the 110 Freeway/Carson Station TOD, is undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. For all these reasons, while the densification of land uses at the Project Site would be noticeable from adjacent off-site land uses, including from the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Project Site and the residential neighborhood to the north), the Project would result in less than significant land use incompatibilities with adjacent off-site land uses.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, provides a list of projects that are planned or are under construction in the Project area. These projects are summarized in **Table 3.1**, *Related Projects List*, and mapped on **Figure 3-1**, *Related Projects Map*. As shown, 17 related projects occur within an

approximately two-mile radius of the Project Site, including four in the unincorporated West Carson Community, ten in the City of Carson, and three projects in the City of Los Angeles. These related projects combined include approximately 1,200 residential units and 158,000 square feet of non-residential land uses (e.g., retail, office, medical, and car wash).

As discussed in Subsection 4.H.2, *Environmental Setting*, the 72-acre Harbor-UCLA Campus is located in the unincorporated Community of West Carson on a flat urbanized site bordered by four arterial streets and surrounded on all sides by urban development. The City of Los Angeles lies immediately west of the Project Site, across Normandie Avenue, while the City of Carson lies one block east of the Project Site, across the Harbor Freeway located approximately 0.1 miles to the east. As discussed in Subsection 4.H.3.d, *Environmental Impacts*, the Project would represent infill development on an already urbanized site that would constitute a densification and slight increase in the height of the existing on-site medical uses, but that: (1) would be consistent with adopted regional and local land use plans, including the existing County GPLU designation and zoning of the Project Site; and (2) would result in less than significant land use incompatibilities with the existing adjacent off-site land uses.

Related projects are subject to CEQA review and review by County regulatory agencies. Most notably, related projects seeking increases in permitted densities and buildings seeking higher densities than those permitted by the underlying zoning per the LACC are subject to review by the Department of Regional Planning and other County departments for consistency with plan provisions. Projects can only be approved if found to be consistent with adopted land use plans and zoning. Given this, and given that the Project would be consistent with the adopted land use plans and zoning, cumulative impacts regarding consistency with the land use regulatory framework would be less than significant.

With respect to cumulative land use incompatibilities, such incompatibilities may occur when one or more related projects are close enough to a proposed project for the occupants of other nearby land uses to be able to experience substantive land use (height, scale, character), aesthetics (views, light, shading), air, and/or noise impacts from both one or more of the related projects AND the proposed project. In the current case, none of the related projects are close enough to the Project Site to add substantively to the Project's less than significant land use incompatibilities (the closest related project is Related Project #2, a 19-unit condominium project located at 1028 W 223rd Street, approximately ¼-mile (1,250 feet) south of the Project Site). Therefore, cumulative impacts regarding land use incompatibilities would be less than significant.

For evaluation of the cumulative land use impacts of the Project pertaining to air quality, see Sections 4.B., *Air Quality*, and 4.E., *Greenhouse Gas Emissions*, of this Draft EIR. For evaluation of the cumulative land use impacts of the Project pertaining to population/housing and transportation/parking, see Sections 4.J., *Population and Housing*, and 4.L., *Transportation and Traffic*, respectively, of this Draft EIR.

4. MITIGATION MEASURES

The land use impacts of the Project would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The land use impacts of the Project would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
I. NOISE

1. INTRODUCTION

The section analyzes the potential noise and vibration impacts that would result from the Project. The analysis describes the existing noise environment within the Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project, identifies the potential for significant impacts, and provides mitigation measures to address significant impacts. In addition, an evaluation of the potential cumulative noise impacts of the Project and related projects is also provided. Supporting data and analysis for the analysis presented in this section, including a Helistop Relocation Noise Impact Study (AES, 2016), are provided in Appendix H of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Noise and Vibration Basics

(1) Noise

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of sound is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The A-weighted sound level is expressed in "dBA." This scale de-emphasizes low frequencies to which human hearing is less sensitive and focuses on mid- to high-range frequencies. The range of human hearing is approximately 3 to 140 dBA, with 110 dBA considered intolerable or painful to the human ear. A comparison of types of commonly experienced environmental noise is provided in **Figure 4.I-1,** *Common Noise Levels*.

Although the A-weighted scale accounts for the range of people's response, and therefore, is commonly used to quantify individual event or general community sound levels, the degree of annoyance or other response effects also depends on several other perceptibility factors. These factors include:

- Ambient (background) sound level
- Magnitude of sound event with respect to the background noise level
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

People judge the relative magnitude of sound sensation by subjective terms such as "loudness" or "noisiness." That is, in a non-controlled environment a change in sound level of 3 dB is considered "just perceptible," a

change in sound level of 5 dB is considered "clearly noticeable, and a change in 10 dB is recognized as "twice as loud".[1]

In an outdoor environment, sound levels attenuate (i.e., diminish) with distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the source configuration, point source or line source. For a point source, the rate of sound attenuation is, usually, 6 dB per doubling of distance from the noise source. For example, a sound level of 50 dBA at a distance of 25 feet from the noise source would attenuate to 44 dBA at a distance of 50 feet. For a line source, such as a constant flow of traffic on a roadway, the rate of sound attenuation is 3 dB per doubling of distance.[2] In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight not fully blocked), some barrier insertion loss would still occur, however to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a more substantial barrier.[3]

Community noise levels usually change continuously during the day. The equivalent sound level (L_{eq}) is normally used to describe community noise. The L_{eq} is the equivalent steady-state A-weighted sound level that would contain the same acoustical energy as the time-varying A-weighted sound level during the same time interval. For intermittent noise sources, the maximum noise level (L_{max}) is normally used to represent the maximum noise level measured during the measurement. Maximum and minimum noise levels, as compared to the L_{eq}, are a function of the characteristics of the noise source. As an example, sources such as generators have maximum and minimum noise levels that are similar to L_{eq} since noise levels for steady-state noise sources do not substantially fluctuate. However, as another example, vehicular noise levels along local roadways result in substantially different minimum and maximum noise levels when compared to the L_{eq} since noise levels fluctuate during pass-by events. The County of Los Angeles Noise Ordinance uses the L_{eq} for evaluation of noise violation.

To assess noise levels over a given 24-hour time period, the Community Noise Equivalent Level (CNEL) descriptor is used in land use planning. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels which occur in the night (10:00 P.M. to 7:00 A.M.) and a 5 dBA adjustment (upward) added to the sound levels which occur in the evening (7:00 P.M. to 10:00 P.M.). These penalties attempt to account for increased human sensitivity to noise during the quieter nighttime periods, particularly where sleep is the most probable activity. CNEL has been adopted by the State of California to define the community noise environment for development of a community noise element of a General Plan and is also used by County for land use planning in the County's Noise Element of the General Plan.[4]

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1 *Engineering Noise Control, Bies & Hansen, 1988.*

2 *Caltrans, Technical Noise Supplement (TeNS), 2013.*

3 *Ibid.*

4 *State of California, General Plan Guidelines, 2002.*

Noise Level (dBA)	Common Indoor Noise Levels	Common Outdoor Noise Levels
110	Rock Band	
100	Inside Subway Train	Jet Flyover @ 1,000 feet Gas Lawn Mower @ 3 feet
90	Food Blender @ 3 feet	Diesel Truck @ 50 feet Noisy Urban Daytime
80	Garbage Disposal @ 3 feet Shouting @ 3 feet	
70	Vacuum Cleaner @ 10 feet	Gas Lawn Mower @ 100 feet Commercial Area
60	Normal Speech @ 3 feet Large	Heavy Traffic @ 300 feet
50	Dishwasher next room	Quiet Urban Daytime
40	Small Theater/Conference Room (background)	Quiet Urban Nightime Quiet Suburban Nightime
30	Library Bedroom at Night	
20	Concert Hall (background) Broadcast & Recording Studio	Quiet Rural Nightime
10		
0	Threshold of Hearing	

- PRELIMINARY WORKING DRAFT -

PCR

Common Noise Levels

Harbor-UCLA Medical Center Master Plan

Source: Caltrans Noise Manual, California Department of Transportation, 1980.

FIGURE **4.I-1**

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(2) Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration.[5] Vibration amplitudes are usually described as either peak, as in peak particle velocity (PPV). The peak level represents the maximum instantaneous peak of the vibration signal. In addition, vibrations can be measured in the vertical, horizontal longitudinal, or horizontal transverse directions. Ground vibrations are most often greatest in the vertical direction.[6] Therefore, the analysis of ground-borne vibration associated with the Project is addressed in the vertical direction. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 50 feet or less) from the source.

b. Existing Conditions

(1) Noise-Sensitive Receptor Locations

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure and the types of activities typically involved at the receptor location. The *County of Los Angeles' 2006 CEQA Thresholds Guide* states that residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. Existing noise sensitive uses within 500 feet of the Medical Center Campus include the following:

- The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multi-family residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of the intersection with Vermont Avenue.
- The area north of Carson Street is a predominantly single-family residential neighborhood.
- Vermont Avenue, the southern half of the block facing the Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and mobile home parks, Starlite Trailer Park and Rainbow Mobile Home Park.
- Single-Family and multi-family residential neighborhoods border the Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles.
- Halldale Avenue Elementary School is located at the southwest corner of Normandie Avenue and 216th Street. White Middle School is located at the southeast corner of Figueroa Street and West 220th Street.

(2) Ambient Noise Levels

The predominant noise source surrounding the Medical Center Campus is roadway noise from Carson Street to the north, Vermont Avenue to the east, and Normandie Avenue to the west. Secondary noise sources include general residential and commercial-related activities, such as loading dock/delivery truck activities, trash compaction, and refuse service activities.

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[5] *Federal Transit Authority, Transit Noise and Vibration Impact Assessment, Final Report, page 7-3, May 2006.*

[6] *California Department of Transportation, Transportation Related Earthborne Vibrations, page 4, February 2002.*

Measured Noise Levels – Existing Conditions

Ambient noise measurements were made at six locations, representing the nearby noise-sensitive land uses in the vicinity of the Medical Center Campus as indicated on **Figure 4.I-2,** *Noise Measurement Locations*. Long-term measurements were conducted at locations R1 and R5 for 2 days and short-term noise measurements were made at locations R2 through R4 and R6. Ambient sound measurements were conducted from Wednesday, October 29, through Friday, October 31, 2014 to characterize the existing noise environment during weekdays in the Project vicinity.

The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated SLM. The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute (ANSI) S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The microphone was placed at a height of 5 feet above the local grade, at the following locations as shown in Figure 4.I-2:

- Measurement Location R1: This measurement location represents the existing noise environment of the Medical Center Campus site along Central Drive. The noise measuring device (sound level meter) was placed approximately 200 feet north from the northwest corner of 220th Street and Central Drive.

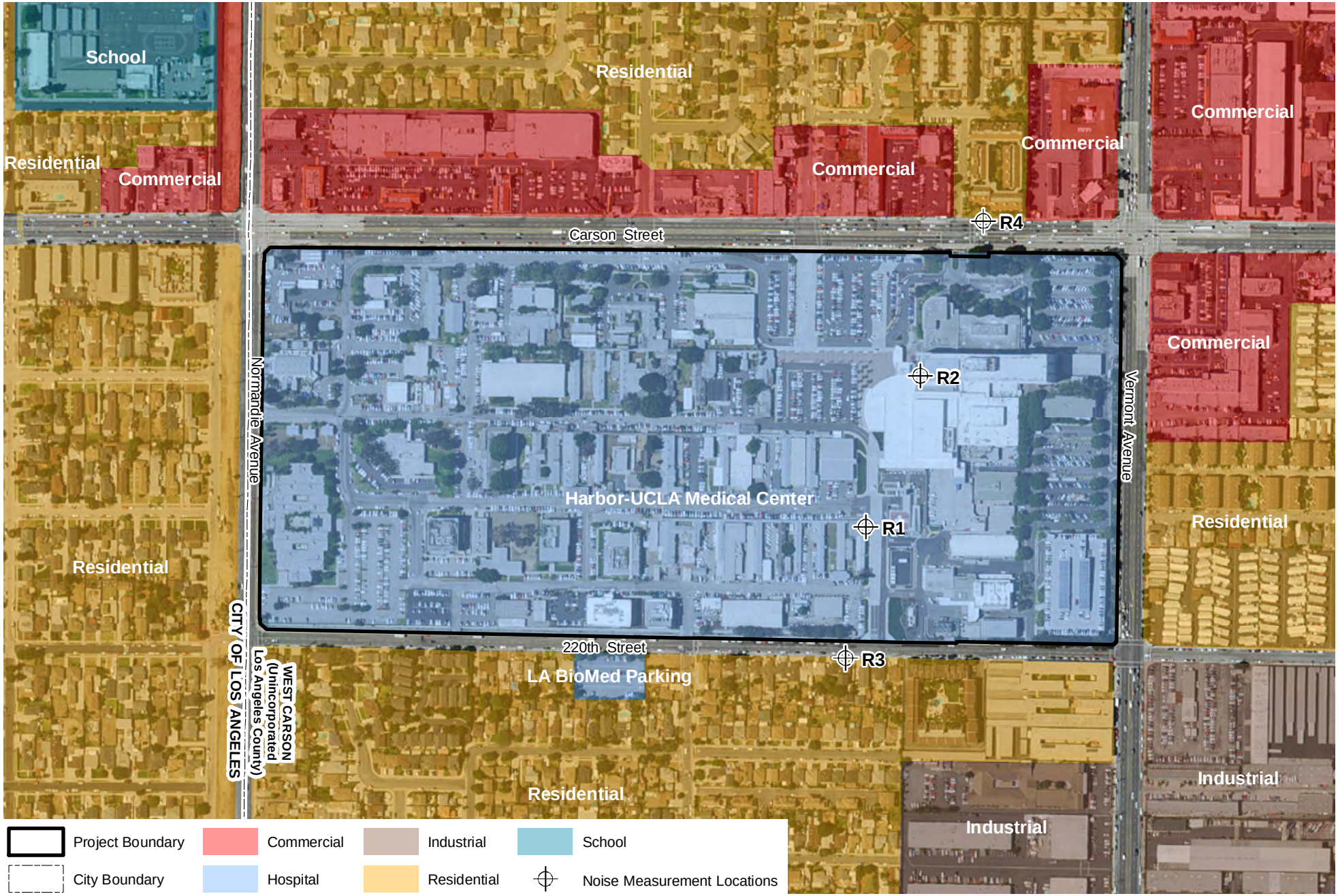
- Measurement Location R2: This measurement location represents the existing noise environment of the Medical Center Campus. The sound level meter was placed on the southwestern corner of the Existing Hospital tower.

- Measurement Location R3: This measurement location represents the existing noise environment of the Child Care Center and single and multi-family residential uses along West 220th Street, south of the Medical Center Campus. The sound level meter was placed along West 220th Street approximately 150 feet east from the northeastern corner of 220th Street and Central Drive.

- Measurement Location R4: This measurement location represents the existing noise environment of the multi-family residential uses along Carson Street. The sound level meter was placed along Carson Street approximately 300 feet west from the northwestern corner of Carson Street and Vermont Avenue.

- Measurement Location R5: This measurement location represents the existing noise environment of the single-family residential and mobile home uses along Vermont Avenue. The sound level meter was placed along Vermont Avenue approximately 250 feet north from the northwest corner of Vermont Avenue and 220th Street.

- Measurement Location R6: This measurement location represents the existing noise environment of the single-family residential uses along Normandie Avenue, north of 220th Street and Halldale Avenue Elementary School located at southwest corner of Normandie Avenue and 216th Street. The sound level meter was placed along Normandie Avenue approximately 350 feet north from the northwestern corner of Normandie Avenue and 220th Street.



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Noise Measurement Locations

Harbor-UCLA Medical Center Master Plan

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

4.I-2

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A summary of noise measurement data is provided in **Table 4.I-1,** *Summary of Ambient Noise Measurements*. As shown in Table 4.I-1, the existing ambient daytime and nighttime noise levels at all of the noise-sensitive residential receptors measured already exceed the County's Exterior Noise Standard for residential areas of 50 dBA during the daytime and 45 dBA during the nighttime. The ambient noise levels in the immediate Project vicinity are representative of a noisy urban area.

Table 4.I-1

Summary of Ambient Noise Measurements

Location, Duration, Existing Land Uses and, Date of Measurements	Measured Ambient Noise Levels,[a] (dBA) Daytime (7 A.M. to 10 P.M.) Hourly L_{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L_{eq}
R1		
10/29/14 (partial 8 hours)/ Wednesday	56 – 58	55 – 56
10/30/14 (full 24 hours)/ Thursday	56 – 67	51 – 57
10/31/14 (partial 8 hours)/ Friday	58 – 67	52 – 57
R2		
10/29/14 12 P.M. to 1 P.M./ Wednesday	56	N/A
R3		
10/29/14 11 A.M. to 12 P.M./ Wednesday	66	N/A
R4		
10/29/14 10 A.M. to 11 A.M./ Wednesday	69	N/A
R5		
10/29/14 (partial 8 hours)/ Wednesday	65 – 73	61 – 65
10/30/14 (full 24 hours)/ Thursday	64 – 73	58 – 69
10/31/14 (partial 8 hours)/ Friday	67	58 – 71
R6		
10/29/14 11 A.M. to 12 P.M./ Wednesday	67	N/A

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix H of this Draft EIR.*

Source: ESA PCR, 2016.

Measured Noise Levels – Existing Helicopter Noise

In addition, ambient noise measurements were conducted at seven off-site noise sensitive (residential and school uses) receptors in the vicinity of the Project site and the proposed helicopter flight paths, to quantify the existing noise environment, which are provided in the Helistop Relocation Noise Impact Study (AES 2016), attached as Appendix H of this EIR. **Figure 4.I-3**, *Ambient Noise Measurement Locations – Helicopter Operations,* (Figure 2 of the Study) shows the noise measurement locations in relation to the existing Helistop. At each of the measurement locations, two short-term (15-minute) noise readings were made, one during daytime period and one during nighttime period. The ambient noise measurements were conducted on March 10 and May 25, 2016, between the hours of 11 a.m. and 2 p.m. (daytime period) and 10 p.m. and 12 a.m. (nighttime period). Noise measurements were conducted using the Quest 2900 Integrated Sound Level Meter (SLM). The Quest 2900 SLM is a Type 2 standard instrument as defined in the American National Standard Institute (ANSI) S1.4; SLMs were calibrated and operated according to the manufacturer's written specifications. The SLM microphone was placed five feet above the local grade during measurements.

Table 4.I-2, *Measured Ambient Noise Levels,* presents the measured ambient noise levels in the vicinity and within the Project site.

Table 4.I-2

Measured Ambient Noise Levels

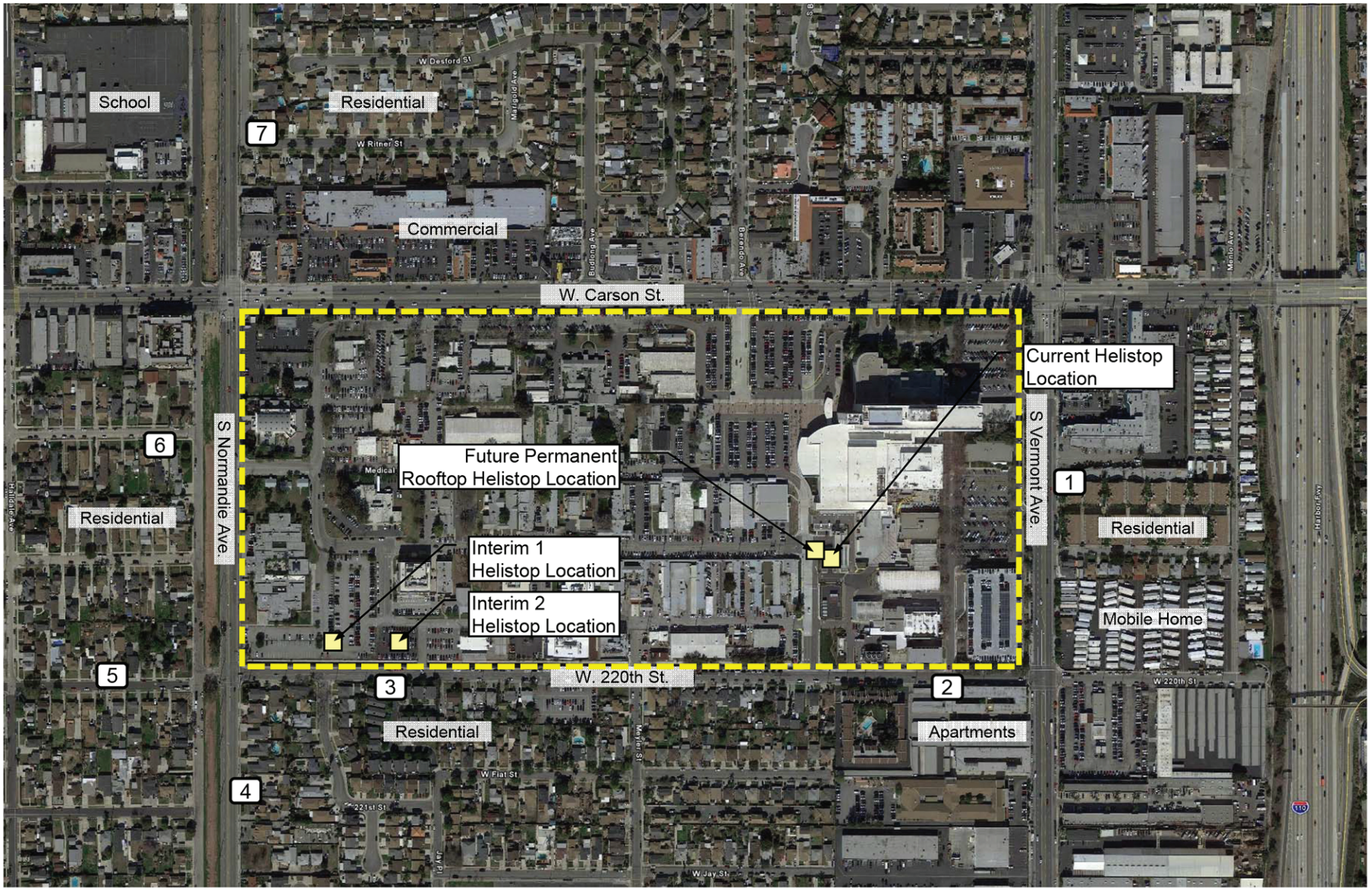
Location	Nearby Noise Sensitive Land Uses	Measured Noise Levels,[a] L_{eq} (dBA)		CNEL,[b] (dBA)
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
R1: Multi-family residential use at the northeast corner of Vermont Avenue and 219th Street	Residential	68.3	64.9	70.5
R2: Multi-family residential use on 220th Street, approximately 200 feet west of Vermont Avenue	Residential	66.2	57.2	65.6
R3: Single-family residential use on 220th Street, approximately 230 feet east of Mariposa Avenue	Residential	63.3	58.0	64.3
R4: Single-family residential use on east side of Normandie Avenue, approximately 150 feet south of 220th Street	Residential	70.5	63.5	70.7
R5: Single-family residential use on north side of 220th Street, approximately 230 feet west of Normandie Avenue	Residential	51.4	47.3	53.1
R6: Single-family residential use on south side of 218th Street, approximately 90 feet west of Normandie Avenue	Residential	57.0	48.1	56.4
R7: Single-family residential use on east side of Normandie Avenue, just north of Ritner Street. This measurement location also represents the Halldale Elementary School located on the west side of Normandie Avenue	Residential/School	64.8	56.9	64.4

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix A of the Noise Study, provided in Appendix H of this Draft EIR.*
[b] *Estimated based on the short-term measurements following the FTA guidelines.*

Source: Acoustical Engineering Services, Inc., 2016.

Detailed noise measurement data, including time of measurements, field notes, and approximate locations are provided in an appendix to the Helistop Relocation Noise Impact Study, which is provided in Appendix H of this Draft EIR. Based on field observation and measured sound data, the current ambient noise environment in the vicinity of the Project Site is controlled primarily by vehicular traffic on nearby local roadways, and to a lesser extent by occasional aircraft flyovers, and other typical urban noise.

In addition to the ambient noise measurements, noise levels associated with the existing Helistop operations were calculated using information provided by the hospital's helicopter landing logs. Existing helicopter operation related noise contours were calculated using the FAA Integrated Noise Model (INM) Version 7.0d. The INM input information include: three dimensional flight tracks for departure and approach, helicopter flight



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Ambient Noise Measurement Locations – Helicopter Operations

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE

4.I-3

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procedures, number and type of helicopters, and daily operations (number of flights by hours). INM calculates helicopter operations-related CNEL, L_{max} and sound exposure level (SEL) at a particular receptor location. Detailed information for the helistop operations including: helicopter operations (i.e., numbers and types of helicopters), helicopter flight tracks, and helicopter flight procedures (i.e., speed, elevation, and distance) are defined in the Helistop Relocation Noise Impact Study, provided in Appendix H of this Draft EIR.

The existing Helistop is located on the roof level of a single-story structure, approximately 15 feet above the local grade elevation at 43 feet above mean sea level (MSL), within the HUCLAMC campus. There are four flight tracks/paths (under the current condition) that the helicopter would utilized for approach (to the hospital) and depart (from the hospital), as shown on **Figure 4.I-4**, *Helicopter Operations CNEL Noise Contour – Existing Helistop Location*. As indicated, two flight paths generally follow west (from the Helistop) and turn north and south follow Normandie Avenue and two flight paths to the northeast and southeast. The noise analysis assumed even distribution for helicopter operations for the four flight paths (i.e., one-fourth for each flight path), because the need for an air ambulance can arise from any direction.

Figure 4.I-4 shows the CNEL noise contours generated by the helicopter operations at the existing Helistop. As shown on Figure 4.I-4, the highest CNEL noise contour is CNEL 65 dBA, which lies within the hospital campus.

Table 4.I-3, *Summary of Helistop Noise Analysis – Existing Helistop Conditions,* presents the predicted helicopter CNEL levels at the Project receptor locations based on the existing helicopter operations.

Table 4.I-3

Summary of Helistop Noise Analysis – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[a] Feet	Predicted Existing Helicopter Noise Levels,[b] CNEL (dBA) "A"	Measured Ambient Noise Levels without Helicopter (from Table 3) Operations,[c] CNEL (dBA) "B"	Ambient Noise Levels + Helicopster Noise Levels,[d] CNEL (dBA) "C=A+B"
R1	Residential	800	47.6	70.5	70.5
R2	Residential	570	50.0	65.6	65.7
R3	Residential	1480	41.3	64.3	64.3
R4	Residential	2100	38.0	70.7	70.7
R5	Residential	2380	35.8	53.1	53.2
R6	Residential	2230	35.4	56.4	56.4
R7	Residential/ School[e]	2380	33.5	64.4	64.6

[a] *Estimated diagonal distances using Google Earth Map. Distances are estimated from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

[b] *Due to helicopter operations only.*

[c] *Measured ambient noise levels without helicopter operations.*

[d] *Calculation Methodologies are provided in Appendix C of the Noise Impact Study, which is provided in Appendix H of this Draft EIR.*

[e] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, Inc., 2016.

As indicated in Table 4.I-3, the predicted helicopter CNEL levels are significantly lower than that of the existing measured ambient noise levels (non-helicopter noise). Also, included in Table 4.I-3 (last column) are the existing ambient noise levels plus the estimated noise levels from the helicopter operations. The results show that the existing helicopter CNEL levels has no impact on the current ambient sound environment at the off-site noise sensitive uses.

In addition to the CNEL noise analysis, INM calculates the single-event (single helicopter) noise level in terms of SEL and L_{max}. The single-event noise analysis provides the maximum noise level that would be generated by a single helicopter arriving or departing on the identified flight paths, regardless of the number of flights per day. The twin engine Sikorsky S-70 helicopter represents the majority of the current helicopter landings, approximately 39 percent of the total operations, and also generates the highest sound level. Therefore, the Sikorsky S-70 helicopter noise signature was used for the single-event noise analysis.

Table 4.I-4, *Helicopter Single-Event Noise Levels – Existing Helistop Conditions,* presents the predicted SEL and L_{max} levels from the Sikorsky S-70 at the Project's offsite noise receptor locations.

Table 4.I-4

Helicopter Single-Event Noise Levels – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[a] Feet	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)
R1	Residential	800	100.8/85.4
R2	Residential	570	102.9/86.5
R3	Residential	1480	96.9/84.1
R4	Residential	2100	94,2/82.7
R5	Residential	2380	91.9/81.8
R6	Residential	2230	90.7/81.8
R7	Residential/School[b]	2380	88.1/79.5

[a] *Diagonal distances using Google Earth Map. Distances are from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

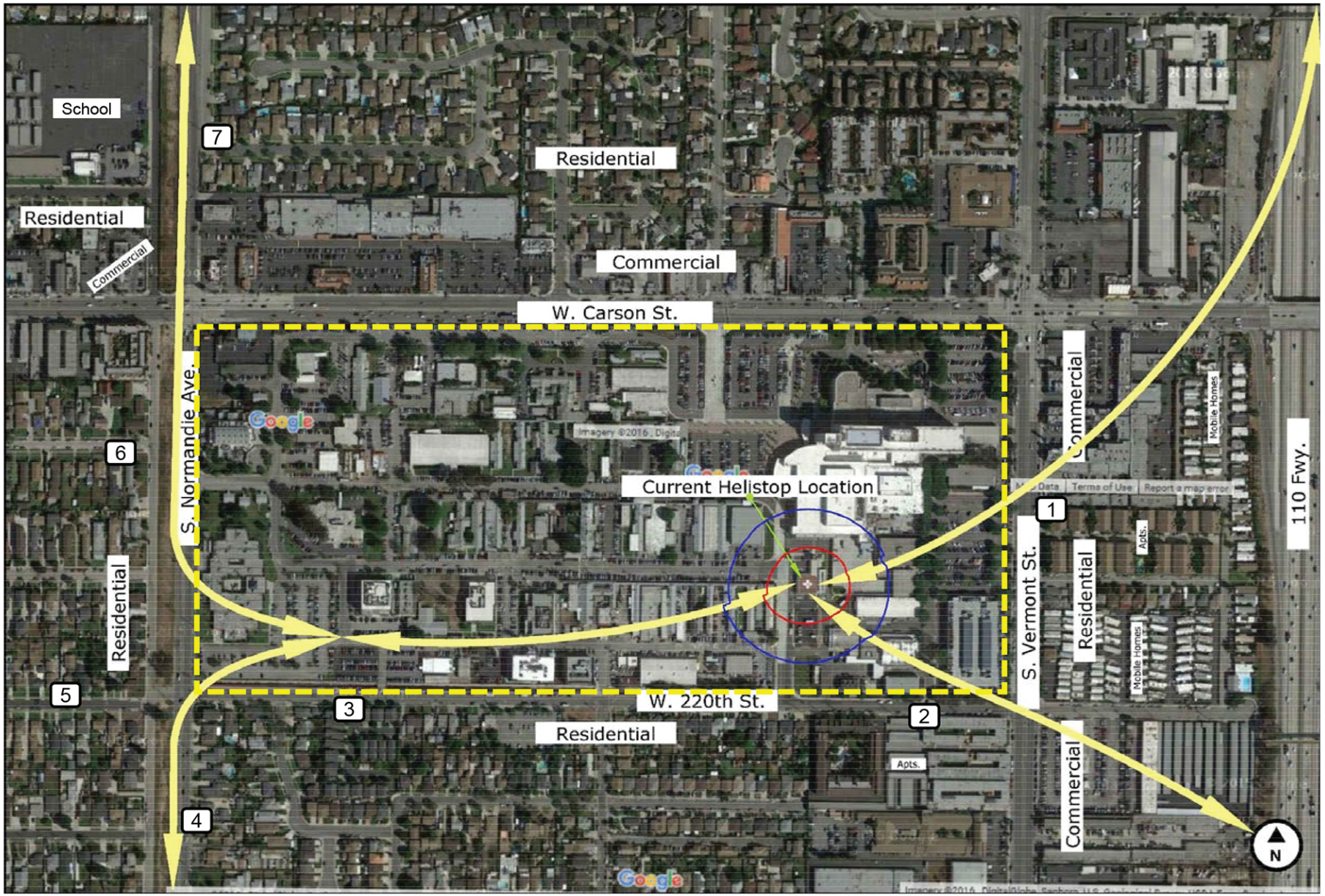
[b] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, Inc, 2016.

As indicated in Table 4.I-4, the predicted noise levels ranged from 79.5 dBA L_{max} (88.1 dBA SEL) at receptor R7 to 86.5 dBA L_{max} (102.9 dBA SEL) at receptor R2. Note: SEL represents the total sound energy during a single noise event normalized to a 1 second period; therefore, SEL is generally higher than L_{max}.

Modeled Noise Conditions – Traffic Noise

To further characterize the Project area's ambient noise environment, the CNEL noise levels attributed to existing traffic on local roadways was calculated using a noise prediction model which was developed based on calculation methodologies provided in the Caltrans Technical Noise Supplement (TeNS) document and



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Helicopter Operations CNEL Noise Contour – Existing Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-4

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traffic data provided by the Project traffic consultant.[7] [8] The roadway noise calculation procedures provided in the Caltrans TeNS are consistent with Federal Highway Administration RD-77-108 roadway noise prediction methodologies. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

A traffic model calibration test was performed to establish the noise prediction model's accuracy. The road segments included in the calibration test were along Carson Street, between Normandie Avenue and Vermont Avenue and Normandie Avenue, between Carson Street and 220th Street. At the noted location, a 15-minute noise recording was made concurrent with logging of actual traffic volumes and auto fleet mix (i.e., standard automobile, medium duty truck, or heavy duty truck). The traffic counts were entered into the noise model along with the observed speed, lane configuration, and distance to the roadway to calculate the traffic noise levels. The results of the traffic noise model calibration are provided in **Table 4.I-5**, *Traffic Noise Model Calibration Results*. As indicated, the noise model results are within less than 1 dBA of the measured noise levels, which is within the industry standard tolerance of the noise prediction model. Therefore, the Project specific traffic noise prediction model is considered accurate and reflective of the Project's physical setting.

Table 4.I-5

Traffic Noise Model Calibration Results

Road Segment/ Noise Measurements Locations	Traffic Counts during noise readings, 15-minutes			Measured Traffic Noise Levels, L_{eq} (dBA)	Project Traffic Noise Model Predicted Noise Levels, L_{eq} (dBA)	Difference between Predicted and Measured Levels, dBA
	Autos	Medium Trucks [a]	Heavy Trucks [b]			
Carson Street	485	8	4	68.7	69.3	-0.6
Normandie Avenue	206	4	1	67.0	67.8	-0.8

[a] *Medium Truck – 2 axle trucks based on field observations.*

[b] *Heavy Truck – 3 or more axle trucks and buses based on field observations.*

Source: ESA PCR, 2016.

Because the monitoring data validates the use of a Project-specific traffic noise prediction model, the ambient noise environment of the Project vicinity can be characterized by 24-hour CNEL levels attributable to existing traffic on local roadways. As indicated in **Table 4.I-6**, *Predicted Existing Vehicular Traffic Noise Levels*, the calculated CNEL (at a distance of 25 feet from the roadway right-of-way) from actual existing traffic volumes on the analyzed roadway segments ranged from 56.1 dBA to 70.9 dBA for residential areas, hospital uses, schools, and commercial areas.

[7] *The roadway noise calculation procedures provided in TeNS are consistent with Federal Highway Administration RD-77-108 "industry standard" roadway noise prediction methodologies.*

[8] *Traffic Impact Analysis Report for the Harbor-UCLA Medical Center Master Plan Project, Fehr & Peers, March 2016.*

Table 4.I-6

Predicted Existing Vehicular Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Existing Noise Exposure Compatibility [b] Category	Existing CNEL (dBA) at Referenced Distances from Roadway Right-of-Way [a] 25 Feet
Carson Street			
Between Western Avenue and Normandie Avenue	Residential/ Commercial	Normally Unacceptable	70.6
Between Normandie Avenue and Budlong Avenue	Commercial/ Hospital	Normally Unacceptable	70.6
Between Budlong Avenue and Berendo Avenue	Commercial/ Hospital	Normally Unacceptable	70.5
Between Berendo Avenue and Medical Center Drive	Residential/ Hospital	Normally Unacceptable	70.6
Between Medical Center Drive and Vermont Avenue	Residential/ Hospital	Normally Unacceptable	70.9
220th Street			
Between Western Avenue and Normandie Avenue	Residential	Conditionally Acceptable	60.6
Between Normandie and Myler Street	Residential/ Commercial	Conditionally Acceptable	62.7
Between Myler Street and Vermont Avenue	Residential/ Commercial	Conditionally Acceptable	63.7
East of Figueroa Street	Residential	Conditionally Acceptable	67.5
Figueroa Street			
South of 220th Street	Residential/ School	Conditionally Acceptable	69.3
223rd Street			
Between Western Avenue and Normandie Avenue	Residential	Conditionally Acceptable	69.6
Between Normandie Avenue and Myler Street	Residential/ School	Conditionally Acceptable	69.8
Between Myler Street and Vermont Avenue	Residential/ Commercial	Conditionally Acceptable	69.7
Between Vermont Avenue and I-110 SB Ramps	Residential	Normally Unacceptable	70.6
Between I-110 SB Ramps and Figueroa Street	Residential/ Commercial	Normally Unacceptable	70.5
Western Avenue			
Between Carson Street and 220th Street	Residential/ Commercial	Normally Unacceptable	70.5
Between 220th Street and 223rd Street	Residential/ Commercial	Normally Unacceptable	70.6
Between 223rd Street and Sepulveda Boulevard	Residential/ Commercial	Normally Unacceptable	70.7

Table 4.I-6 (Continued)

Predicted Existing Vehicular Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Existing Noise Exposure Compatibility [b] Category	Existing CNEL (dBA) at Referenced Distances from Roadway Right-of-Way [a] 25 Feet
Myler Street			
Between 220th Street and 223rd Street	Residential/ School	Conditionally Acceptable	60.6
Normandie Avenue			
Between Torrance Boulevard and Carson Street	Residential/ Commercial	Conditionally Acceptable	69.0
Between Carson Street and 220th Street	Residential/ Hospital	Conditionally Acceptable	68.8
Between 220th Street and 223rd Street	Residential	Conditionally Acceptable	68.5
Budlong Avenue			
North of Carson Street	Residential	Normally Acceptable	56.2
Berendo Avenue			
North of Carson Street	Residential	Normally Acceptable	57.3
Vermont Avenue			
Between Torrance Boulevard and Carson Street	Residential/ Commercial	Normally Unacceptable	70.1
Between Carson Street and 220th Street	Residential/ Hospital	Normally Unacceptable	70.4
Between 220th Street and 223rd Street	Residential/ Commercial	Normally Unacceptable	70.0
Medical Center Drive			
North of Carson Street	Residential	Normally Acceptable	56.1

[a] *Calculated based on existing traffic volumes.*
[b] *Based on noise levels at 25 feet distance from the roadway and residential uses if residential uses are shown along roadways.*

Source: ESA PCR, 2016.

(3) Vibration-Sensitive Receptor Locations

Typically, ground-borne vibration generated by man-made activities (i.e., rail and roadway traffic, mechanical equipment and typical construction equipment) diminishes rapidly as the distance from the source of the vibration become greater. The Federal Transit Administration (FTA) uses a screening distance of 100 feet for high vibration sensitive buildings (e.g., hospital with vibration sensitive equipment) and 50 feet for residential uses. When vibration sensitive uses are located within those distances from a Medical Center Campus, vibration impact analysis is required. There are no residential uses that are located within the area of potential (within 50 feet) for perceptible vibration due to short-term construction and long-term project operations. Multi- and single-family residential uses are located approximately 55 feet south of the Medical Center Campus across 220th Street.

(4) Ground-Borne Vibration Environment

Based on field observations, the only source of ground-borne vibration in the Project vicinity is vehicular travel (refuse trucks, delivery trucks, and transit buses) on local roadways. According to the FTA technical study's "Federal Transit Administration; Transit Noise and Vibration Impacts Assessments," typical road traffic induced vibration levels are unlikely to be perceptible by people. In part, FTA indicates "it is unusual for vibration from traffic including buses and trucks to be perceptible, even in location close to major roadways."[9] Therefore, FTA published vibration data are utilized in describing the existing ground vibration environment in the vicinity of the Medical Center Campus. As the Medical Center Campus is located within 50 feet of two major roadways; Sunset Boulevard to the north and Crescent Heights Boulevard to the east. It is likely the site is exposed to ground vibration level of 0.004 inches per second PPV. As discussed below, this vibration level is considered below perception threshold of 0.04 inches per second (PPV).

c. Regulatory Framework

Many government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise and ground-borne vibration. Policies and/or standards such as those of the FTA, the California Department of Transportation (Caltrans) and regulations in the County of Los Angeles General Plan Noise Element, and the County of Los Angeles Municipal Code (Municipal Code) would be applicable to the Project. No regional regulations are applicable to the assessment of noise and vibration impacts.

(1) Federal

A technical discussion of construction activity-related vibration is provided in Section 12.2 of FTA publication titled "Transit Noise and Vibration Impacts Assessments," April 1995. As described therein, a ground-borne vibration level of 0.2 inch-per-second PPV should be considered as damage threshold criterion for structures deemed "fragile," and a ground-borne vibration level of 0.12 inch-per-second PPV should be considered as damage criterion for structures deemed "extremely fragile," such as historic buildings. Please also see discussion of State vibration standards below, which are based, in part, on FTA criteria.

The Federal Aviation Administration (FAA) established the aircraft noise analysis methodology and significance threshold that are applicable to federally funded projects that have an aviation noise component. Title 14 of the Code of Federal Regulations (CFR), and specifically Part 150, *Airport Noise Compatibility Planning*, provides guidelines for land use compatibility around airports. Part 150 states that in general, residential uses are not compatible within the 65 dBA L_{dn} contour or above, and that all types of land uses are compatible in areas below 65 dBA L_{dn} (65 dBA CNEL for projects in California). In addition, the FAA's Order 1050.1E, *Environmental Impacts: Policies and Procedures*, establishes a screening threshold of a 1.5 dBA L_{dn} (or 1.5 dBA CNEL for projects in California) increase in noise in any sensitive area located within the 65 dBA L_{dn} (or 65 dBA CNEL for projects in California) contour. In practice, it has been found that unless a proposed airport or heliport project will cause at least by a 1.5 dB increase within the 65 dBA CNEL or greater area, a 3 dB or greater (i.e., audible) increase in the 60-65 dBA CNEL area, impacts will not occur (Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992).

[9] *Federal Transit Administration "Transit Noise and Vibration Impact Assessment", Chapter 7, 2006.*

While the FAA has not established a standard compatibility criterion for the A-weighted single-event noise metrics, such as SEL or L_{max}, previous research performed by the FAA and others, examines the correlation between single-event noise levels and prediction of "annoyance" due to speech or sleep interference. The Federal Interagency Committee on Aircraft Noise (FICAN), *Effects of Aviation Noise on Awakenings from Sleep, June, 1997* analyzed several sleep studies regarding the relationship between the single event noise metric, SEL and sleep disturbance as measured by the number of awakenings. According to the FICAN reports, up to 10 percent of the people could experience sleep disturbance from aircraft noise when the indoor noise environment reaches a level of 81 dBA SEL (FICAN, "Effects of Aviation Noise on Awakening from Sleep", June 1997).

(2) State

(a) Noise Standards

The State Department of Health Services has established guidelines for community noise compatibility for land use in assessing the compatibility of various land use types with a range of noise levels. CNEL guidelines for specific land uses are classified into four categories: (1) "normally acceptable," (2) "conditionally acceptable," (3) "normally unacceptable," and (4) "clearly unacceptable." As shown in **Table 4.I-7,** *Land Use Compatibility for Community Noise*, a CNEL value of 70 dBA is the upper limit of what is considered a "conditionally acceptable" noise environment for hotel uses.

The airport noise regulations found in CCR Title 21, Section 5000 et seq. are administered by the Division of Aeronautics within Caltrans. Under these regulations, civilian airports are required to ensure compatible land uses within the 65 dBA CNEL contour produced by their aircraft operations. Caltrans also has adopted the 65 dBA CNEL threshold as the maximum acceptable exterior noise exposure for residential land uses affected by noise generated at helistops.

(b) Vibration Standards

Caltrans has produced a guidance manual for evaluating potential vibration impacts ("Transportation- and Construction-Induced Vibration Guidance Manual" dated June 2004). The manual provides thresholds for potential impacts on human comfort and damage to buildings, as well as guidance for reducing potential vibration impacts and addressing vibration issues. The manual gathers data from multiple sources, including the FTA. Tables 4, 5, and 6 of the manual provide criteria for identifying potential annoyance from vibration activity, as measured in inches per second PPV. The values range in value. For example, 0.035 inches per second PPV is identified as a level that is "distinctly" or "barely" perceptible, and 0.08/0.1 is identified as "readily" or "strongly" perceptible. Levels above this range are levels that begin to annoy human beings. Tables 9 through 15 of the manual provide criteria for identifying potential damage to buildings. Again, the values vary greatly depending on assumptions and the types and conditions of buildings considered. Per those guidelines, buildings that are extremely old and fragile can be subject to damage from vibration levels as low as 0.1 inches per second. Generally, the levels for well-constructed, more substantial buildings fall in the range of 1.0 to 2.0 inches per second PPV. Notably, Table 10 of the manual, based on FTA data, provides a conservative estimate for well-constructed buildings of 0.5 inches per second PPV, while Tables 9, 14, and 15 of the manual assign the 0.5 standard to residential structures and some older buildings, and levels of 1.0 to 2.0 inches per second PPV for newer, more substantial, better-engineered buildings.

Table 4.I-7

Land Use Compatibility for Community Noise
(California Department of Public Health Criteria)

Land Use	Community Noise Exposure CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 70
Multi-Family Homes	50 to 65	60 to 70	70 to 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 70	70 to 80	Above 80
Transient Lodging—Motels, Hotels	50 to 65	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 75	—	Above 70
Playgrounds, Neighborhood Parks	50 to 70	—	67 to 75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	70 to 80	Above 80
Office Buildings, Business and Professional Commercial	50 to 70	67 to 77	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	Above 75	—

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Noise Control, California Department of Public Health.

(3) Local

(a) Los Angeles County General Plan Noise Element

The overall purpose of the Noise Element of a General Plan is to protect people from the harmful and annoying effects of exposure to excessive noise. The Los Angeles County Noise Element focuses on noise issues associated with transportation, including airports, highways, and railroads.

The County has adapted the Table 4.I-7, Land Use Compatibility for Community Noise, to develop the County's exterior noise standards, discussed below.

(b) Los Angeles County Code (LACC)

The County of Los Angeles Noise Restrictions are provided in Chapter 12.08, Noise Control of the LACC. Chapter 12.08 provides procedures and criteria for the measurement of the sound level of "offending" noise sources.

The LACC outlines exterior noise standards for four noise zones based on land use type: noise-sensitive areas, residential properties, commercial properties, and industrial properties. The County's maximum exterior noise standards set forth in LACC Section 12.08.390 are provided in **Table 4.I-8,** *Los Angeles County Presumed Ambient Noise Levels*. For residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 45 dBA during the nighttime. The following standards are used to evaluate compliance:

Table 4.I-8

Los Angeles County Presumed Ambient Noise Levels

Noise Zone	Zone	Daytime Hours (7 A.M. to 10 P.M.) dBA (L_{eq})	Nighttime Hours (10 P.M. to 7 A.M.) dBA (L_{eq})
I	Noise-sensitive area	45	45
II	Residential	50	45
III	Commercial	60	55
IV	Industrial	70	70

Source: LACC, Section 12.08.390.

- Standard No. 1: Exterior noise cannot exceed levels set forth in Table 4.I-5 for a cumulative period of more than 30 minutes in any hour.
- Standard No. 2: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
- Standard No. 3: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
- Standard No. 4: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 15 dBA for a cumulative period of more than one minute in any hour.
- Standard No. 5: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 20 dBA at any time.

If ambient noise levels exceed the exterior noise levels in Table 4.I-5, then the aforementioned standards can be adjusted by substituting relevant noise levels in Table 4.I-5 with the following ambient measurements:

- Standard No. 6: Ambient L50, the noise level exceeded 50% of the time over an hour period.
- Standard No. 7: Ambient L25, the noise level exceeded 25% of the time over an hour period.
- Standard No. 8: Ambient L8.3, the noise level exceeded 8.3% of the time over an hour period.

- Standard No. 9: Ambient L1.7, the noise level exceeded 1.7% of the time over an hour period.
- Standard No. 10: Ambient L0, the maximum noise level over an hour period.

LACC Section 12.08.440 prohibits construction between the hours of 7:00 P.M. and 7:00 A.M. and at any time on Sundays or holidays, given that it creates a noise disturbance across a residential or commercial real-property line. **Table 4.I-9,** *Los Angeles County Permissible Construction Equipment Noise at Receptor*, outlines the maximum noise levels permissible by construction equipment at affected buildings depending on land use. These noise thresholds pertain to two timeframes: daytime hours from 7:00 A.M. to 8:00 P.M. daily (except Sundays and holidays) and nighttime hours from 8:00 P.M. to 7:00 A.M. daily (or all day Sundays and holidays).

Table 4.I-9

Los Angeles County Permissible Construction Equipment Noise at Receptor

Equipment Type	Receptor Type	Daytime Hours (7 A.M. to 8 P.M.) dBA (L_{eq})	Nighttime Hours (8 P.M. to 7 A.M.) dBA (L_{eq})
Mobile short-term operation (less than 10 days)	Single-family Residential	75	60
	Multi-family Residential	80	64
	Semiresidential/Commercial	85	70
	Business Structures	85	85
Stationary long-term operation (more than 10 days)	Single-family Residential	60	50
	Multi-family Residential	65	55
	Semiresidential/Commercial	70	60

Source: LACC , Section 12.08.440.

The County Noise Ordinance states that noise levels caused by any air-conditioning or refrigeration equipment shall not exceed the levels identified in **Table 4.I-10**, *County of Los Angeles Residential Air-Conditioning and Refrigeration Equipment Standards.*

The County Noise Ordinance Section 12.08.350 provides a presumed perception threshold of 0.01 inch-per second RMS; however, this applies to ground-borne vibrations from long-term operational activities, such as surface traffic, and not to short-term activities such as construction. Therefore, the 0.01 inch-per second RMS vibration criteria is used in connection with the Project's operation-related vibration impacts. The vibration level of 0.01 inch-per second RMS is equivalent to 0.04 inches per second PPV.

Table 4.I-10

County of Los Angeles Residential Air-Conditioning and Refrigeration Equipment Standards

Measurement Location	Units Installed Before 1-1-80 dBA	Units Installed On or After 1-1-80 dBA
Any point on neighboring property line, 5 feet above grade level, no closer than 3 feet from any wall.	60	55
Center of neighboring patio, 5 feet above grade level, no closer than 3 feet from any wall.	55	50
Outside the neighboring living area window nearest the equipment location, not more than 3 feet from the window opening, but at least 3 feet from any other surface.	55	50

Source: County of Los Angeles Ordinance, No. 11743, LACC, Section 12.08.530.

3. PROJECT IMPACTS

a. Methodology

(1) On-Site Construction Noise

On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity, calculating the construction-related noise level at nearby sensitive receptor locations, and comparing these construction-related noise levels to existing ambient noise levels (i.e., noise levels without construction noise). More, specifically, the following steps were undertaken to assess construction-period noise impacts.

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 4.I-1);

2. Typical noise levels for each type of construction equipment were obtained from the Federal Highway Administration (FHWA) roadway construction noise model (RCNM);

3. Distances between construction site locations (noise source) and surrounding sensitive receptors were measured using Project architectural drawings, Google Earth, and site plans;

4. The construction noise level was then calculated, in terms of hourly L_{eq}, for sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance; and

5. Construction noise levels were then compared to the construction noise significance thresholds identified below.

(2) Off-Site Roadway Noise (Construction and Operation)

Roadway noise impacts have been evaluated using the Caltrans TeNS methodology based on the roadway traffic volume data provided in the Traffic Impact Study prepared for the Project. This methodology allows for the definition of roadway configurations, barrier information (if any), and receiver locations. Roadway noise attributable to project development was calculated and compared to baseline noise levels that would occur under the "without project" condition.

(3) Stationary Point-Source Noise (Operation)

Stationary point-source noise impacts have been evaluated by identifying the noise levels generated by outdoor stationary noise sources such as rooftop mechanical equipment and loading dock activities, calculating the hourly L_{eq} noise level from each noise source at surrounding sensitive receiver property line locations, and comparing such noise levels to existing ambient noise levels. More specifically, the following steps were undertaken to calculate outdoor stationary point-source noise impacts:

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 4.I-1);

2. Distances between stationary noise sources and surrounding sensitive receptor locations were measured using project architectural drawings, Google Earth, and site plans;

3. Stationary-source noise levels were then calculated for each sensitive receptor location based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance;

4. Noise level increases were compared to the stationary source noise significance thresholds identified below; and

5. For outdoor mechanical equipment, the maximum allowable noise emissions from any and all outdoor mechanical equipment were specified such that noise levels would not exceed the significance threshold identified below.

(4) Ground-Borne Vibration (Construction and Operation)

Ground-borne vibration impacts were evaluated by identifying potential vibration sources, measuring the distance between vibration sources and surrounding structure locations, and making a significance determination based on the significance thresholds described below.

(5) Helicopter Noise

Helicopter noise impacts were evaluated by predicting the CNEL levels due to helicopter operations at the two proposed interim helistop locations (Interim 1 Helistop and Interim 2 Helistop), and at the Future permanent Helistop location; comparing these against current CNEL levels at the current Helistop location and determining the increase; and comparing the increases to the applicable CNEL and L_{max} significance thresholds. The significance threshold for the helicopter operations related noise impact is based on projected changes in noise levels (increases) from existing to the future conditions, with consideration of existing ambient noise environments and the regulatory framework described above. The applicable

significance threshold with respect to helicopter operation per FAA and Caltrans is provided in terms of CNEL. In addition to the CNEL threshold, a single-event noise level significance threshold is recommended in terms of L_{max}. As discussed above with respect to the community noise assessment, changes in noise levels of less than 3 dBA are generally not discernable to most people, while changes greater than 5 dBA L_{max} are readily noticeable and would be considered a significant increase (Bies & Hansen*, Engineering Noise Control,* 1988). Therefore, the significance threshold for the single-event noise level (in L_{max}) is utilized by evaluating the incremental change from the existing with that of the future helicopter operations.

b. Significance Thresholds

The potential for noise impacts is based on thresholds derived from Los Angeles County Department of Regional Planning Initial Study Checklist screening questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

Noise. Would the project result in:

a) Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance(Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Significance thresholds have been developed based on these factors and the applicable regulatory requirements, as presented below.

(1) Construction Noise

Since the Project construction period would have a duration of more than 10 days and would not occur between the hours of 7:00 P.M. and 7:00 A.M. Monday through Saturday, or at any time on Sundays and holidays (consistent with provisions of the LACC), noise during construction would have a significant impact if it would:

NOISE-1 Result in construction equipment noise exceeding 60 dBA, L_{eq} at single-family residences and mobile homes; 65 dBA, L_{eq} at multi-family residences; or 70 dBA, L_{eq} at transient lodging.

NOISE-2 Result in off-site Project construction traffic noise exceeding 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging.

(2) Operational Noise

Noise during operation would have a significant impact if it would:

NOISE-3 Increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing "normally acceptable" or "conditionally acceptable" noise levels; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels; or result in helicopter operations that generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more; or, for a single helicopter operation, generate an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use.

NOISE-4 Result in non-roadway-related noise, such as building mechanical/electrical equipment or the use of outdoor amenity spaces, which exceeds ambient noise levels at noise-sensitive uses, in violation of the County Noise Ordinance.

In addition, the LACC provides guidance for calculation of short-term annoying sounds of the type that could be generated within a project's parking structure. Accordingly, the Project would have a potentially significant impact on Noise if it would:

NOISE-5 Result in maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceeding the average (L_{eq}) ambient noise level by 10 dBA.

(3) Ground-Borne Vibration

Vibration would have a significant impact if it would:

NOISE-6 Result in Project construction activities causing ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings.

NOISE-7 Result in Project construction and operation activities causing ground-borne vibration levels to exceed the human annoyance threshold, 0.04-inch-per-second PPV, at nearby sensitive land uses.

c. Project Characteristics or Design Features

(1) Project Characteristics

All outdoor mechanical building and electrical equipment would be designed to meet the requirements of LACC, Section 12.08.530.

(2) Project Design Features

In addition to compliance with LACC requirements in future construction, the following Project Design Features would be implemented to reduce Project-generated noise and were incorporated into analytical assumptions prior to the determination of potential impacts.

PDF-NOISE-1: The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.

PDF-NOISE-2: On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings.

PDF-NOISE-3: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings.

PDF-NOISE-4: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.

PDF NOISE-5: Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise.

PDF NOISE-6: To reduce the potential for construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on-site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.

PDF-NOISE-7: As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet noise limits in Table 4.I-6.

d. Analysis of Project Impacts

(1) Construction

(a) On-site Construction Noise

Threshold NOISE-1: Would Project construction equipment noise exceed 60 dBA, L_{eq} at single-family residences; 65 dBA, L_{eq} at multi-family residences; or 70 dBA, L_{eq} at transient lodging?

Impact Statement NOISE -1 *On-site construction noise associated with the Project would increase noise levels at nearby residential uses in excess of established thresholds. Therefore, impacts would be significant without implementation of mitigation measures.*

Noise impacts from construction activities are generally a function of the noise generated by construction equipment, equipment locations, the sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Individual construction phases will typically be undertaken in four stages: (1) demolition; (2) grading; (3) building construction; and (4) paving. Each stage involves the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques.

Project construction would require the use of mobile heavy equipment with high noise level characteristics. Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels of 74 dBA to 85 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 4.I-11**, *Construction Equipment Noise Levels*. These maximum noise levels would occur when equipment is operating under full power conditions. However, equipment used on construction sites often operate under less than full power conditions, or part power as shown in the first column in Table 4.I-8. As shown in Table 4.I-8, the part power percentage (%) of construction equipment is based on the Construction Noise Control Specification developed for the Central Artery/Tunnel project in Boston.[10] To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage and are typically attributable to multiple pieces of equipment operating simultaneously.

Construction noise levels were estimated based on an industry standard sound attenuation rate of 6 dB per doubling of distance for point sources (e.g., construction equipment). Within the analysis, all construction equipment was assumed to operate simultaneously at the construction area nearest to potentially affected residential receptors. These assumptions represent a worst-case noise scenario as construction activities would routinely be spread throughout the construction site further away from noise sensitive receptors. In addition, noise from different construction stages, which have the potential to occur simultaneously were added together to provide a composite construction noise level. A summary of the construction noise impacts at the nearby sensitive receptors is provided in **Table 4.I-12,** *Estimate of Maximum Construction Noise Levels(L_{eq}) at Off-Site Sensitive Receptor Locations*. Detailed noise calculations for construction activities are provided in Appendix H of this EIR.

[10] *Federal Highway Administration, Roadway Construction Noise Model User's Guide, 2006.*

Table 4.I-11

Construction Equipment Noise Levels

Equipment	Estimated Usage Factor, %	Typical Noise Level at 50 feet from Equipment, dBA (L_{max})
Air Compressor	50	78
Concrete Mixer Truck	40	79
Chain Saw	20	85
Cranes	40	81
Dozer	40	82
Excavator	40	81
Forklift	10	75
Grader	40	85
Rubber Tired Loader	40	79
Other Equipment (Trencher)	50	85
Paver	50	77
Roller	20	80
Tractor/Loader/Backhoe	25	80
Water Truck	10	80
Welder	40	74

Source: FHWA Roadway Construction Noise Model User's Guide, 2006.

As shown in Table 4.I-12, construction noise levels would exceed the Project's significance threshold at the following receptor location

- R3 during the following construction phases: Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed;
- R4 during construction Phase 4; and
- R5 during construction phases: Phase 2, Phase 4, and Phase 5.

As such, construction-period noise impacts would be significant. Mitigation measures are therefore prescribed to reduce construction noise impacts to these sensitive noise receptors, as presented below in subsection 4. *Mitigation Measures*, below.

Table 4.I-12

Estimate of Maximum Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Construction Phases	Noise Sensitive Receptor	Nearest Distance between Receptor and Construction Site, feet	Estimated Maximum Construction Noise Levels at the Noise Sensitive Receptor by Construction Phase,[a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
Phase C	R3: South of the Medical Center Campus	80	85	60	Yes
	R4 [b]: North of the Medical Center Campus	1,300	46	65	No
	R5 [b]: East of the Medical Center Campus	1,100	47	60	No
	R6 [b]: West of the Medical Center Campus	1,500	45	60	No
Phase 1	R3 [b]: South of the Medical Center Campus	750	44	60	No
	R4 [b]: North of the Medical Center Campus	350	66	65	No
	R5 [c]: East of the Medical Center Campus	1,200	45	60	No
	R6 [b]: West of the Medical Center Campus	1,000	47	60	No
Phase 2	R3 [c]: South of the Medical Center Campus	350	62	60	Yes
	R4 [b]: North of the Medical Center Campus	750	46	65	No
	R5 [c]: East of the Medical Center Campus	345	62	60	Yes
	R6 [b]: West of the Medical Center Campus	2,200	31	60	No
Phase 3	R3 [c]: South of the Medical Center Campus	215	70	60	Yes
	R4 [c]: North of the Medical Center Campus	750	59	65	No
	R5 [c]: East of the Medical Center Campus	850	53	60	No
	R6 [b]: West of the Medical Center Campus	1,450	43	60	No
Phase 4	R3 [c]: South of the Medical Center Campus	560	58	60	No
	R4: North of the Medical Center Campus	200	72	65	Yes
	R5: East of the Medical Center Campus	160	74	60	Yes
	R6 [b]: West of the Medical Center Campus	2,000	37	60	No

Table 4.I-12 (Continued)

Estimate of Maximum Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Construction Phases	Noise Sensitive Receptor	Nearest Distance between Receptor and Construction Site, feet	Estimated Maximum Construction Noise Levels at the Noise Sensitive Receptor by Construction Phase,[a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
Phase 5	R3: South of the Medical Center Campus	55	83	60	Yes
	R4 [b]: North of the Medical Center Campus	600	53	65	No
	R5: East of the Medical Center Campus	110	77	60	Yes
	R6 [b]: West of the Medical Center Campus	2,500	35	60	No
Phase 6	R3: South of the Medical Center Campus	70	83	60	Yes
	R4 [c]: North of the Medical Center Campus	400	63	65	No
	R5 [b]: East of the Medical Center Campus	1,700	40	60	No
	R6: West of the Medical Center Campus	170	75	60	No
Phase LA Biomed	R3: South of the Medical Center Campus	65	82	60	Yes
	R4 [c]: North of the Medical Center Campus	1,200	42	65	No
	R5 [b]: East of the Medical Center Campus	1,400	40	60	No
	R6: West of the Medical Center Campus	1,100	52	60	No

[a] *Estimated construction noise levels represent the worst-case condition when all noise generators are located closest to the receptors and are not expected to last the entire construction duration.*

[b] *Receptors are fully shielded from the construction site by existing off-site buildings.*

[c] *Receptors are partially shielded from the construction site by existing off-site buildings.*

Source: ESA PCR, 2016

(b) Off-Site Construction Activities

Threshold NOISE-2 Would Project construction traffic noise exceed 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging?

Impact Statement NOISE-2: *Off-site construction traffic would not exceed the significance thresholds at off-site noise sensitive receptor locations. Impacts to off-site sensitive receptors would be less than significant.*

There would be material delivery truck trips throughout the construction period. The truck haul routes will comply with the approved truck routes designated within the County. Trucks traveling to and from the Medical Center Campus must travel along the designated truck route. Trucks are expected to travel on Carson Street, 220th Street, Vermont Street, and Figueroa Street to access the Harbor Freeway (I-110).

The Project's truck trips would result in a total noise level (exiting plus project trucks) of approximately 61.9 dBA, L_{eq} at 25 feet distance along Carson Street, 62.8 dBA along 220th Street, 61.5 dBA along Vermont Street, and 61.9 dBA along Figueroa Street. The noise levels by truck trips would be below the significance thresholds of 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transit lodging. Therefore, impacts would be less than significant.

(c) On-Site Sensitive Receptors

As discussed above, construction activities would temporarily increase the existing ambient noise in close proximity of the construction site within the Project areas. The on-site hospital uses are sensitive receptors, but effects of the Project itself on these included receptors are not considered a project impact to the environment under CEQA. Nonetheless, due to the sensitive on-site receptors, the potential for noise to affect on-site receptors is presented in this Draft EIR. The on-site hospital uses are noise-sensitive. At various times throughout the construction of the Master Plan Project, use of heavy duty construction equipment could be closer than 100 feet to occupied on-site patient rooms and it would increase the ambient noise levels at on-site noise sensitive uses. PDF-NOISE-2, PDF-NOISE-3, and PDF-NOISE-4 are designed to minimize the generation of on-site noise to the extent feasible. PDF NOISE-5 has been included to ensure appropriate noise barriers are designed and erected when construction is planned within close proximity to existing on-site noise-sensitive uses to minimize effects to on-site hospital uses. However, the upper floors (i.e. above 2nd floor) of the existing hospital buildings would not experience the same noise reductions as the result of the noise barriers since the proposed barrier would not block the line of sight between the construction site and upper floors of the existing hospital buildings. Therefore, detailed acoustical studies should be conducted prior to the construction phases.

(2) Operation

Threshold NOISE-3: Would the Project increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing noise levels characterized as "normally acceptable" or "conditionally acceptable"; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels? Would helicopter operations generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more? Would maximum noise levels from a single helicopter operation cause an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use?

Impact Statement NOISE-3: *Project implementation would increase noise levels at adjacent noise-sensitive receptors in the Project area as the result of increased Project traffic, but traffic would not exceed established noise thresholds at those receptors and impacts would be less than significant. Helicopter activity associated with use of the proposed Interim 1 and 2 Helistops would exceed established thresholds at sensitive land uses, which is a significant, although temporary and periodic, impact. Project-related noise from helicopter activity associated with use of the permanent helistop, following Master Plan Project buildout, would be less than significant.*

(i) Impacts Under Existing Traffic Baseline Conditions

Future roadway noise levels were calculated along various arterial segments adjacent to the Medical Center Campus. Roadway noise attributable to project development was calculated using the traffic noise model previously described and was compared to baseline noise levels that would occur under the "No Project" condition.

Project impacts are shown in **Table 4.I-13**, *Off-Site Traffic Noise Impacts- Project Build Out.* As indicated, the maximum increase in project-related traffic noise levels over existing traffic noise levels would be 0.7 dBA, CNEL, which would occur along 220th Street, between Myler Street and Vermont Avenue. This increase in sound level would be well below a "clearly noticeable" increase of 5.0 dBA, CNEL in an area characterized by conditionally acceptable noise levels (see Table 4.I-4),[11] and the increase in sound level would be substantially lower at the remaining roadway segments analyzed. The project-related noise increases would be less than the threshold and therefore less than significant, and no mitigation measures would be required.

(ii) Impacts Under Future Traffic Baseline Conditions

Future roadway noise levels were calculated along various arterial segments adjacent to the Project Site and compared to 2021 baseline traffic noise levels assuming implementation of the cumulative projects. Project impacts are shown in **Table 4.I-14**, *Off-Site Traffic Noise Impacts – Future 2030 Area-Wide Growth with Project.* As indicated therein, the maximum increase attributable to Project-related traffic would be 0.6 dBA CNEL along 220th Street between Myler Street and Vermont Avenue. This would be below the "clearly noticeable" increase threshold of 5.0 dBA CNEL applicable to land uses experiencing normally acceptable noise levels (see Table 4.H-4),[12] and the increase in noise would be substantially lower at the remaining roadway segments analyzed. Project-related noise increases, when measured against the 2030 with Area-Wide Growth conditions, would therefore be less than significant.

Noise would be substantially lower at the remaining roadway segments analyzed. Project-related noise increases, when measured against the 2030 with Area-Wide Growth conditions, would therefore be less than significant.

(iii) Impacts from Helicopter Operations

As part of the Master Plan Project, a permanent new Helistop would be located on the rooftop of the New Hospital Tower. However, as previously discussed, following demolition of the existing helistop and prior to construction of the New Hospital Tower and permanent new Helistop, two interim helistops would be constructed for temporary use. The Interim 1 Helistop is proposed in the existing Harbor-UCLA Professional Building parking lot near the southwestern corner of the Medical Center Campus, and the Interim 2 Helistop would be located in the LA BioMed surface parking lot, approximately 230 feet east of the Interim 1 Helistop location. Pads for both helistops would be raised approximately 10 feet above the adjacent grade. The helicopter flight paths for the Interim 1 Helistop and Interim 2 Helistop locations are illustrated on **Figure 4.I-5**, *Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location*, and **Figure 4.I-6,** *Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location*, respectively. This noise analysis assumes that future helicopter operations would be similar to helicopter operations under existing conditions, as

[11] *Engineering Noise Control, Bies & Hansen, 1988.*

[12] *Engineering Noise Control, Bies & Hansen, 1988.*

Table 4.I-13

Off-Site Traffic Noise Impacts – Project Build Out Conditions

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing [a] (A)	Existing with Project Build Out [b] (B)	Project Increment (B - A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	70.6	70.7	0.1	No
Between Normandie Avenue and Budlong Avenue	70.6	70.7	0.1	No
Between Budlong Avenue and Berendo Avenue	70.5	70.7	0.2	No
Between Berendo Avenue and Medical Center Drive	70.6	71.0	0.4	No
Between Medical Center Drive and Vermont Avenue	70.9	71.3	0.4	No
220th Street				
Between Western Avenue and Normandie Avenue	60.6	60.9	0.3	No
Between Normandie and Myler Street	62.7	63.2	0.5	No
Between Myler Street and Vermont Avenue	63.7	64.4	0.7	No
East of Figueroa Street	67.5	68.0	0.5	No
Figueroa Street				
South of 220th Street	69.3	69.4	0.1	No
223rd Street				
Between Western Avenue and Normandie Avenue	69.6	69.7	0.1	No
Between Normandie Avenue and Myler Street	69.8	69.9	0.1	No
Between Myler Street and Vermont Avenue	69.7	69.8	0.1	No
Between Vermont Avenue and I-110 SB Ramps	70.6	70.9	0.3	No
Between I-110 SB Ramps and Figueroa Street	70.5	70.7	0.2	No
Western Avenue				
Between Carson Street and 220th Street	70.5	70.5	0.0	No
Between 220th Street and 223rd Street	70.6	70.6	0.0	No
Between 223rd Street and Sepulveda Boulevard	70.7	70.7	0.0	No
Myler Street				
Between 220th Street and 223rd Street	60.6	61.2	0.6	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.0	69.2	0.2	No
Between Carson Street and 220th Street	68.8	69.1	0.3	No
Between 220th Street and 223rd Street	68.5	68.7	0.2	No
Budlong Avenue				
North of Carson Street	56.2	56.2	0.0	No
Berendo Avenue				
North of Carson Street	57.3	57.3	0.0	No

Table 4.I-13 (Continued)

Off-Site Traffic Noise Impacts – Project Build Out Conditions

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing [a] (A)	Existing with Project Build Out [b] (B)	Project Increment (B - A)	Exceed Threshold?
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.1	70.2	0.1	No
Between Carson Street and 220th Street	70.4	70.6	0.2	No
Between 220th Street and 223rd Street	70.0	70.3	0.3	No
Medical Center Drive				
North of Carson Street	56.1	56.1	0.0	No

[a] *Existing data is taken from Table 4.I-1.*

Source: ESA PCR, 2016.

Table 4.I-14

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Future Project Increment (B-A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	71.7	71.8	0.1	No
Between Normandie Avenue and Budlong Avenue	71.8	71.9	0.1	No
Between Budlong Avenue and Berendo Avenue	71.8	72.0	0.2	No
Between Berendo Avenue and Medical Center Drive	71.8	72.1	0.3	No
Between Medical Center Drive and Vermont Avenue	71.8	72.1	0.3	No
220th Street				
Between Western Avenue and Normandie Avenue	61.1	61.4	0.3	No
Between Normandie and Myler Street	63.2	63.6	0.4	No

Table 4.I-14 (Continued)

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)		Future Project Increment (B-A)	Exceed Threshold?
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)		
Between Myler Street and Vermont Avenue	64.2	64.8	0.6	No
East of Figueroa Street	68.1	68.6	0.5	No
Figueroa Street				
South of 220th Street	69.9	70.1	0.2	No
223rd Street				No
Between Western Avenue and Normandie Avenue	70.2	70.2	0.0	No
Between Normandie Avenue and Myler Street	70.4	70.5	0.1	No
Between Myler Street and Vermont Avenue	70.3	70.4	0.1	No
Between Vermont Avenue and I-110 SB Ramps	71.2	71.5	0.3	No
Between I-110 SB Ramps and Figueroa Street	71.1	71.3	0.2	No
Western Avenue				
Between Carson Street and 220th Street	71.0	71.1	0.1	No
Between 220th Street and 223rd Street	71.2	71.2	0.0	No
Between 223rd Street and Sepulveda Boulevard	71.3	71.3	0.0	No
Myler Street				
Between 220th Street and 223rd Street	61.1	61.6	0.5	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.5	69.7	0.2	No
Between Carson Street and 220th Street	69.4	69.6	0.2	No
Between 220th Street and 223rd Street	69.1	69.2	0.1	No

Table 4.I-14 (Continued)

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Future Project Increment (B-A)	Exceed Threshold?
Budlong Avenue				
North of Carson Street	56.7	56.7	0.0	No
Berendo Avenue				
North of Carson Street	57.8	57.8	0.0	No
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.7	70.8	0.1	No
Between Carson Street and 220th Street	70.9	71.1	0.2	No
Between 220th Street and 223rd Street	70.6	70.8	0.2	No
Medical Center Drive				
North of Carson Street	56.6	56.6	0.0	No

[a] *Include future growth plus related (cumulative) projects and proposed project traffic.*

Source: ESA PCR, 2016.

discussed in the Helistop Relocation Noise Impact Study provided in Appendix H of this Draft EIR. Figure 4.I-5 shows the calculated CNEL noise contours generated by the helicopter operations at the Interim 1 Helistop location. As shown on Figure 4.I-5, the 65 CNEL noise contour would extend just beyond the southern property line of the Medical Center Campus.

Table 4.I-15, *Helicopter Noise Analysis – Interim 1 Helistop Locations,* summarizes the predicted noise levels in CNEL for helicopter operations at the Interim 1 Helistop location.

As shown in Table 4.I-15, the predicted CNEL levels due to the helicopter operations at the Interim 1 Helistop location ranged from 37.0 dBA CNEL at receptors R1 and R2 to 58.6 dBA CNEL at receptor R3. Compared with the current Helistop, these predicted CNEL levels for the Interim 1 Helistop would result in a higher CNEL level at receptors (R3 through R7). Also included in Table 4.I-15 are the ambient noise levels

Table 4.I-15

Helicopter Noise Analysis – Interim 1 Helistop Locations

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2470	70.5	47.6	70.5	37.0	70.5	0.0
R2	2040	65.6	50.0	65.7	37.0	65.6	-0.1
R3	260	64.3	41.3	64.3	58.6	65.3	1.0
R4	580	70.7	38.0	70.7	53.6	70.8	0.1
R5	700	53.1	35.8	53.2	47.1	54.1	0.9
R6	870	56.4	35.4	56.4	46.6	56.8	0.4
R7	1710	64.6	33.5	64.6	38.8	64.6	0.0

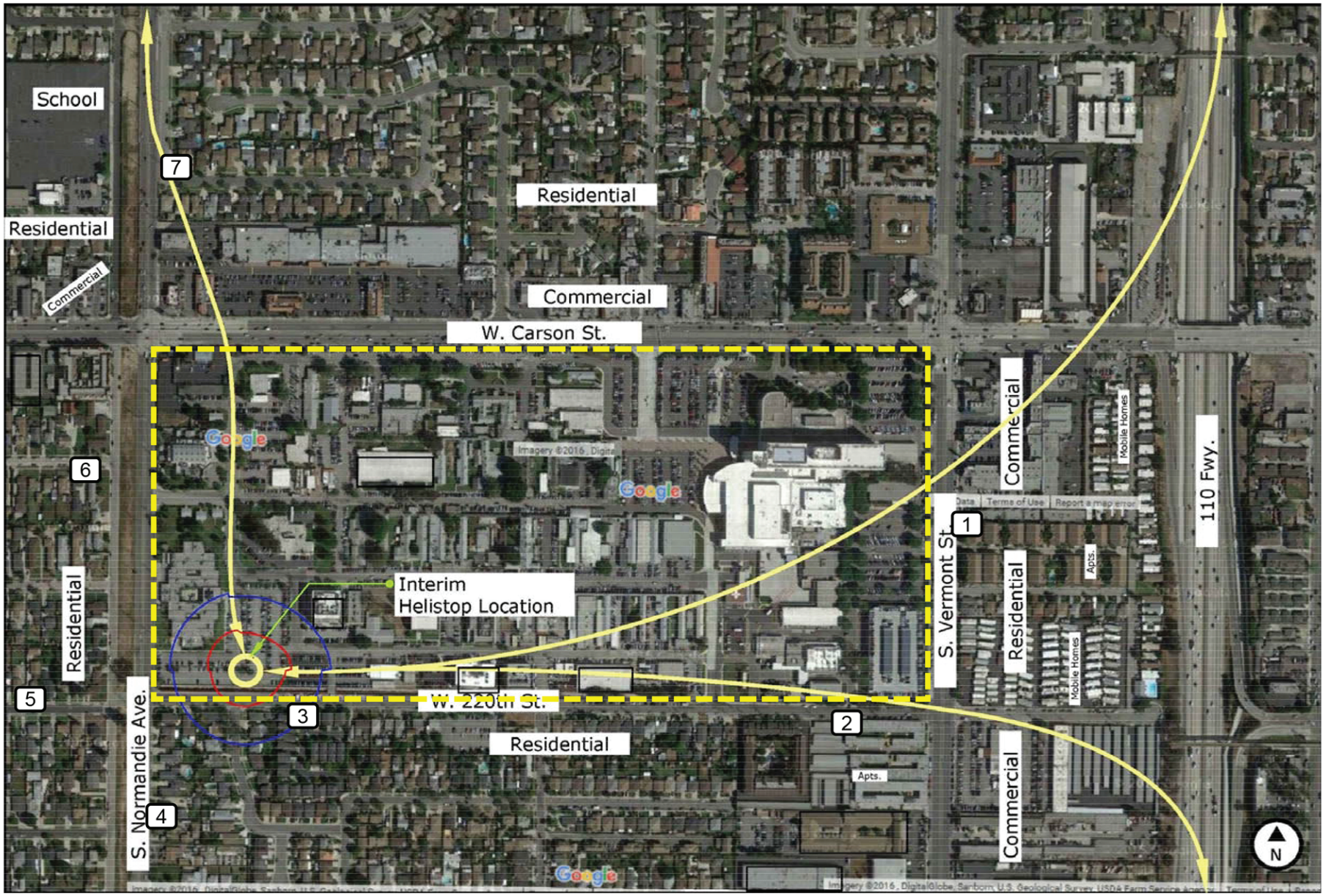
[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

with helicopter operations under both existing and future conditions at the Interim 1 Helistop location. As indicated in Table 4.I-15, future helicopter operations would result in a maximum increase of 0.1 dBA CNEL at receptor R4 to 1.0 dBA CNEL at receptor R3 (with no increase in helicopter noise levels at receptors R1, R2 and R7). The estimated increase would be below the Project's significance threshold of 1.5 dBA CNEL.

Table 4.I-16, *Helicopter Single-Event Noise Impacts – Interim 1 Helistop,* presents the predicted helicopter single-event noise levels at R1 through R7 under the existing and the Interim 1 Helistop location in SEL and L_{max}. SEL levels are provided for informational purposes only, as the County does not have criteria as relates to SEL levels. A single helicopter operational event would generate noise levels at receptors in the vicinity of the Helistop, which could result in awakening based on the 1997 FICAN study. However, helicopter nighttime operations would be minimal, approximately 1.8 events per month.

As indicated in Table 4.I-16, the predicted L_{max} due to the helicopter (i.e., Sikorsky S-70) operation at the Interim 1 Helistop location would result in an increase of 2.7 dBA L_{max} (at receptor R4) to 5.6 dBA L_{max} (at receptor R3), as compared with the existing conditions. The estimated L_{max} increase would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, the relocation of the existing Helistop to the Interim 1 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed on the rooftop of the New Hospital Tower.



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Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-5



PCR

Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-6

Table 4.I-16

Helicopter Single-Event Noise Impacts – Interim 1 Helistop

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2470	Residential	100.8/85.4	92.1/81.4	-8.7/-4.0
R2	2040	Residential	102.9/86.5	90.6/81.2	-12.3/-5.3
R3	260	Residential	96.9/84.1	112.4/89.7	15.5/5.6
R4	580	Residential	94.2/82.7	107.0/85.4	12.8/2.7
R5	700	Residential	91.9/81.8	100.3/81.6	8.4/-0.2
R6	870	Residential	90.7/81.8	101.4/85.5	10.7/3.7
R7	1710	Residential/School	88.1/79.5	93.9/83.7	5.8/4.2

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

The calculated CNEL noise contours generated by helicopter operations at the proposed Interim 2 Helistop location are provided on Figure 4.I-6. As shown on Figure 4.I-6, the 65 CNEL noise contour would extend just beyond the southern property line of the Medical Center Campus.

Table 4.I-17, *Helicopter Noise Analysis – Interim 2 Helistop Locations*, presents the predicted helicopter noise levels in CNEL with the helicopter operations at the Interim 2 Helistop location.

As shown in Table 4.I-17, the predicted CNEL levels due to the helicopter operations at the Interim 2 Helistop location ranged from 35.6 dBA CNEL at receptor R7 to 63.7 dBA CNEL at receptor R3. Similar to the Interim 1 Helistop location, the predicted helicopter CNEL levels (from the Interim 2 Helistop location) would result in higher CNEL levels at receptors (R3 through R7). When considering the ambient noise levels with the helicopter operations under both existing and future conditions at the Interim 2 Helistop location, future helicopter operations would result in a maximum increase of 0.2 dBA CNEL at receptor R6 to 2.7 dBA CNEL at receptor R3 (with no increase in helicopter noise levels at receptors R1, R2, R4 and R7). The estimated increase of 2.7 dBA CNEL would exceed the Project's significance threshold increase of 1.5 dBA CNEL at receptor R3. Therefore, the impact would be significant, albeit temporary and periodic, lasting only until implementation of the future permanent Helistop on the New Hospital Tower rooftop.

Table 4.I-18, *Helicopter Single-Event Noise Impacts – Interim 2 Helistop,* presents the predicted helicopter single-event noise levels under the existing and the Interim 2 Helistop location.

As indicated in Table 4.I-18, the predicted L_{max} due to the helicopter operation at the Interim 2 Helistop location would result in an increase of 0.3 dBA L_{max} (at receptors R4 and R5) to 15.4 dBA L_{max} (at receptor R3, directly south of the Interim 2 Helistop), as compared to the existing conditions. The estimated L_{max} increase would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts

Table 4.I-17

Helicopter Noise Analysis – Interim 2 Helistop Locations

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2250	70.5	47.6	70.5	38.0	70.5	0.0
R2	1820	65.6	50.0	65.7	38.3	65.6	-0.1
R3	130	64.3	41.3	64.3	63.7	67.0	2.7
R4	720	70.7	38.0	70.7	50.2	70.7	0.0
R5	930	53.1	35.8	53.2	45.3	53.8	0.6
R6	1030	56.4	35.4	56.4	43.3	56.6	0.2
R7	1765	64.6	33.5	64.6	35.6	64.6	0.0

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*

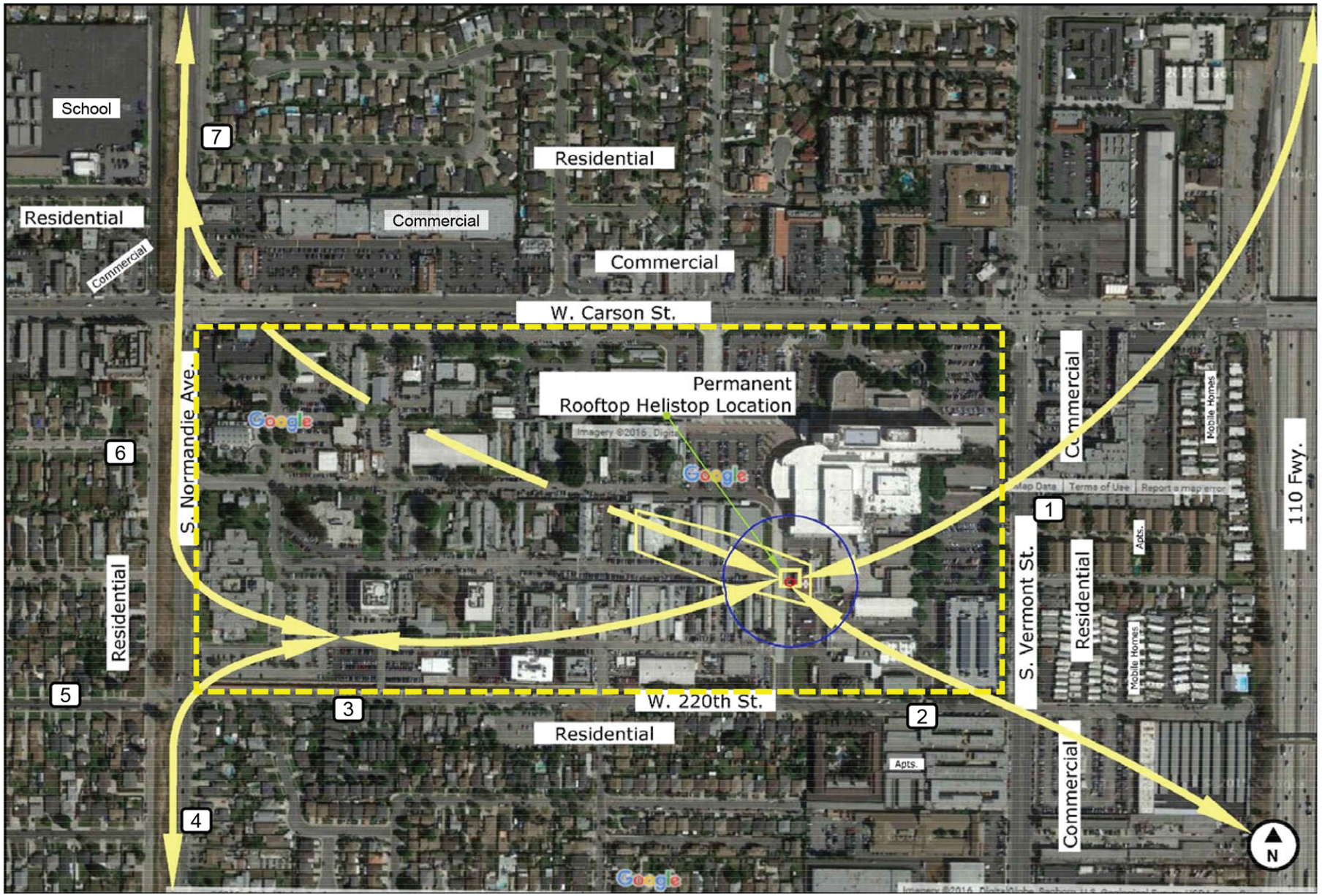
Source: Acoustical Engineering Services, Inc., 2016.

associated with the relocation to the existing Helistop to the Interim 2 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building. However, there are no feasible mitigation measures to reduce the increase at receptor R3 below the level of significance. Therefore, the impact would be significant and unavoidable; however, impacts would be temporary, lasting only until the implementation of the future permanent Helistop location.

The permanent Helistop would be located at the roof level of the future hospital building, approximately 133 feet above local grade. **Figure 4.I-7**, *Helistop Operation Noise Contour – Permanent Rooftop Helistop,* shows the helicopter flight paths with the future permanent helistop. The future helicopter operations (i.e., number of flights per day) are assumed to be similar to the existing conditions. The calculated CNEL noise contours generated by the future helicopter operations are illustrated on Figure 4.I-7. As shown on Figure 4.I-7, the 60 and 65 dBA CNEL noise contour falls within the medical campus.

Table 4.I-19, *Helicopter Noise Analysis – Permanent Rooftop Helistop,* presents the predicted helicopter noise levels in CNEL with the helicopter operations at the future permanent helistop location.

As shown in Table 4.I-19, the predicted CNEL levels due to the helicopter operations ranged from 35.1 dBA CNEL at receptor R7 to 49.8 dBA CNEL at receptor R2. Similar to the existing conditions, the future predicted helicopter noise levels in term of CNEL would be lower than that of the existing measured ambient noise levels (non-helicopter noise). Included in Table 4.I.19 are the ambient noise levels plus helicopter operations under both existing and future conditions. As indicated therein, the future helicopter operations would not



PCR

Helistop Operation Noise Contour – Permanent Rooftop Helistop

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-7

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Table 4.I-18

Helicopter Single-Event Noise Impacts – Interim 2 Helistop

Location	Longitudinal Distance from Interim 2 Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2250	Residential	100.8/85.4	93.0/83.4	-7.8/-2.0
R2	1820	Residential	102.9/86.5	91.7/83.9	-11.2/-2.6
R3	130	Residential	96.9/84.1	117.7/99.5	20.8/15.4
R4	720	Residential	94.2/82.7	105.0/83.0	10.8/0.3
R5	930	Residential	91.9/81.8	101.2/82.1	9.3/0.3
R6	1030	Residential	90.7/81.8	96.0/79.2	5.3/-2.6
R7	1765	Residential/School	88.1/79.5	88.2/79.3	0.1/-0.2

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

result in an increase (in terms of CNEL), as compared to the existing conditions, and therefore, would be below the Project's significance threshold of 1.5 dBA CNEL.

Table 4.I-20, *Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop,* presents the predicted helicopter single-event noise levels under the existing and the future permanent location.

As indicated in Table 4.I-20, the predicted L_{max} due to the helicopter under the future conditions would result in a lower noise level, compared to existing conditions. As such, noise impacts associated with the proposed helicopter relocation to the future location (roof top of the future hospital building) would be less than significant.

Threshold NOISE-4: Would Project-related operational (i.e., non-roadway) noise sources such as building mechanical/electrical equipment or outdoor amenity spaces exceed ambient noise levels at noise sensitive uses, thus causing a violation of the County Noise Ordinance?

Impact Statement NOISE-4*: Project implementation would not increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. Therefore, impacts would be less than significant.*

(i) Fixed Mechanical Equipment

The operation of mechanical equipment such as air conditioners, fans, and related equipment may generate audible noise levels. These types of equipment would be used on the Medical Center Campus. Mechanical equipment would typically be located on rooftops or within buildings, shielded from nearby land uses to attenuate noise and avoid conflicts with adjacent uses. In addition, to ensure compliance with noise limitation requirements of the LACC shown in Table 4.I-7, PDF-NOISE-7 requires an acoustical analysis of the

Table 4.I-19

Helicopter Noise Analysis – Permanent Rooftop Helistop

		Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	850	70.5	47.6	70.5	47.4	70.5	0.0
R2	620	65.6	50.0	65.7	49.8	65.7	0.0
R3	1440	64.3	41.3	64.3	41.9	64.3	0.0
R4	2060	70.7	38.0	70.7	38.3	70.7	0.0
R5	2340	53.1	35.8	53.2	36.1	53.2	0.0
R6	2185	56.4	35.4	56.4	36.8	56.4	0.0
R7	2330	64.6	33.5	64.6	35.1	64.6	0.0

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the nearest edge of the permanent Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

mechanical plans of the proposed building so that all mechanical equipment would be designed with appropriate noise control devices, such as sound attenuators, acoustics louvers, or sound screen/ parapet walls. Therefore, operation of mechanical equipment would not exceed the Project thresholds of significance and impacts would be less than significant.

(ii) Loading Dock and Refuse Collection Areas

The Project would incorporate new Materials and Waste Management facilities including a loading dock. The new loading dock and Waste Management Center would be located at the back of the New Hospital Tower, with the new storeroom located on the lower level of the tower.

Loading dock and refuse service-related activities such as truck movements/idling and loading/unloading operations would generate noise levels that have a potential to adversely impact adjacent land uses during long-term Project operations. Based on measured noise levels, delivery trucks (at loading dock) and trash compactors (from refuse collection) would generate noise levels of approximately 71 dBA (L_{eq}) and 66 dBA (L_{eq}) at 50 feet distance, respectively.

The nearest noise-sensitive use, the single and multi-family residential uses on along 220th Street (R3), is approximately 200 feet south of the proposed loading dock and Waste Management Center. The Central Plat building would partially block the line-of-sight between the noise source and sound receptor locations. Based on a noise level source strength of 71 dBA at a reference distance of 50 feet, and accounting for barrier-insertion loss (minimum 5 dBA insertion loss), loading dock noise would be 54 dBA and would not

Table 4.I-20

Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop

Location	Longitudinal Distance from Permanent Rooftop Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, Permanent Conditions, L_{max} (dBA)
			Existing Helistop	Permanent Rooftop Helistop	
R1	850	Residential	100.8/85.4	101.0/83.8	0.2/-1.6
R2	620	Residential	102.9/86.5	103.0/84.2	0.1/-2.3
R3	1440	Residential	96.9/84.1	97.4/82.9	0.5/-1.2
R4	2060	Residential	94.2/82.7	94.3/81.5	0.1/-1.2
R5	2340	Residential	91.9/81.8	90.5/80.8	-1.4/-1.0
R6	2185	Residential	90.7/81.8	93.3/80.8	2.6/-1.0
R7	2330	Residential/School	88.1/79.5	89.0/79.0	0.9/-0.5

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the permanent Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

exceed the significance threshold of the ambient noise level of 66 dBA at the receptor locations, R3. As such, impacts to surrounding uses would be less than significant.

(iii) Composite Noise Level Impacts from Proposed Project Operations

Primary noise sources associated with the proposed Project would include traffic on nearby roadways, on-site mechanical equipment, on-site loading dock/waste management center, and parking areas. An evaluation of noise from all the Project's noise sources (i.e., composite noise level) was conducted to conservatively ascertain the potential maximum Project-related noise level increase that may occur at the noise-sensitive receptor locations included in this analysis. The overall sound environment at the areas surrounding the project is comprised of contributions from each individual noise source associated with the typical daily operation of the Project.

Based on a review of the noise-sensitive receptors and the project noise sources, the only noise-sensitive location wherein composite noise impacts could occur is single- and multi-family residences (R3). Due to a combination of distance and the presence of intervening structures that would serve as noise barriers, the predominant Project noise source that could potentially affect the other noise-sensitive locations is roadway noise.

Based on the traffic noise analysis above, Project -generated traffic is expected to increase the traffic-related noise by a maximum of 0.7 dBA (CNEL) along 220th Street, between Myler Street and Vermont Avenue, which is represented by the receptor R3. Noise associated with activities in parking structures and at the loading docks and refuse collection transference would increase the overall ambient noise levels by 0.3 dBA at the receptor location R3. Mechanical related noise is expected to be the maximum 50 dBA as shown in Table 4.I-7, which would not increase the ambient noise level of 66 dBA at R3 since, according to industry engineering

references, a 16 dB difference between two noise sources results in an increase of 0.1 dBA to the composite noise level of the two sources.[13] Overall, relative to the existing noise environment, the Project is estimated to increase the ambient noise level at the nearest noise-sensitive receptor R3, but by a less than the threshold of significance of 5 dBA. Composite noise level increases at all other receptor locations are expected to be less than significant as well, given their distance from the Medical Center Campus and the presence of intervening structures. As such, the composite noise level impact due to the proposed Project's future operations would be less than significant.

Threshold NOISE-5 Would the maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceed the average (L_{eq}) ambient noise level by 10 dBA?

Impact Statement NOISE-5: *Project implementation, including noise from the parking structure, would increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. However, Project-related noise generation would not exceed established thresholds and therefore impacts would be less than significant.*

Currently, large parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots located throughout the Medical Center Campus interior. Parking is also allowed on one or both sides of most internal roadways. Nonetheless incidental on-street parking also occurs in areas not officially designated as parking areas, as shown in Figure 2-5.

With implementation of the Master Plan Project, parking structures would be built. The new parking structures would be located in the southeastern corner of the Harbor-UCLA Medical Center Campus, north of New Hospital Tower, the east end of the Medical Center Campus, and immediately north of the proposed new Central Plan. These proposed new/modified parking structures and lots would not bring parking areas into closer proximity to nearby residential uses. Because the distance between the parking areas and the nearest residential uses would generally be unchanged from current conditions, the parking lot related noise impacts at the offsite receptors would be consistent with the existing ambient noise levels and would not exceed the significance threshold of the average ambient noise level by 10 dBA. As such, impacts would be less than significant.

(3) Vibration

Threshold NOISE 6: Would Project construction activities cause ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings?

Impact Statement NOISE-6: *Construction activities would result in sporadic, temporary vibration effects adjacent to the Project area. However, ground-borne vibration levels would not exceed established thresholds. Thus, construction vibration impacts would be less than significant and no mitigation measures are required.*

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. The operation of construction equipment generates

[13] *Engineering Noise Control, Bies & Hansen, 1988.*

vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. Impacts from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibration from construction activities rarely reach levels that damage structures. The FTA has published standard vibration velocities for construction equipment operations. The PPV for construction equipment pieces anticipated to be used during Project construction are listed in **Table 4.I-21**, *Typical Vibration Velocities for Potential Project Construction Equipment.*

Table 4.I-21

Typical Vibration Velocities for the Project Construction Equipment

Equipment	Reference Vibration Velocity Levels at 25 ft, inch/second PPV[a,b]	Vibration Velocity Levels at 55 ft, inch/second PPV[a,b]
Large bulldozer	0.089	0.027
Loaded trucks	0.076	0.023

[a] *PPV=Peak particle velocity.*
[b] *FTA's "Transit Noise and Vibration Impact Assessment", Table 12-2.*

Source: USDOT Federal Transit Administration, 2005.

The construction of the Project would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Based on the vibration data provided in Table 4.I-21, vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. As shown previously in Table 4.I-12, the nearest off-site residential structures are the single- and multi-family residential buildings, R3, located approximately 55 feet south of the construction site during Phase 5.

As shown in Table 4.I-21, the maximum vibration velocities to which receptors could be exposed ranges from 0.01 to 0.027 inches per second PPV. As this value is considerably lower than the 0.5 inches per second PPV significance threshold regarding potential building damage for older residential buildings, vibration impacts associated with construction would be less than significant at the nearest residential building.

Due to the sensitivity of on-site receptors, the potential for noise to affect on-site receptors is presented in this Draft EIR. On-site hospital uses, such as surgical suites, are vibration-sensitive. At various times throughout the construction of the Master Plan, use of heavy duty construction equipment could be as close as 100 feet to occupied on-site operating rooms. The vibration velocity of a large bulldozer generates 0.89 inches per second PPV at 25 feet from the equipment. If a large bulldozer operates within 125 feet of an operating room, the operating room would be exposed to vibration levels of 0.008 inches per second PPV (the level established for the protection of operating rooms and other uses with sensitive equipment and systems). With implementation of PDF Noise-6, which would ensure appropriate site-specific studies are

conducted and additional noise reduction practices implemented as necessary, impacts would be less than significant even when construction is planned within 125 feet of on-site vibration-sensitive uses.

Threshold NOISE-7: Would Project construction and operational activities cause ground-borne vibration levels to exceed 0.04 inch per second PPV at nearby residential uses?

Impact Statement NOISE-7*: Project implementation would not generate excessive vibration levels to nearby sensitive receptors. Thus, construction and long-term vibration impacts would be less than significant and no mitigation measures are required.*

As discussed above, the nearest residential uses, R3 would be exposed to maximum vibration velocities during construction of approximately 0.027 inches per second PPV. As this value is lower than the 0.04 inches per second PPV significance threshold for human perception, vibration impacts associated with construction would be less than significant at the nearest residential building.

Operation of the Project would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration generated by each of the above-mentioned activities would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the closest off-site buildings would be up to 0.01 inches per second PPV[14] and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, vibration impacts associated with operation of the Project would be below the significance threshold and impacts would be less than significant.

e. Cumulative Impacts

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. Noise is by definition a localized phenomenon, and significantly reduces in magnitude as the distance from the source increases. As such, only projects and growth due to occur in the immediate project area would be likely to contribute to cumulative noise impacts.

As discussed in Section 3.0, General Description of Environmental Setting, of this EIR, there are 26 related projects in the surrounding areas. The closet related projects situated approximately 1,300 feet from the Medical Center Campus, including Related Project No. 2 – 1028 W 223rd Street, Condos. All other related projects are 2,600 feet or more from the proposed Project.

(1) Construction Noise

Noise from construction of the proposed Project and related projects would be localized, thereby potentially affecting areas within 500 feet from each of the construction sites. Due to distance attenuation of projects more than 1,000 feet from each other and intervening structures, construction noise from one site would not result in a noticeable increase in noise at sensitive receptors near the other site, which would preclude a

[14] *Transportation Related Earthborne Vibrations, California Department of Transportation, February 2002.*

cumulative noise impact. As such, cumulative impacts associated with construction noise would be less than significant.

(2) Operation

Cumulative operational noise impacts would occur primarily as a result of increased traffic on local roadways due to the Project and other projects within the Medical Center Campus. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of the Project to the future cumulative base traffic volumes in the project vicinity. The noise levels associated with cumulative base traffic volumes without the project, and cumulative base traffic volumes with the project are identified in **Table 4.I-22**, *Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth*. Noise level increases in the Project area would reach a maximum of 1.5 dBA CNEL along Carson Street, between Budlong Avenue and Medical Center Drive, which would not exceed the Project's 3 dBA significance threshold. As such, roadway noise impacts due to cumulative traffic volumes would be less than significant.

Table 4.I-22

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	70.6	71.8	1.2	No
Between Normandie Avenue and Budlong Avenue	70.6	71.9	1.3	No
Between Budlong Avenue and Berendo Avenue	70.5	72.0	1.5	No
Between Berendo Avenue and Medical Center Drive	70.6	72.1	1.5	No
Between Medical Center Drive and Vermont Avenue	70.9	72.1	1.2	No
220th Street				
Between Western Avenue and Normandie Avenue	60.6	61.4	0.8	No
Between Normandie and Myler Street	62.7	63.6	0.9	No
Between Myler Street and Vermont Avenue	63.7	64.8	1.1	No
East of Figueroa Street	67.5	68.6	1.1	No
Figueroa Street				
South of 220th Street	69.3	70.1	0.8	No

Table 4.I-22 (Continued)

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
223rd Street				No
Between Western Avenue and Normandie Avenue	69.6	70.2	0.6	No
Between Normandie Avenue and Myler Street	69.8	70.5	0.7	No
Between Myler Street and Vermont Avenue	69.7	70.4	0.7	No
Between Vermont Avenue and I-110 SB Ramps	70.6	71.5	0.9	No
Between I-110 SB Ramps and Figueroa Street	70.5	71.3	0.8	No
Western Avenue				
Between Carson Street and 220th Street	70.5	71.1	0.6	No
Between 220th Street and 223rd Street	70.6	71.2	0.6	No
Between 223rd Street and Sepulveda Boulevard	70.7	71.3	0.6	No
Myler Street				
Between 220th Street and 223rd Street	60.6	61.6	1.0	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.0	69.7	0.7	No
Between Carson Street and 220th Street	68.8	69.6	0.8	No
Between 220th Street and 223rd Street	68.5	69.2	0.7	No
Budlong Avenue				
North of Carson Street	56.2	56.7	0.5	No

Table 4.I-22 (Continued)

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
Berendo Avenue				
North of Carson Street	57.3	57.8	0.5	No
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.1	70.8	0.7	No
Between Carson Street and 220th Street	70.4	71.1	0.7	No
Between 220th Street and 223rd Street	70.0	70.8	0.8	No
Medical Center Drive				
North of Carson Street	56.1	56.6	0.5	No

[a] *Include future growth plus related (cumulative) projects and proposed project traffic.*

Source: ESA PCR, 2016.

LACC provisions that limit stationary-source noise from items such as roof-top mechanical equipment, noise levels would be less than significant at the property line for each related project. For this reason, on-site noise produced by any related project would not be additive to project-related noise levels. As the project's composite stationary-source impacts would be less than significant, composite stationary-source noise impacts attributable to cumulative development would also be less than significant.

(3) Ground-Borne Vibration

Due to the rapid attenuation characteristics of ground-borne vibration and distance of the related projects to the Project, there is no potential for a cumulative construction- or operational-period impact with respect to ground-borne vibration.

(4) Helicopter Noise

In addition to cumulative operational noise impacts from increased vehicle traffic (discussed under (b) above), potential cumulative operational noise impacts could occur as a result of increased air traffic in the local air space due to the Project and other air traffic in proximity to the Medical Center Campus. However,

there are no facilities similar to the project (i.e., with helicopter traffic) proposed in proximity to the Medical Center Campus. As such, noise impacts due to cumulative helicopter air traffic would be less than significant.

4. MITIGATION MEASURES

The following mitigation measures address the potential significant noise impacts from the proposed Project.

a. Construction Noise and Vibration

Construction-related activities on the Medical Center Campus have the potential to result in significant impacts at nearby sensitive receptors. Thus, the following mitigation measures are required to minimize construction-related noise and vibration impacts:

(1) Noise **Mitigation Measure NOISE-1:** Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows:

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed.
- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4.
- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.

(2) Vibration

No mitigation measures are necessary.

b. Operational Noise and Vibration

(1) Noise

No mitigation measures are necessary.

(2) Vibration

No mitigation measures are necessary.

(3) Helicopter

The noise impacts associated with the proposed interim helistops would result in a significant temporary and periodic impact. No mitigation measures are feasible to reduce the temporary and periodic helicopter

noise associated with operation of the interim helistops. The proposed permanent helistop that would be located on the roof top of the proposed future hospital building would result in a less than significant permanent impact. Therefore, once the permanent helistop is operational, the significant temporary and periodic impact associated with the interim helistop would no longer occur.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

The temporary sound barriers prescribed in Mitigation Measure NOISE-1 can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. Therefore, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4. However, even with implementation of the mitigation measure, construction-related noise could reach up to approximately 85 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this will exceed the significance threshold of 60 dBA, construction noise impacts would be significant and unavoidable at the single- and multi-family residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.b. Operation

Temporary helicopter operations associated with use of the Interim 1 Helistop and Interim 2 Helistop would result in significant and unavoidable, albeit temporary and periodic, impacts at receptor R3. There are no feasible mitigation measures to reduce the noise increases caused by the use of these interim helistops below the level of significance at receptor R3. Therefore, the impacts of temporary use of the Interim 1 Helistop and Interim 2 Helistop would be significant and unavoidable. However, impacts would last only until completion of the permanent Helistop location on the rooftop of the proposed New Hospital Tower. Noise impacts associated with use of the permanent Helistop would be less than significant.

Operation of the Project would result in less than significant traffic-related noise and vibration impacts on off-site noise sensitive receptors and no mitigation is required.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
I. NOISE

1. INTRODUCTION

The section analyzes the potential noise and vibration impacts that would result from the Project. The analysis describes the existing noise environment within the Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project, identifies the potential for significant impacts, and provides mitigation measures to address significant impacts. In addition, an evaluation of the potential cumulative noise impacts of the Project and related projects is also provided. Supporting data and analysis for the analysis presented in this section, including a Helistop Relocation Noise Impact Study (AES, 2016), are provided in Appendix H of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Noise and Vibration Basics

(1) Noise

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of sound is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The A-weighted sound level is expressed in "dBA." This scale de-emphasizes low frequencies to which human hearing is less sensitive and focuses on mid- to high-range frequencies. The range of human hearing is approximately 3 to 140 dBA, with 110 dBA considered intolerable or painful to the human ear. A comparison of types of commonly experienced environmental noise is provided in **Figure 4.I-1,** *Common Noise Levels*.

Although the A-weighted scale accounts for the range of people's response, and therefore, is commonly used to quantify individual event or general community sound levels, the degree of annoyance or other response effects also depends on several other perceptibility factors. These factors include:

- Ambient (background) sound level
- Magnitude of sound event with respect to the background noise level
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

People judge the relative magnitude of sound sensation by subjective terms such as "loudness" or "noisiness." That is, in a non-controlled environment a change in sound level of 3 dB is considered "just perceptible," a

change in sound level of 5 dB is considered "clearly noticeable, and a change in 10 dB is recognized as "twice as loud".[1]

In an outdoor environment, sound levels attenuate (i.e., diminish) with distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the source configuration, point source or line source. For a point source, the rate of sound attenuation is, usually, 6 dB per doubling of distance from the noise source. For example, a sound level of 50 dBA at a distance of 25 feet from the noise source would attenuate to 44 dBA at a distance of 50 feet. For a line source, such as a constant flow of traffic on a roadway, the rate of sound attenuation is 3 dB per doubling of distance.[2] In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight not fully blocked), some barrier insertion loss would still occur, however to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a more substantial barrier.[3]

Community noise levels usually change continuously during the day. The equivalent sound level (L_{eq}) is normally used to describe community noise. The L_{eq} is the equivalent steady-state A-weighted sound level that would contain the same acoustical energy as the time-varying A-weighted sound level during the same time interval. For intermittent noise sources, the maximum noise level (L_{max}) is normally used to represent the maximum noise level measured during the measurement. Maximum and minimum noise levels, as compared to the L_{eq}, are a function of the characteristics of the noise source. As an example, sources such as generators have maximum and minimum noise levels that are similar to L_{eq} since noise levels for steady-state noise sources do not substantially fluctuate. However, as another example, vehicular noise levels along local roadways result in substantially different minimum and maximum noise levels when compared to the L_{eq} since noise levels fluctuate during pass-by events. The County of Los Angeles Noise Ordinance uses the L_{eq} for evaluation of noise violation.

To assess noise levels over a given 24-hour time period, the Community Noise Equivalent Level (CNEL) descriptor is used in land use planning. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels which occur in the night (10:00 P.M. to 7:00 A.M.) and a 5 dBA adjustment (upward) added to the sound levels which occur in the evening (7:00 P.M. to 10:00 P.M.). These penalties attempt to account for increased human sensitivity to noise during the quieter nighttime periods, particularly where sleep is the most probable activity. CNEL has been adopted by the State of California to define the community noise environment for development of a community noise element of a General Plan and is also used by County for land use planning in the County's Noise Element of the General Plan.[4]

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1 *Engineering Noise Control, Bies & Hansen, 1988.*

2 *Caltrans, Technical Noise Supplement (TeNS), 2013.*

3 *Ibid.*

4 *State of California, General Plan Guidelines, 2002.*

Noise Level (dBA)	Common Indoor Noise Levels	Common Outdoor Noise Levels
110	Rock Band	
100	Inside Subway Train	Jet Flyover @ 1,000 feet Gas Lawn Mower @ 3 feet
90	Food Blender @ 3 feet	Diesel Truck @ 50 feet Noisy Urban Daytime
80	Garbage Disposal @ 3 feet Shouting @ 3 feet	
70	Vacuum Cleaner @ 10 feet	Gas Lawn Mower @ 100 feet Commercial Area
60	Normal Speech @ 3 feet Large	Heavy Traffic @ 300 feet
50	Dishwasher next room	Quiet Urban Daytime
40	Small Theater/Conference Room (background)	Quiet Urban Nightime Quiet Suburban Nightime
30	Library Bedroom at Night	
20	Concert Hall (background) Broadcast & Recording Studio	Quiet Rural Nightime
10		
0	Threshold of Hearing	

- PRELIMINARY WORKING DRAFT -

PCR

Common Noise Levels

Harbor-UCLA Medical Center Master Plan

Source: Caltrans Noise Manual, California Department of Transportation, 1980.

FIGURE **4.I-1**

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(2) Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration.[5] Vibration amplitudes are usually described as either peak, as in peak particle velocity (PPV). The peak level represents the maximum instantaneous peak of the vibration signal. In addition, vibrations can be measured in the vertical, horizontal longitudinal, or horizontal transverse directions. Ground vibrations are most often greatest in the vertical direction.[6] Therefore, the analysis of ground-borne vibration associated with the Project is addressed in the vertical direction. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 50 feet or less) from the source.

b. Existing Conditions

(1) Noise-Sensitive Receptor Locations

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure and the types of activities typically involved at the receptor location. The *County of Los Angeles' 2006 CEQA Thresholds Guide* states that residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. Existing noise sensitive uses within 500 feet of the Medical Center Campus include the following:

- The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multi-family residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of the intersection with Vermont Avenue.
- The area north of Carson Street is a predominantly single-family residential neighborhood.
- Vermont Avenue, the southern half of the block facing the Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and mobile home parks, Starlite Trailer Park and Rainbow Mobile Home Park.
- Single-Family and multi-family residential neighborhoods border the Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles.
- Halldale Avenue Elementary School is located at the southwest corner of Normandie Avenue and 216th Street. White Middle School is located at the southeast corner of Figueroa Street and West 220th Street.

(2) Ambient Noise Levels

The predominant noise source surrounding the Medical Center Campus is roadway noise from Carson Street to the north, Vermont Avenue to the east, and Normandie Avenue to the west. Secondary noise sources include general residential and commercial-related activities, such as loading dock/delivery truck activities, trash compaction, and refuse service activities.

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[5] *Federal Transit Authority, Transit Noise and Vibration Impact Assessment, Final Report, page 7-3, May 2006.*

[6] *California Department of Transportation, Transportation Related Earthborne Vibrations, page 4, February 2002.*

Measured Noise Levels – Existing Conditions

Ambient noise measurements were made at six locations, representing the nearby noise-sensitive land uses in the vicinity of the Medical Center Campus as indicated on **Figure 4.I-2,** *Noise Measurement Locations*. Long-term measurements were conducted at locations R1 and R5 for 2 days and short-term noise measurements were made at locations R2 through R4 and R6. Ambient sound measurements were conducted from Wednesday, October 29, through Friday, October 31, 2014 to characterize the existing noise environment during weekdays in the Project vicinity.

The ambient noise measurements were conducted using the Larson-Davis 820 Precision Integrated SLM. The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute (ANSI) S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The microphone was placed at a height of 5 feet above the local grade, at the following locations as shown in Figure 4.I-2:

- Measurement Location R1: This measurement location represents the existing noise environment of the Medical Center Campus site along Central Drive. The noise measuring device (sound level meter) was placed approximately 200 feet north from the northwest corner of 220th Street and Central Drive.

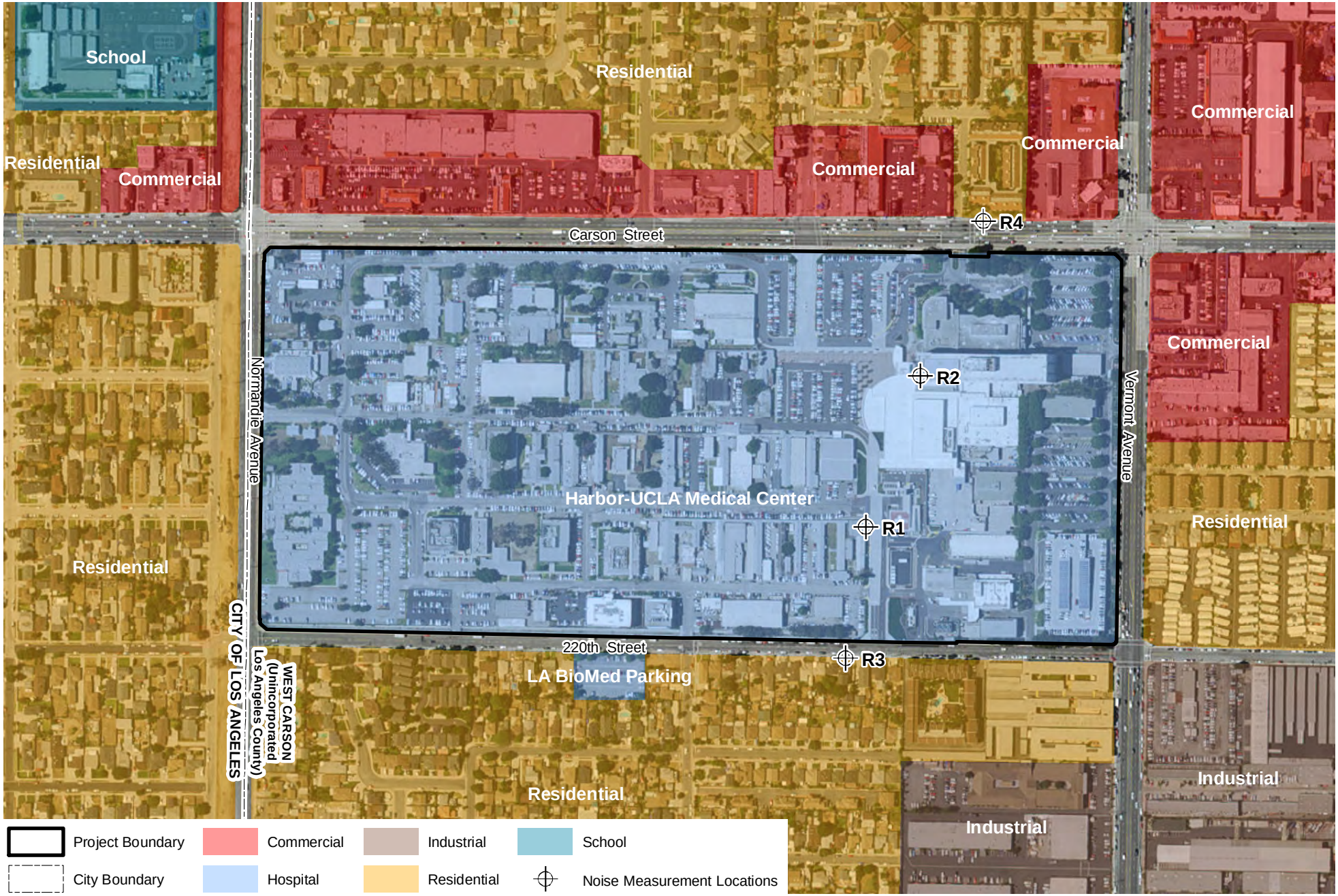
- Measurement Location R2: This measurement location represents the existing noise environment of the Medical Center Campus. The sound level meter was placed on the southwestern corner of the Existing Hospital tower.

- Measurement Location R3: This measurement location represents the existing noise environment of the Child Care Center and single and multi-family residential uses along West 220th Street, south of the Medical Center Campus. The sound level meter was placed along West 220th Street approximately 150 feet east from the northeastern corner of 220th Street and Central Drive.

- Measurement Location R4: This measurement location represents the existing noise environment of the multi-family residential uses along Carson Street. The sound level meter was placed along Carson Street approximately 300 feet west from the northwestern corner of Carson Street and Vermont Avenue.

- Measurement Location R5: This measurement location represents the existing noise environment of the single-family residential and mobile home uses along Vermont Avenue. The sound level meter was placed along Vermont Avenue approximately 250 feet north from the northwest corner of Vermont Avenue and 220th Street.

- Measurement Location R6: This measurement location represents the existing noise environment of the single-family residential uses along Normandie Avenue, north of 220th Street and Halldale Avenue Elementary School located at southwest corner of Normandie Avenue and 216th Street. The sound level meter was placed along Normandie Avenue approximately 350 feet north from the northwestern corner of Normandie Avenue and 220th Street.



PCR

Noise Measurement Locations

Harbor-UCLA Medical Center Master Plan

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

4.I-2

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A summary of noise measurement data is provided in **Table 4.I-1,** *Summary of Ambient Noise Measurements*. As shown in Table 4.I-1, the existing ambient daytime and nighttime noise levels at all of the noise-sensitive residential receptors measured already exceed the County's Exterior Noise Standard for residential areas of 50 dBA during the daytime and 45 dBA during the nighttime. The ambient noise levels in the immediate Project vicinity are representative of a noisy urban area.

Table 4.I-1

Summary of Ambient Noise Measurements

Location, Duration, Existing Land Uses and, Date of Measurements	Measured Ambient Noise Levels,[a] (dBA) Daytime (7 A.M. to 10 P.M.) Hourly L_{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L_{eq}
R1		
10/29/14 (partial 8 hours)/ Wednesday	56 – 58	55 – 56
10/30/14 (full 24 hours)/ Thursday	56 – 67	51 – 57
10/31/14 (partial 8 hours)/ Friday	58 – 67	52 – 57
R2		
10/29/14 12 P.M. to 1 P.M./ Wednesday	56	N/A
R3		
10/29/14 11 A.M. to 12 P.M./ Wednesday	66	N/A
R4		
10/29/14 10 A.M. to 11 A.M./ Wednesday	69	N/A
R5		
10/29/14 (partial 8 hours)/ Wednesday	65 – 73	61 – 65
10/30/14 (full 24 hours)/ Thursday	64 – 73	58 – 69
10/31/14 (partial 8 hours)/ Friday	67	58 – 71
R6		
10/29/14 11 A.M. to 12 P.M./ Wednesday	67	N/A

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix H of this Draft EIR.*

Source: ESA PCR, 2016.

Measured Noise Levels – Existing Helicopter Noise

In addition, ambient noise measurements were conducted at seven off-site noise sensitive (residential and school uses) receptors in the vicinity of the Project site and the proposed helicopter flight paths, to quantify the existing noise environment, which are provided in the Helistop Relocation Noise Impact Study (AES 2016), attached as Appendix H of this EIR. **Figure 4.I-3**, *Ambient Noise Measurement Locations – Helicopter Operations,* (Figure 2 of the Study) shows the noise measurement locations in relation to the existing Helistop. At each of the measurement locations, two short-term (15-minute) noise readings were made, one during daytime period and one during nighttime period. The ambient noise measurements were conducted on March 10 and May 25, 2016, between the hours of 11 a.m. and 2 p.m. (daytime period) and 10 p.m. and 12 a.m. (nighttime period). Noise measurements were conducted using the Quest 2900 Integrated Sound Level Meter (SLM). The Quest 2900 SLM is a Type 2 standard instrument as defined in the American National Standard Institute (ANSI) S1.4; SLMs were calibrated and operated according to the manufacturer's written specifications. The SLM microphone was placed five feet above the local grade during measurements.

Table 4.I-2, *Measured Ambient Noise Levels,* presents the measured ambient noise levels in the vicinity and within the Project site.

Table 4.I-2

Measured Ambient Noise Levels

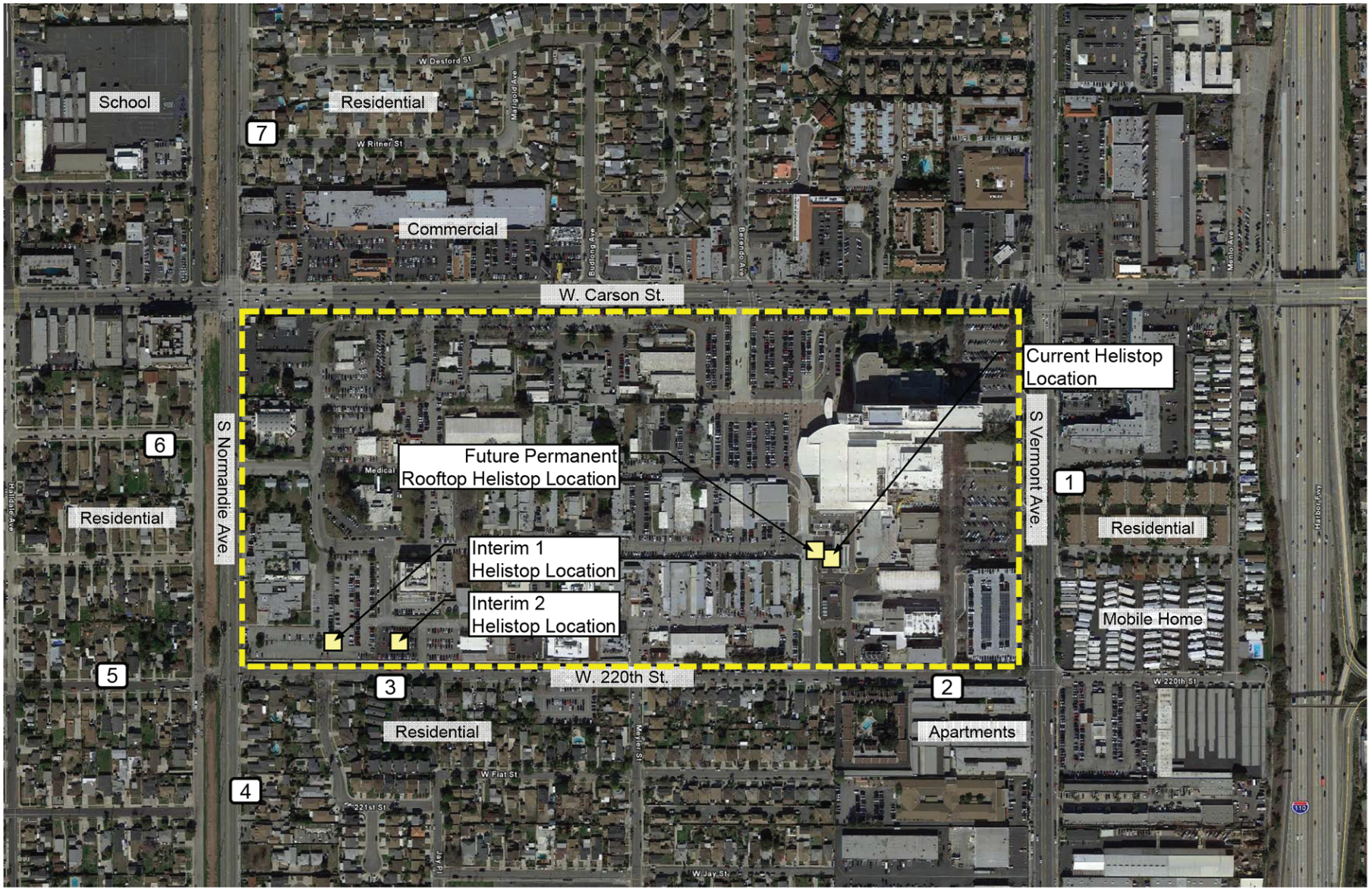
Location	Nearby Noise Sensitive Land Uses	Measured Noise Levels,[a] L_{eq} (dBA)		CNEL,[b] (dBA)
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
R1: Multi-family residential use at the northeast corner of Vermont Avenue and 219th Street	Residential	68.3	64.9	70.5
R2: Multi-family residential use on 220th Street, approximately 200 feet west of Vermont Avenue	Residential	66.2	57.2	65.6
R3: Single-family residential use on 220th Street, approximately 230 feet east of Mariposa Avenue	Residential	63.3	58.0	64.3
R4: Single-family residential use on east side of Normandie Avenue, approximately 150 feet south of 220th Street	Residential	70.5	63.5	70.7
R5: Single-family residential use on north side of 220th Street, approximately 230 feet west of Normandie Avenue	Residential	51.4	47.3	53.1
R6: Single-family residential use on south side of 218th Street, approximately 90 feet west of Normandie Avenue	Residential	57.0	48.1	56.4
R7: Single-family residential use on east side of Normandie Avenue, just north of Ritner Street. This measurement location also represents the Halldale Elementary School located on the west side of Normandie Avenue	Residential/School	64.8	56.9	64.4

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix A of the Noise Study, provided in Appendix H of this Draft EIR.*
[b] *Estimated based on the short-term measurements following the FTA guidelines.*

Source: Acoustical Engineering Services, Inc., 2016.

Detailed noise measurement data, including time of measurements, field notes, and approximate locations are provided in an appendix to the Helistop Relocation Noise Impact Study, which is provided in Appendix H of this Draft EIR. Based on field observation and measured sound data, the current ambient noise environment in the vicinity of the Project Site is controlled primarily by vehicular traffic on nearby local roadways, and to a lesser extent by occasional aircraft flyovers, and other typical urban noise.

In addition to the ambient noise measurements, noise levels associated with the existing Helistop operations were calculated using information provided by the hospital's helicopter landing logs. Existing helicopter operation related noise contours were calculated using the FAA Integrated Noise Model (INM) Version 7.0d. The INM input information include: three dimensional flight tracks for departure and approach, helicopter flight



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Ambient Noise Measurement Locations – Helicopter Operations

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE

4.I-3

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procedures, number and type of helicopters, and daily operations (number of flights by hours). INM calculates helicopter operations-related CNEL, L_{max} and sound exposure level (SEL) at a particular receptor location. Detailed information for the helistop operations including: helicopter operations (i.e., numbers and types of helicopters), helicopter flight tracks, and helicopter flight procedures (i.e., speed, elevation, and distance) are defined in the Helistop Relocation Noise Impact Study, provided in Appendix H of this Draft EIR.

The existing Helistop is located on the roof level of a single-story structure, approximately 15 feet above the local grade elevation at 43 feet above mean sea level (MSL), within the HUCLAMC campus. There are four flight tracks/paths (under the current condition) that the helicopter would utilized for approach (to the hospital) and depart (from the hospital), as shown on **Figure 4.I-4**, *Helicopter Operations CNEL Noise Contour – Existing Helistop Location*. As indicated, two flight paths generally follow west (from the Helistop) and turn north and south follow Normandie Avenue and two flight paths to the northeast and southeast. The noise analysis assumed even distribution for helicopter operations for the four flight paths (i.e., one-fourth for each flight path), because the need for an air ambulance can arise from any direction.

Figure 4.I-4 shows the CNEL noise contours generated by the helicopter operations at the existing Helistop. As shown on Figure 4.I-4, the highest CNEL noise contour is CNEL 65 dBA, which lies within the hospital campus.

Table 4.I-3, *Summary of Helistop Noise Analysis – Existing Helistop Conditions,* presents the predicted helicopter CNEL levels at the Project receptor locations based on the existing helicopter operations.

Table 4.I-3

Summary of Helistop Noise Analysis – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[a] Feet	Predicted Existing Helicopter Noise Levels,[b] CNEL (dBA) "A"	Measured Ambient Noise Levels without Helicopter (from Table 3) Operations,[c] CNEL (dBA) "B"	Ambient Noise Levels + Helicopster Noise Levels,[d] CNEL (dBA) "C=A+B"
R1	Residential	800	47.6	70.5	70.5
R2	Residential	570	50.0	65.6	65.7
R3	Residential	1480	41.3	64.3	64.3
R4	Residential	2100	38.0	70.7	70.7
R5	Residential	2380	35.8	53.1	53.2
R6	Residential	2230	35.4	56.4	56.4
R7	Residential/ School[e]	2380	33.5	64.4	64.6

[a] *Estimated diagonal distances using Google Earth Map. Distances are estimated from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

[b] *Due to helicopter operations only.*

[c] *Measured ambient noise levels without helicopter operations.*

[d] *Calculation Methodologies are provided in Appendix C of the Noise Impact Study, which is provided in Appendix H of this Draft EIR.*

[e] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, Inc., 2016.

As indicated in Table 4.I-3, the predicted helicopter CNEL levels are significantly lower than that of the existing measured ambient noise levels (non-helicopter noise). Also, included in Table 4.I-3 (last column) are the existing ambient noise levels plus the estimated noise levels from the helicopter operations. The results show that the existing helicopter CNEL levels has no impact on the current ambient sound environment at the off-site noise sensitive uses.

In addition to the CNEL noise analysis, INM calculates the single-event (single helicopter) noise level in terms of SEL and L_{max}. The single-event noise analysis provides the maximum noise level that would be generated by a single helicopter arriving or departing on the identified flight paths, regardless of the number of flights per day. The twin engine Sikorsky S-70 helicopter represents the majority of the current helicopter landings, approximately 39 percent of the total operations, and also generates the highest sound level. Therefore, the Sikorsky S-70 helicopter noise signature was used for the single-event noise analysis.

Table 4.I-4, *Helicopter Single-Event Noise Levels – Existing Helistop Conditions,* presents the predicted SEL and L_{max} levels from the Sikorsky S-70 at the Project's offsite noise receptor locations.

Table 4.I-4

Helicopter Single-Event Noise Levels – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[a] Feet	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)
R1	Residential	800	100.8/85.4
R2	Residential	570	102.9/86.5
R3	Residential	1480	96.9/84.1
R4	Residential	2100	94,2/82.7
R5	Residential	2380	91.9/81.8
R6	Residential	2230	90.7/81.8
R7	Residential/School[b]	2380	88.1/79.5

[a] *Diagonal distances using Google Earth Map. Distances are from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

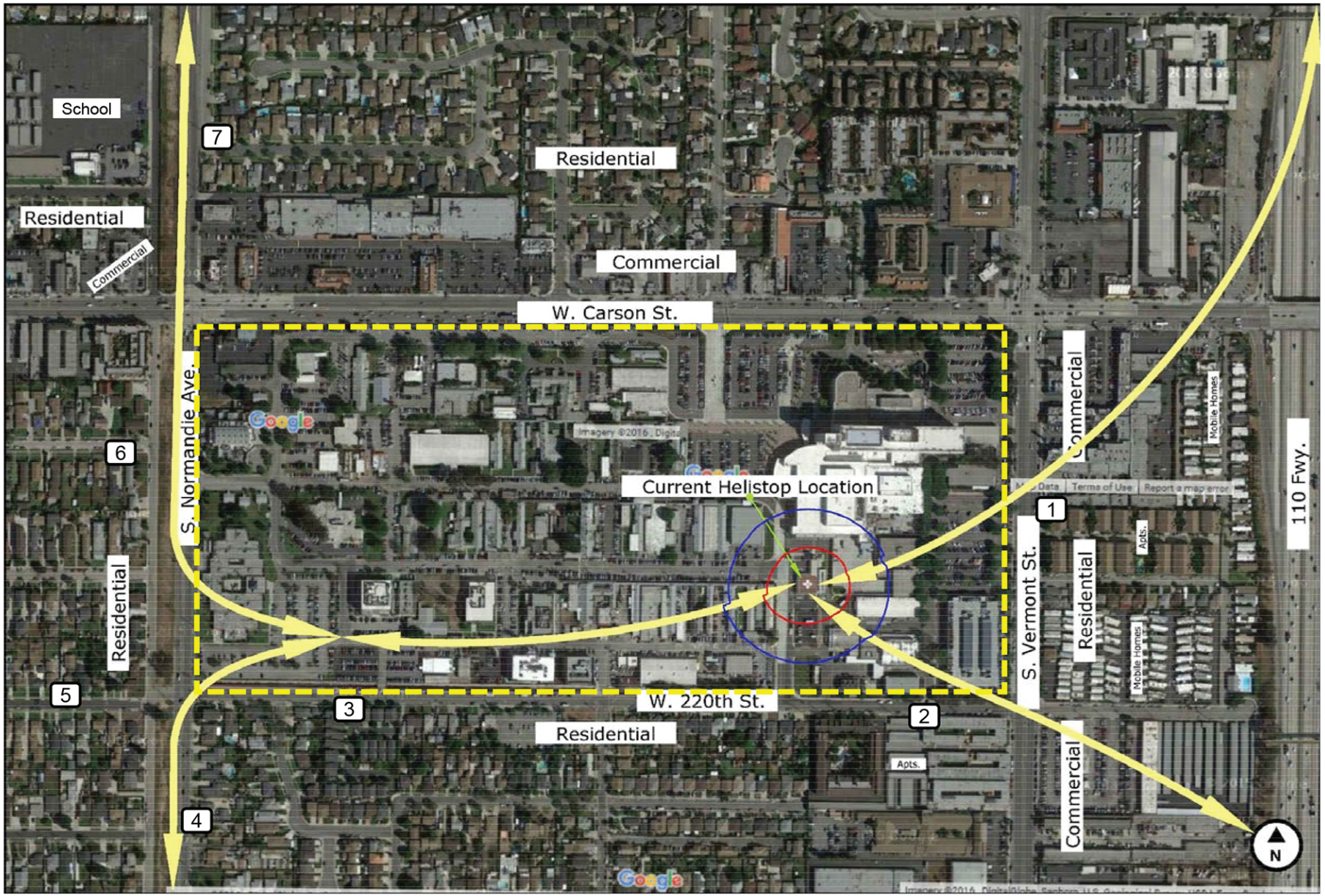
[b] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, Inc, 2016.

As indicated in Table 4.I-4, the predicted noise levels ranged from 79.5 dBA L_{max} (88.1 dBA SEL) at receptor R7 to 86.5 dBA L_{max} (102.9 dBA SEL) at receptor R2. Note: SEL represents the total sound energy during a single noise event normalized to a 1 second period; therefore, SEL is generally higher than L_{max}.

Modeled Noise Conditions – Traffic Noise

To further characterize the Project area's ambient noise environment, the CNEL noise levels attributed to existing traffic on local roadways was calculated using a noise prediction model which was developed based on calculation methodologies provided in the Caltrans Technical Noise Supplement (TeNS) document and



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Helicopter Operations CNEL Noise Contour – Existing Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
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traffic data provided by the Project traffic consultant.[7] [8] The roadway noise calculation procedures provided in the Caltrans TeNS are consistent with Federal Highway Administration RD-77-108 roadway noise prediction methodologies. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

A traffic model calibration test was performed to establish the noise prediction model's accuracy. The road segments included in the calibration test were along Carson Street, between Normandie Avenue and Vermont Avenue and Normandie Avenue, between Carson Street and 220th Street. At the noted location, a 15-minute noise recording was made concurrent with logging of actual traffic volumes and auto fleet mix (i.e., standard automobile, medium duty truck, or heavy duty truck). The traffic counts were entered into the noise model along with the observed speed, lane configuration, and distance to the roadway to calculate the traffic noise levels. The results of the traffic noise model calibration are provided in **Table 4.I-5**, *Traffic Noise Model Calibration Results*. As indicated, the noise model results are within less than 1 dBA of the measured noise levels, which is within the industry standard tolerance of the noise prediction model. Therefore, the Project specific traffic noise prediction model is considered accurate and reflective of the Project's physical setting.

Table 4.I-5

Traffic Noise Model Calibration Results

Road Segment/ Noise Measurements Locations	Traffic Counts during noise readings, 15-minutes			Measured Traffic Noise Levels, L_{eq} (dBA)	Project Traffic Noise Model Predicted Noise Levels, L_{eq} (dBA)	Difference between Predicted and Measured Levels, dBA
	Autos	Medium Trucks [a]	Heavy Trucks [b]			
Carson Street	485	8	4	68.7	69.3	-0.6
Normandie Avenue	206	4	1	67.0	67.8	-0.8

[a] *Medium Truck – 2 axle trucks based on field observations.*

[b] *Heavy Truck – 3 or more axle trucks and buses based on field observations.*

Source: ESA PCR, 2016.

Because the monitoring data validates the use of a Project-specific traffic noise prediction model, the ambient noise environment of the Project vicinity can be characterized by 24-hour CNEL levels attributable to existing traffic on local roadways. As indicated in **Table 4.I-6**, *Predicted Existing Vehicular Traffic Noise Levels*, the calculated CNEL (at a distance of 25 feet from the roadway right-of-way) from actual existing traffic volumes on the analyzed roadway segments ranged from 56.1 dBA to 70.9 dBA for residential areas, hospital uses, schools, and commercial areas.

[7] *The roadway noise calculation procedures provided in TeNS are consistent with Federal Highway Administration RD-77-108 "industry standard" roadway noise prediction methodologies.*

[8] *Traffic Impact Analysis Report for the Harbor-UCLA Medical Center Master Plan Project, Fehr & Peers, March 2016.*

Table 4.I-6

Predicted Existing Vehicular Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Existing Noise Exposure Compatibility [b] Category	Existing CNEL (dBA) at Referenced Distances from Roadway Right-of-Way [a] 25 Feet
Carson Street			
Between Western Avenue and Normandie Avenue	Residential/ Commercial	Normally Unacceptable	70.6
Between Normandie Avenue and Budlong Avenue	Commercial/ Hospital	Normally Unacceptable	70.6
Between Budlong Avenue and Berendo Avenue	Commercial/ Hospital	Normally Unacceptable	70.5
Between Berendo Avenue and Medical Center Drive	Residential/ Hospital	Normally Unacceptable	70.6
Between Medical Center Drive and Vermont Avenue	Residential/ Hospital	Normally Unacceptable	70.9
220th Street			
Between Western Avenue and Normandie Avenue	Residential	Conditionally Acceptable	60.6
Between Normandie and Myler Street	Residential/ Commercial	Conditionally Acceptable	62.7
Between Myler Street and Vermont Avenue	Residential/ Commercial	Conditionally Acceptable	63.7
East of Figueroa Street	Residential	Conditionally Acceptable	67.5
Figueroa Street			
South of 220th Street	Residential/ School	Conditionally Acceptable	69.3
223rd Street			
Between Western Avenue and Normandie Avenue	Residential	Conditionally Acceptable	69.6
Between Normandie Avenue and Myler Street	Residential/ School	Conditionally Acceptable	69.8
Between Myler Street and Vermont Avenue	Residential/ Commercial	Conditionally Acceptable	69.7
Between Vermont Avenue and I-110 SB Ramps	Residential	Normally Unacceptable	70.6
Between I-110 SB Ramps and Figueroa Street	Residential/ Commercial	Normally Unacceptable	70.5
Western Avenue			
Between Carson Street and 220th Street	Residential/ Commercial	Normally Unacceptable	70.5
Between 220th Street and 223rd Street	Residential/ Commercial	Normally Unacceptable	70.6
Between 223rd Street and Sepulveda Boulevard	Residential/ Commercial	Normally Unacceptable	70.7

Table 4.I-6 (Continued)

Predicted Existing Vehicular Traffic Noise Levels

Roadway Segment	Adjacent Land Use	Existing Noise Exposure Compatibility [b] Category	Existing CNEL (dBA) at Referenced Distances from Roadway Right-of-Way [a] 25 Feet
Myler Street			
Between 220th Street and 223rd Street	Residential/ School	Conditionally Acceptable	60.6
Normandie Avenue			
Between Torrance Boulevard and Carson Street	Residential/ Commercial	Conditionally Acceptable	69.0
Between Carson Street and 220th Street	Residential/ Hospital	Conditionally Acceptable	68.8
Between 220th Street and 223rd Street	Residential	Conditionally Acceptable	68.5
Budlong Avenue			
North of Carson Street	Residential	Normally Acceptable	56.2
Berendo Avenue			
North of Carson Street	Residential	Normally Acceptable	57.3
Vermont Avenue			
Between Torrance Boulevard and Carson Street	Residential/ Commercial	Normally Unacceptable	70.1
Between Carson Street and 220th Street	Residential/ Hospital	Normally Unacceptable	70.4
Between 220th Street and 223rd Street	Residential/ Commercial	Normally Unacceptable	70.0
Medical Center Drive			
North of Carson Street	Residential	Normally Acceptable	56.1

[a] *Calculated based on existing traffic volumes.*
[b] *Based on noise levels at 25 feet distance from the roadway and residential uses if residential uses are shown along roadways.*

Source: ESA PCR, 2016.

(3) Vibration-Sensitive Receptor Locations

Typically, ground-borne vibration generated by man-made activities (i.e., rail and roadway traffic, mechanical equipment and typical construction equipment) diminishes rapidly as the distance from the source of the vibration become greater. The Federal Transit Administration (FTA) uses a screening distance of 100 feet for high vibration sensitive buildings (e.g., hospital with vibration sensitive equipment) and 50 feet for residential uses. When vibration sensitive uses are located within those distances from a Medical Center Campus, vibration impact analysis is required. There are no residential uses that are located within the area of potential (within 50 feet) for perceptible vibration due to short-term construction and long-term project operations. Multi- and single-family residential uses are located approximately 55 feet south of the Medical Center Campus across 220th Street.

(4) Ground-Borne Vibration Environment

Based on field observations, the only source of ground-borne vibration in the Project vicinity is vehicular travel (refuse trucks, delivery trucks, and transit buses) on local roadways. According to the FTA technical study's "Federal Transit Administration; Transit Noise and Vibration Impacts Assessments," typical road traffic induced vibration levels are unlikely to be perceptible by people. In part, FTA indicates "it is unusual for vibration from traffic including buses and trucks to be perceptible, even in location close to major roadways."[9] Therefore, FTA published vibration data are utilized in describing the existing ground vibration environment in the vicinity of the Medical Center Campus. As the Medical Center Campus is located within 50 feet of two major roadways; Sunset Boulevard to the north and Crescent Heights Boulevard to the east. It is likely the site is exposed to ground vibration level of 0.004 inches per second PPV. As discussed below, this vibration level is considered below perception threshold of 0.04 inches per second (PPV).

c. Regulatory Framework

Many government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise and ground-borne vibration. Policies and/or standards such as those of the FTA, the California Department of Transportation (Caltrans) and regulations in the County of Los Angeles General Plan Noise Element, and the County of Los Angeles Municipal Code (Municipal Code) would be applicable to the Project. No regional regulations are applicable to the assessment of noise and vibration impacts.

(1) Federal

A technical discussion of construction activity-related vibration is provided in Section 12.2 of FTA publication titled "Transit Noise and Vibration Impacts Assessments," April 1995. As described therein, a ground-borne vibration level of 0.2 inch-per-second PPV should be considered as damage threshold criterion for structures deemed "fragile," and a ground-borne vibration level of 0.12 inch-per-second PPV should be considered as damage criterion for structures deemed "extremely fragile," such as historic buildings. Please also see discussion of State vibration standards below, which are based, in part, on FTA criteria.

The Federal Aviation Administration (FAA) established the aircraft noise analysis methodology and significance threshold that are applicable to federally funded projects that have an aviation noise component. Title 14 of the Code of Federal Regulations (CFR), and specifically Part 150, *Airport Noise Compatibility Planning*, provides guidelines for land use compatibility around airports. Part 150 states that in general, residential uses are not compatible within the 65 dBA L_{dn} contour or above, and that all types of land uses are compatible in areas below 65 dBA L_{dn} (65 dBA CNEL for projects in California). In addition, the FAA's Order 1050.1E, *Environmental Impacts: Policies and Procedures*, establishes a screening threshold of a 1.5 dBA L_{dn} (or 1.5 dBA CNEL for projects in California) increase in noise in any sensitive area located within the 65 dBA L_{dn} (or 65 dBA CNEL for projects in California) contour. In practice, it has been found that unless a proposed airport or heliport project will cause at least by a 1.5 dB increase within the 65 dBA CNEL or greater area, a 3 dB or greater (i.e., audible) increase in the 60-65 dBA CNEL area, impacts will not occur (Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992).

[9] *Federal Transit Administration "Transit Noise and Vibration Impact Assessment", Chapter 7, 2006.*

While the FAA has not established a standard compatibility criterion for the A-weighted single-event noise metrics, such as SEL or L_{max}, previous research performed by the FAA and others, examines the correlation between single-event noise levels and prediction of "annoyance" due to speech or sleep interference. The Federal Interagency Committee on Aircraft Noise (FICAN), *Effects of Aviation Noise on Awakenings from Sleep, June, 1997* analyzed several sleep studies regarding the relationship between the single event noise metric, SEL and sleep disturbance as measured by the number of awakenings. According to the FICAN reports, up to 10 percent of the people could experience sleep disturbance from aircraft noise when the indoor noise environment reaches a level of 81 dBA SEL (FICAN, "Effects of Aviation Noise on Awakening from Sleep", June 1997).

(2) State

(a) Noise Standards

The State Department of Health Services has established guidelines for community noise compatibility for land use in assessing the compatibility of various land use types with a range of noise levels. CNEL guidelines for specific land uses are classified into four categories: (1) "normally acceptable," (2) "conditionally acceptable," (3) "normally unacceptable," and (4) "clearly unacceptable." As shown in **Table 4.I-7,** *Land Use Compatibility for Community Noise*, a CNEL value of 70 dBA is the upper limit of what is considered a "conditionally acceptable" noise environment for hotel uses.

The airport noise regulations found in CCR Title 21, Section 5000 et seq. are administered by the Division of Aeronautics within Caltrans. Under these regulations, civilian airports are required to ensure compatible land uses within the 65 dBA CNEL contour produced by their aircraft operations. Caltrans also has adopted the 65 dBA CNEL threshold as the maximum acceptable exterior noise exposure for residential land uses affected by noise generated at helistops.

(b) Vibration Standards

Caltrans has produced a guidance manual for evaluating potential vibration impacts ("Transportation- and Construction-Induced Vibration Guidance Manual" dated June 2004). The manual provides thresholds for potential impacts on human comfort and damage to buildings, as well as guidance for reducing potential vibration impacts and addressing vibration issues. The manual gathers data from multiple sources, including the FTA. Tables 4, 5, and 6 of the manual provide criteria for identifying potential annoyance from vibration activity, as measured in inches per second PPV. The values range in value. For example, 0.035 inches per second PPV is identified as a level that is "distinctly" or "barely" perceptible, and 0.08/0.1 is identified as "readily" or "strongly" perceptible. Levels above this range are levels that begin to annoy human beings. Tables 9 through 15 of the manual provide criteria for identifying potential damage to buildings. Again, the values vary greatly depending on assumptions and the types and conditions of buildings considered. Per those guidelines, buildings that are extremely old and fragile can be subject to damage from vibration levels as low as 0.1 inches per second. Generally, the levels for well-constructed, more substantial buildings fall in the range of 1.0 to 2.0 inches per second PPV. Notably, Table 10 of the manual, based on FTA data, provides a conservative estimate for well-constructed buildings of 0.5 inches per second PPV, while Tables 9, 14, and 15 of the manual assign the 0.5 standard to residential structures and some older buildings, and levels of 1.0 to 2.0 inches per second PPV for newer, more substantial, better-engineered buildings.

Table 4.I-7

Land Use Compatibility for Community Noise
(California Department of Public Health Criteria)

Land Use	Community Noise Exposure CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 70
Multi-Family Homes	50 to 65	60 to 70	70 to 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 70	70 to 80	Above 80
Transient Lodging—Motels, Hotels	50 to 65	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 75	—	Above 70
Playgrounds, Neighborhood Parks	50 to 70	—	67 to 75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	70 to 80	Above 80
Office Buildings, Business and Professional Commercial	50 to 70	67 to 77	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	Above 75	—

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Noise Control, California Department of Public Health.

(3) Local

(a) Los Angeles County General Plan Noise Element

The overall purpose of the Noise Element of a General Plan is to protect people from the harmful and annoying effects of exposure to excessive noise. The Los Angeles County Noise Element focuses on noise issues associated with transportation, including airports, highways, and railroads.

The County has adapted the Table 4.I-7, Land Use Compatibility for Community Noise, to develop the County's exterior noise standards, discussed below.

(b) Los Angeles County Code (LACC)

The County of Los Angeles Noise Restrictions are provided in Chapter 12.08, Noise Control of the LACC. Chapter 12.08 provides procedures and criteria for the measurement of the sound level of "offending" noise sources.

The LACC outlines exterior noise standards for four noise zones based on land use type: noise-sensitive areas, residential properties, commercial properties, and industrial properties. The County's maximum exterior noise standards set forth in LACC Section 12.08.390 are provided in **Table 4.I-8,** *Los Angeles County Presumed Ambient Noise Levels*. For residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 45 dBA during the nighttime. The following standards are used to evaluate compliance:

Table 4.I-8

Los Angeles County Presumed Ambient Noise Levels

Noise Zone	Zone	Daytime Hours (7 A.M. to 10 P.M.) dBA (L_{eq})	Nighttime Hours (10 P.M. to 7 A.M.) dBA (L_{eq})
I	Noise-sensitive area	45	45
II	Residential	50	45
III	Commercial	60	55
IV	Industrial	70	70

Source: LACC, Section 12.08.390.

- Standard No. 1: Exterior noise cannot exceed levels set forth in Table 4.I-5 for a cumulative period of more than 30 minutes in any hour.
- Standard No. 2: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
- Standard No. 3: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
- Standard No. 4: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 15 dBA for a cumulative period of more than one minute in any hour.
- Standard No. 5: Exterior noise cannot exceed levels set forth in Table 4.I-5 plus 20 dBA at any time.

If ambient noise levels exceed the exterior noise levels in Table 4.I-5, then the aforementioned standards can be adjusted by substituting relevant noise levels in Table 4.I-5 with the following ambient measurements:

- Standard No. 6: Ambient L50, the noise level exceeded 50% of the time over an hour period.
- Standard No. 7: Ambient L25, the noise level exceeded 25% of the time over an hour period.
- Standard No. 8: Ambient L8.3, the noise level exceeded 8.3% of the time over an hour period.

- Standard No. 9: Ambient L1.7, the noise level exceeded 1.7% of the time over an hour period.
- Standard No. 10: Ambient L0, the maximum noise level over an hour period.

LACC Section 12.08.440 prohibits construction between the hours of 7:00 P.M. and 7:00 A.M. and at any time on Sundays or holidays, given that it creates a noise disturbance across a residential or commercial real-property line. **Table 4.I-9,** *Los Angeles County Permissible Construction Equipment Noise at Receptor*, outlines the maximum noise levels permissible by construction equipment at affected buildings depending on land use. These noise thresholds pertain to two timeframes: daytime hours from 7:00 A.M. to 8:00 P.M. daily (except Sundays and holidays) and nighttime hours from 8:00 P.M. to 7:00 A.M. daily (or all day Sundays and holidays).

Table 4.I-9

Los Angeles County Permissible Construction Equipment Noise at Receptor

Equipment Type	Receptor Type	Daytime Hours (7 A.M. to 8 P.M.) dBA (L_{eq})	Nighttime Hours (8 P.M. to 7 A.M.) dBA (L_{eq})
Mobile short-term operation (less than 10 days)	Single-family Residential	75	60
	Multi-family Residential	80	64
	Semiresidential/Commercial	85	70
	Business Structures	85	85
Stationary long-term operation (more than 10 days)	Single-family Residential	60	50
	Multi-family Residential	65	55
	Semiresidential/Commercial	70	60

Source: LACC , Section 12.08.440.

The County Noise Ordinance states that noise levels caused by any air-conditioning or refrigeration equipment shall not exceed the levels identified in **Table 4.I-10**, *County of Los Angeles Residential Air-Conditioning and Refrigeration Equipment Standards.*

The County Noise Ordinance Section 12.08.350 provides a presumed perception threshold of 0.01 inch-per second RMS; however, this applies to ground-borne vibrations from long-term operational activities, such as surface traffic, and not to short-term activities such as construction. Therefore, the 0.01 inch-per second RMS vibration criteria is used in connection with the Project's operation-related vibration impacts. The vibration level of 0.01 inch-per second RMS is equivalent to 0.04 inches per second PPV.

Table 4.I-10

County of Los Angeles Residential Air-Conditioning and Refrigeration Equipment Standards

Measurement Location	Units Installed Before 1-1-80 dBA	Units Installed On or After 1-1-80 dBA
Any point on neighboring property line, 5 feet above grade level, no closer than 3 feet from any wall.	60	55
Center of neighboring patio, 5 feet above grade level, no closer than 3 feet from any wall.	55	50
Outside the neighboring living area window nearest the equipment location, not more than 3 feet from the window opening, but at least 3 feet from any other surface.	55	50

Source: County of Los Angeles Ordinance, No. 11743, LACC, Section 12.08.530.

3. PROJECT IMPACTS

a. Methodology

(1) On-Site Construction Noise

On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity, calculating the construction-related noise level at nearby sensitive receptor locations, and comparing these construction-related noise levels to existing ambient noise levels (i.e., noise levels without construction noise). More, specifically, the following steps were undertaken to assess construction-period noise impacts.

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 4.I-1);

2. Typical noise levels for each type of construction equipment were obtained from the Federal Highway Administration (FHWA) roadway construction noise model (RCNM);

3. Distances between construction site locations (noise source) and surrounding sensitive receptors were measured using Project architectural drawings, Google Earth, and site plans;

4. The construction noise level was then calculated, in terms of hourly L_{eq}, for sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance; and

5. Construction noise levels were then compared to the construction noise significance thresholds identified below.

(2) Off-Site Roadway Noise (Construction and Operation)

Roadway noise impacts have been evaluated using the Caltrans TeNS methodology based on the roadway traffic volume data provided in the Traffic Impact Study prepared for the Project. This methodology allows for the definition of roadway configurations, barrier information (if any), and receiver locations. Roadway noise attributable to project development was calculated and compared to baseline noise levels that would occur under the "without project" condition.

(3) Stationary Point-Source Noise (Operation)

Stationary point-source noise impacts have been evaluated by identifying the noise levels generated by outdoor stationary noise sources such as rooftop mechanical equipment and loading dock activities, calculating the hourly L_{eq} noise level from each noise source at surrounding sensitive receiver property line locations, and comparing such noise levels to existing ambient noise levels. More specifically, the following steps were undertaken to calculate outdoor stationary point-source noise impacts:

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 4.I-1);

2. Distances between stationary noise sources and surrounding sensitive receptor locations were measured using project architectural drawings, Google Earth, and site plans;

3. Stationary-source noise levels were then calculated for each sensitive receptor location based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance;

4. Noise level increases were compared to the stationary source noise significance thresholds identified below; and

5. For outdoor mechanical equipment, the maximum allowable noise emissions from any and all outdoor mechanical equipment were specified such that noise levels would not exceed the significance threshold identified below.

(4) Ground-Borne Vibration (Construction and Operation)

Ground-borne vibration impacts were evaluated by identifying potential vibration sources, measuring the distance between vibration sources and surrounding structure locations, and making a significance determination based on the significance thresholds described below.

(5) Helicopter Noise

Helicopter noise impacts were evaluated by predicting the CNEL levels due to helicopter operations at the two proposed interim helistop locations (Interim 1 Helistop and Interim 2 Helistop), and at the Future permanent Helistop location; comparing these against current CNEL levels at the current Helistop location and determining the increase; and comparing the increases to the applicable CNEL and L_{max} significance thresholds. The significance threshold for the helicopter operations related noise impact is based on projected changes in noise levels (increases) from existing to the future conditions, with consideration of existing ambient noise environments and the regulatory framework described above. The applicable

significance threshold with respect to helicopter operation per FAA and Caltrans is provided in terms of CNEL. In addition to the CNEL threshold, a single-event noise level significance threshold is recommended in terms of L_{max}. As discussed above with respect to the community noise assessment, changes in noise levels of less than 3 dBA are generally not discernable to most people, while changes greater than 5 dBA L_{max} are readily noticeable and would be considered a significant increase (Bies & Hansen*, Engineering Noise Control,* 1988). Therefore, the significance threshold for the single-event noise level (in L_{max}) is utilized by evaluating the incremental change from the existing with that of the future helicopter operations.

b. Significance Thresholds

The potential for noise impacts is based on thresholds derived from Los Angeles County Department of Regional Planning Initial Study Checklist screening questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

Noise. Would the project result in:

a) Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance(Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Significance thresholds have been developed based on these factors and the applicable regulatory requirements, as presented below.

(1) Construction Noise

Since the Project construction period would have a duration of more than 10 days and would not occur between the hours of 7:00 P.M. and 7:00 A.M. Monday through Saturday, or at any time on Sundays and holidays (consistent with provisions of the LACC), noise during construction would have a significant impact if it would:

NOISE-1 Result in construction equipment noise exceeding 60 dBA, L_{eq} at single-family residences and mobile homes; 65 dBA, L_{eq} at multi-family residences; or 70 dBA, L_{eq} at transient lodging.

NOISE-2 Result in off-site Project construction traffic noise exceeding 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging.

(2) Operational Noise

Noise during operation would have a significant impact if it would:

NOISE-3 Increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing "normally acceptable" or "conditionally acceptable" noise levels; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels; or result in helicopter operations that generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more; or, for a single helicopter operation, generate an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use.

NOISE-4 Result in non-roadway-related noise, such as building mechanical/electrical equipment or the use of outdoor amenity spaces, which exceeds ambient noise levels at noise-sensitive uses, in violation of the County Noise Ordinance.

In addition, the LACC provides guidance for calculation of short-term annoying sounds of the type that could be generated within a project's parking structure. Accordingly, the Project would have a potentially significant impact on Noise if it would:

NOISE-5 Result in maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceeding the average (L_{eq}) ambient noise level by 10 dBA.

(3) Ground-Borne Vibration

Vibration would have a significant impact if it would:

NOISE-6 Result in Project construction activities causing ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings.

NOISE-7 Result in Project construction and operation activities causing ground-borne vibration levels to exceed the human annoyance threshold, 0.04-inch-per-second PPV, at nearby sensitive land uses.

c. Project Characteristics or Design Features

(1) Project Characteristics

All outdoor mechanical building and electrical equipment would be designed to meet the requirements of LACC, Section 12.08.530.

(2) Project Design Features

In addition to compliance with LACC requirements in future construction, the following Project Design Features would be implemented to reduce Project-generated noise and were incorporated into analytical assumptions prior to the determination of potential impacts.

PDF-NOISE-1: The Project contractor(s) will equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.

PDF-NOISE-2: On-site construction equipment staging area shall be located as far as feasible from sensitive uses/hospital patient buildings.

PDF-NOISE-3: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited near sensitive uses/patient buildings.

PDF-NOISE-4: Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.

PDF NOISE-5: Effective noise barriers will be designed and erected as needed to shield on-site uses from excessive construction-related noise.

PDF NOISE-6: To reduce the potential for construction-related vibration effects to on-site operating rooms or other vibration sensitive medical uses (such as laboratories), the Project contractor(s) shall perform appropriate study of the potential for peak particle velocities to reach or exceed 0.008 inches per second PPV whenever construction involving the use of heavy duty equipment is planned within 125 feet of such an on-site medical use. If, based on site-specific conditions, this study indicates potential for detrimental effects, strategies to minimize the effects shall be incorporated into the construction plan.

PDF-NOISE-7: As required by LACC, an acoustical analysis of the mechanical plans of the proposed buildings will be prepared by a qualified acoustical engineer, prior to issuance of building permits, to ensure that all mechanical equipment would be designed to meet noise limits in Table 4.I-6.

d. Analysis of Project Impacts

(1) Construction

(a) On-site Construction Noise

Threshold NOISE-1: Would Project construction equipment noise exceed 60 dBA, L_{eq} at single-family residences; 65 dBA, L_{eq} at multi-family residences; or 70 dBA, L_{eq} at transient lodging?

Impact Statement NOISE -1 *On-site construction noise associated with the Project would increase noise levels at nearby residential uses in excess of established thresholds. Therefore, impacts would be significant without implementation of mitigation measures.*

Noise impacts from construction activities are generally a function of the noise generated by construction equipment, equipment locations, the sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Individual construction phases will typically be undertaken in four stages: (1) demolition; (2) grading; (3) building construction; and (4) paving. Each stage involves the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques.

Project construction would require the use of mobile heavy equipment with high noise level characteristics. Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels of 74 dBA to 85 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 4.I-11**, *Construction Equipment Noise Levels*. These maximum noise levels would occur when equipment is operating under full power conditions. However, equipment used on construction sites often operate under less than full power conditions, or part power as shown in the first column in Table 4.I-8. As shown in Table 4.I-8, the part power percentage (%) of construction equipment is based on the Construction Noise Control Specification developed for the Central Artery/Tunnel project in Boston.[10] To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage and are typically attributable to multiple pieces of equipment operating simultaneously.

Construction noise levels were estimated based on an industry standard sound attenuation rate of 6 dB per doubling of distance for point sources (e.g., construction equipment). Within the analysis, all construction equipment was assumed to operate simultaneously at the construction area nearest to potentially affected residential receptors. These assumptions represent a worst-case noise scenario as construction activities would routinely be spread throughout the construction site further away from noise sensitive receptors. In addition, noise from different construction stages, which have the potential to occur simultaneously were added together to provide a composite construction noise level. A summary of the construction noise impacts at the nearby sensitive receptors is provided in **Table 4.I-12,** *Estimate of Maximum Construction Noise Levels(L_{eq}) at Off-Site Sensitive Receptor Locations*. Detailed noise calculations for construction activities are provided in Appendix H of this EIR.

[10] *Federal Highway Administration, Roadway Construction Noise Model User's Guide, 2006.*

Table 4.I-11

Construction Equipment Noise Levels

Equipment	Estimated Usage Factor, %	Typical Noise Level at 50 feet from Equipment, dBA (L_{max})
Air Compressor	50	78
Concrete Mixer Truck	40	79
Chain Saw	20	85
Cranes	40	81
Dozer	40	82
Excavator	40	81
Forklift	10	75
Grader	40	85
Rubber Tired Loader	40	79
Other Equipment (Trencher)	50	85
Paver	50	77
Roller	20	80
Tractor/Loader/Backhoe	25	80
Water Truck	10	80
Welder	40	74

Source: FHWA Roadway Construction Noise Model User's Guide, 2006.

As shown in Table 4.I-12, construction noise levels would exceed the Project's significance threshold at the following receptor location

- R3 during the following construction phases: Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed;
- R4 during construction Phase 4; and
- R5 during construction phases: Phase 2, Phase 4, and Phase 5.

As such, construction-period noise impacts would be significant. Mitigation measures are therefore prescribed to reduce construction noise impacts to these sensitive noise receptors, as presented below in subsection 4. *Mitigation Measures*, below.

Table 4.I-12

Estimate of Maximum Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Construction Phases	Noise Sensitive Receptor	Nearest Distance between Receptor and Construction Site, feet	Estimated Maximum Construction Noise Levels at the Noise Sensitive Receptor by Construction Phase,[a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
Phase C	R3: South of the Medical Center Campus	80	85	60	Yes
	R4 [b]: North of the Medical Center Campus	1,300	46	65	No
	R5 [b]: East of the Medical Center Campus	1,100	47	60	No
	R6 [b]: West of the Medical Center Campus	1,500	45	60	No
Phase 1	R3 [b]: South of the Medical Center Campus	750	44	60	No
	R4 [b]: North of the Medical Center Campus	350	66	65	No
	R5 [c]: East of the Medical Center Campus	1,200	45	60	No
	R6 [b]: West of the Medical Center Campus	1,000	47	60	No
Phase 2	R3 [c]: South of the Medical Center Campus	350	62	60	Yes
	R4 [b]: North of the Medical Center Campus	750	46	65	No
	R5 [c]: East of the Medical Center Campus	345	62	60	Yes
	R6 [b]: West of the Medical Center Campus	2,200	31	60	No
Phase 3	R3 [c]: South of the Medical Center Campus	215	70	60	Yes
	R4 [c]: North of the Medical Center Campus	750	59	65	No
	R5 [c]: East of the Medical Center Campus	850	53	60	No
	R6 [b]: West of the Medical Center Campus	1,450	43	60	No
Phase 4	R3 [c]: South of the Medical Center Campus	560	58	60	No
	R4: North of the Medical Center Campus	200	72	65	Yes
	R5: East of the Medical Center Campus	160	74	60	Yes
	R6 [b]: West of the Medical Center Campus	2,000	37	60	No

Table 4.I-12 (Continued)

Estimate of Maximum Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Construction Phases	Noise Sensitive Receptor	Nearest Distance between Receptor and Construction Site, feet	Estimated Maximum Construction Noise Levels at the Noise Sensitive Receptor by Construction Phase,[a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
Phase 5	R3: South of the Medical Center Campus	55	83	60	Yes
	R4 [b]: North of the Medical Center Campus	600	53	65	No
	R5: East of the Medical Center Campus	110	77	60	Yes
	R6 [b]: West of the Medical Center Campus	2,500	35	60	No
Phase 6	R3: South of the Medical Center Campus	70	83	60	Yes
	R4 [c]: North of the Medical Center Campus	400	63	65	No
	R5 [b]: East of the Medical Center Campus	1,700	40	60	No
	R6: West of the Medical Center Campus	170	75	60	No
Phase LA Biomed	R3: South of the Medical Center Campus	65	82	60	Yes
	R4 [c]: North of the Medical Center Campus	1,200	42	65	No
	R5 [b]: East of the Medical Center Campus	1,400	40	60	No
	R6: West of the Medical Center Campus	1,100	52	60	No

[a] *Estimated construction noise levels represent the worst-case condition when all noise generators are located closest to the receptors and are not expected to last the entire construction duration.*

[b] *Receptors are fully shielded from the construction site by existing off-site buildings.*

[c] *Receptors are partially shielded from the construction site by existing off-site buildings.*

Source: ESA PCR, 2016

(b) Off-Site Construction Activities

Threshold NOISE-2 Would Project construction traffic noise exceed 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transient lodging?

Impact Statement NOISE-2: *Off-site construction traffic would not exceed the significance thresholds at off-site noise sensitive receptor locations. Impacts to off-site sensitive receptors would be less than significant.*

There would be material delivery truck trips throughout the construction period. The truck haul routes will comply with the approved truck routes designated within the County. Trucks traveling to and from the Medical Center Campus must travel along the designated truck route. Trucks are expected to travel on Carson Street, 220th Street, Vermont Street, and Figueroa Street to access the Harbor Freeway (I-110).

The Project's truck trips would result in a total noise level (exiting plus project trucks) of approximately 61.9 dBA, L_{eq} at 25 feet distance along Carson Street, 62.8 dBA along 220th Street, 61.5 dBA along Vermont Street, and 61.9 dBA along Figueroa Street. The noise levels by truck trips would be below the significance thresholds of 75 dBA, L_{eq} at single-family residences and mobile homes; 80 dBA, L_{eq} at multi-family residences; or 85 dBA, L_{eq} at transit lodging. Therefore, impacts would be less than significant.

(c) On-Site Sensitive Receptors

As discussed above, construction activities would temporarily increase the existing ambient noise in close proximity of the construction site within the Project areas. The on-site hospital uses are sensitive receptors, but effects of the Project itself on these included receptors are not considered a project impact to the environment under CEQA. Nonetheless, due to the sensitive on-site receptors, the potential for noise to affect on-site receptors is presented in this Draft EIR. The on-site hospital uses are noise-sensitive. At various times throughout the construction of the Master Plan Project, use of heavy duty construction equipment could be closer than 100 feet to occupied on-site patient rooms and it would increase the ambient noise levels at on-site noise sensitive uses. PDF-NOISE-2, PDF-NOISE-3, and PDF-NOISE-4 are designed to minimize the generation of on-site noise to the extent feasible. PDF NOISE-5 has been included to ensure appropriate noise barriers are designed and erected when construction is planned within close proximity to existing on-site noise-sensitive uses to minimize effects to on-site hospital uses. However, the upper floors (i.e. above 2nd floor) of the existing hospital buildings would not experience the same noise reductions as the result of the noise barriers since the proposed barrier would not block the line of sight between the construction site and upper floors of the existing hospital buildings. Therefore, detailed acoustical studies should be conducted prior to the construction phases.

(2) Operation

Threshold NOISE-3: Would the Project increase ambient noise levels by 5 dBA CNEL or more at a land use currently experiencing noise levels characterized as "normally acceptable" or "conditionally acceptable"; or increase ambient noise levels by 3 dBA CNEL or more at a land use currently experiencing "normally unacceptable" or "clearly unacceptable" noise levels? Would helicopter operations generate noise levels in excess of 65 dBA CNEL at a sensitive land use and increase ambient noise levels by 1.5 dBA CNEL or more? Would maximum noise levels from a single helicopter operation cause an incremental noise increase of 5 dBA L_{max} or more, compared to existing helicopter operations, at a sensitive land use?

Impact Statement NOISE-3: *Project implementation would increase noise levels at adjacent noise-sensitive receptors in the Project area as the result of increased Project traffic, but traffic would not exceed established noise thresholds at those receptors and impacts would be less than significant. Helicopter activity associated with use of the proposed Interim 1 and 2 Helistops would exceed established thresholds at sensitive land uses, which is a significant, although temporary and periodic, impact. Project-related noise from helicopter activity associated with use of the permanent helistop, following Master Plan Project buildout, would be less than significant.*

(i) Impacts Under Existing Traffic Baseline Conditions

Future roadway noise levels were calculated along various arterial segments adjacent to the Medical Center Campus. Roadway noise attributable to project development was calculated using the traffic noise model previously described and was compared to baseline noise levels that would occur under the "No Project" condition.

Project impacts are shown in **Table 4.I-13**, *Off-Site Traffic Noise Impacts- Project Build Out.* As indicated, the maximum increase in project-related traffic noise levels over existing traffic noise levels would be 0.7 dBA, CNEL, which would occur along 220th Street, between Myler Street and Vermont Avenue. This increase in sound level would be well below a "clearly noticeable" increase of 5.0 dBA, CNEL in an area characterized by conditionally acceptable noise levels (see Table 4.I-4),[11] and the increase in sound level would be substantially lower at the remaining roadway segments analyzed. The project-related noise increases would be less than the threshold and therefore less than significant, and no mitigation measures would be required.

(ii) Impacts Under Future Traffic Baseline Conditions

Future roadway noise levels were calculated along various arterial segments adjacent to the Project Site and compared to 2021 baseline traffic noise levels assuming implementation of the cumulative projects. Project impacts are shown in **Table 4.I-14**, *Off-Site Traffic Noise Impacts – Future 2030 Area-Wide Growth with Project.* As indicated therein, the maximum increase attributable to Project-related traffic would be 0.6 dBA CNEL along 220th Street between Myler Street and Vermont Avenue. This would be below the "clearly noticeable" increase threshold of 5.0 dBA CNEL applicable to land uses experiencing normally acceptable noise levels (see Table 4.H-4),[12] and the increase in noise would be substantially lower at the remaining roadway segments analyzed. Project-related noise increases, when measured against the 2030 with Area-Wide Growth conditions, would therefore be less than significant.

Noise would be substantially lower at the remaining roadway segments analyzed. Project-related noise increases, when measured against the 2030 with Area-Wide Growth conditions, would therefore be less than significant.

(iii) Impacts from Helicopter Operations

As part of the Master Plan Project, a permanent new Helistop would be located on the rooftop of the New Hospital Tower. However, as previously discussed, following demolition of the existing helistop and prior to construction of the New Hospital Tower and permanent new Helistop, two interim helistops would be constructed for temporary use. The Interim 1 Helistop is proposed in the existing Harbor-UCLA Professional Building parking lot near the southwestern corner of the Medical Center Campus, and the Interim 2 Helistop would be located in the LA BioMed surface parking lot, approximately 230 feet east of the Interim 1 Helistop location. Pads for both helistops would be raised approximately 10 feet above the adjacent grade. The helicopter flight paths for the Interim 1 Helistop and Interim 2 Helistop locations are illustrated on **Figure 4.I-5**, *Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location*, and **Figure 4.I-6,** *Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location*, respectively. This noise analysis assumes that future helicopter operations would be similar to helicopter operations under existing conditions, as

[11] *Engineering Noise Control, Bies & Hansen, 1988.*

[12] *Engineering Noise Control, Bies & Hansen, 1988.*

Table 4.I-13

Off-Site Traffic Noise Impacts – Project Build Out Conditions

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing [a] (A)	Existing with Project Build Out [b] (B)	Project Increment (B - A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	70.6	70.7	0.1	No
Between Normandie Avenue and Budlong Avenue	70.6	70.7	0.1	No
Between Budlong Avenue and Berendo Avenue	70.5	70.7	0.2	No
Between Berendo Avenue and Medical Center Drive	70.6	71.0	0.4	No
Between Medical Center Drive and Vermont Avenue	70.9	71.3	0.4	No
220th Street				
Between Western Avenue and Normandie Avenue	60.6	60.9	0.3	No
Between Normandie and Myler Street	62.7	63.2	0.5	No
Between Myler Street and Vermont Avenue	63.7	64.4	0.7	No
East of Figueroa Street	67.5	68.0	0.5	No
Figueroa Street				
South of 220th Street	69.3	69.4	0.1	No
223rd Street				
Between Western Avenue and Normandie Avenue	69.6	69.7	0.1	No
Between Normandie Avenue and Myler Street	69.8	69.9	0.1	No
Between Myler Street and Vermont Avenue	69.7	69.8	0.1	No
Between Vermont Avenue and I-110 SB Ramps	70.6	70.9	0.3	No
Between I-110 SB Ramps and Figueroa Street	70.5	70.7	0.2	No
Western Avenue				
Between Carson Street and 220th Street	70.5	70.5	0.0	No
Between 220th Street and 223rd Street	70.6	70.6	0.0	No
Between 223rd Street and Sepulveda Boulevard	70.7	70.7	0.0	No
Myler Street				
Between 220th Street and 223rd Street	60.6	61.2	0.6	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.0	69.2	0.2	No
Between Carson Street and 220th Street	68.8	69.1	0.3	No
Between 220th Street and 223rd Street	68.5	68.7	0.2	No
Budlong Avenue				
North of Carson Street	56.2	56.2	0.0	No
Berendo Avenue				
North of Carson Street	57.3	57.3	0.0	No

Table 4.I-13 (Continued)

Off-Site Traffic Noise Impacts – Project Build Out Conditions

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing [a] (A)	Existing with Project Build Out [b] (B)	Project Increment (B - A)	Exceed Threshold?
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.1	70.2	0.1	No
Between Carson Street and 220th Street	70.4	70.6	0.2	No
Between 220th Street and 223rd Street	70.0	70.3	0.3	No
Medical Center Drive				
North of Carson Street	56.1	56.1	0.0	No

[a] *Existing data is taken from Table 4.I-1.*

Source: ESA PCR, 2016.

Table 4.I-14

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Future Project Increment (B-A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	71.7	71.8	0.1	No
Between Normandie Avenue and Budlong Avenue	71.8	71.9	0.1	No
Between Budlong Avenue and Berendo Avenue	71.8	72.0	0.2	No
Between Berendo Avenue and Medical Center Drive	71.8	72.1	0.3	No
Between Medical Center Drive and Vermont Avenue	71.8	72.1	0.3	No
220th Street				
Between Western Avenue and Normandie Avenue	61.1	61.4	0.3	No
Between Normandie and Myler Street	63.2	63.6	0.4	No

Table 4.I-14 (Continued)

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)		Future Project Increment (B-A)	Exceed Threshold?
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)		
Between Myler Street and Vermont Avenue	64.2	64.8	0.6	No
East of Figueroa Street	68.1	68.6	0.5	No
Figueroa Street				
South of 220th Street	69.9	70.1	0.2	No
223rd Street				No
Between Western Avenue and Normandie Avenue	70.2	70.2	0.0	No
Between Normandie Avenue and Myler Street	70.4	70.5	0.1	No
Between Myler Street and Vermont Avenue	70.3	70.4	0.1	No
Between Vermont Avenue and I-110 SB Ramps	71.2	71.5	0.3	No
Between I-110 SB Ramps and Figueroa Street	71.1	71.3	0.2	No
Western Avenue				
Between Carson Street and 220th Street	71.0	71.1	0.1	No
Between 220th Street and 223rd Street	71.2	71.2	0.0	No
Between 223rd Street and Sepulveda Boulevard	71.3	71.3	0.0	No
Myler Street				
Between 220th Street and 223rd Street	61.1	61.6	0.5	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.5	69.7	0.2	No
Between Carson Street and 220th Street	69.4	69.6	0.2	No
Between 220th Street and 223rd Street	69.1	69.2	0.1	No

Table 4.I-14 (Continued)

Off-Site Traffic Noise Levels – Future 2030 Area-Wide Growth with Project

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Future No Project (2030 Area Wide Growth) (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Future Project Increment (B-A)	Exceed Threshold?
Budlong Avenue				
North of Carson Street	56.7	56.7	0.0	No
Berendo Avenue				
North of Carson Street	57.8	57.8	0.0	No
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.7	70.8	0.1	No
Between Carson Street and 220th Street	70.9	71.1	0.2	No
Between 220th Street and 223rd Street	70.6	70.8	0.2	No
Medical Center Drive				
North of Carson Street	56.6	56.6	0.0	No

[a] *Include future growth plus related (cumulative) projects and proposed project traffic.*

Source: ESA PCR, 2016.

discussed in the Helistop Relocation Noise Impact Study provided in Appendix H of this Draft EIR. Figure 4.I-5 shows the calculated CNEL noise contours generated by the helicopter operations at the Interim 1 Helistop location. As shown on Figure 4.I-5, the 65 CNEL noise contour would extend just beyond the southern property line of the Medical Center Campus.

Table 4.I-15, *Helicopter Noise Analysis – Interim 1 Helistop Locations,* summarizes the predicted noise levels in CNEL for helicopter operations at the Interim 1 Helistop location.

As shown in Table 4.I-15, the predicted CNEL levels due to the helicopter operations at the Interim 1 Helistop location ranged from 37.0 dBA CNEL at receptors R1 and R2 to 58.6 dBA CNEL at receptor R3. Compared with the current Helistop, these predicted CNEL levels for the Interim 1 Helistop would result in a higher CNEL level at receptors (R3 through R7). Also included in Table 4.I-15 are the ambient noise levels

Table 4.I-15

Helicopter Noise Analysis – Interim 1 Helistop Locations

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2470	70.5	47.6	70.5	37.0	70.5	0.0
R2	2040	65.6	50.0	65.7	37.0	65.6	-0.1
R3	260	64.3	41.3	64.3	58.6	65.3	1.0
R4	580	70.7	38.0	70.7	53.6	70.8	0.1
R5	700	53.1	35.8	53.2	47.1	54.1	0.9
R6	870	56.4	35.4	56.4	46.6	56.8	0.4
R7	1710	64.6	33.5	64.6	38.8	64.6	0.0

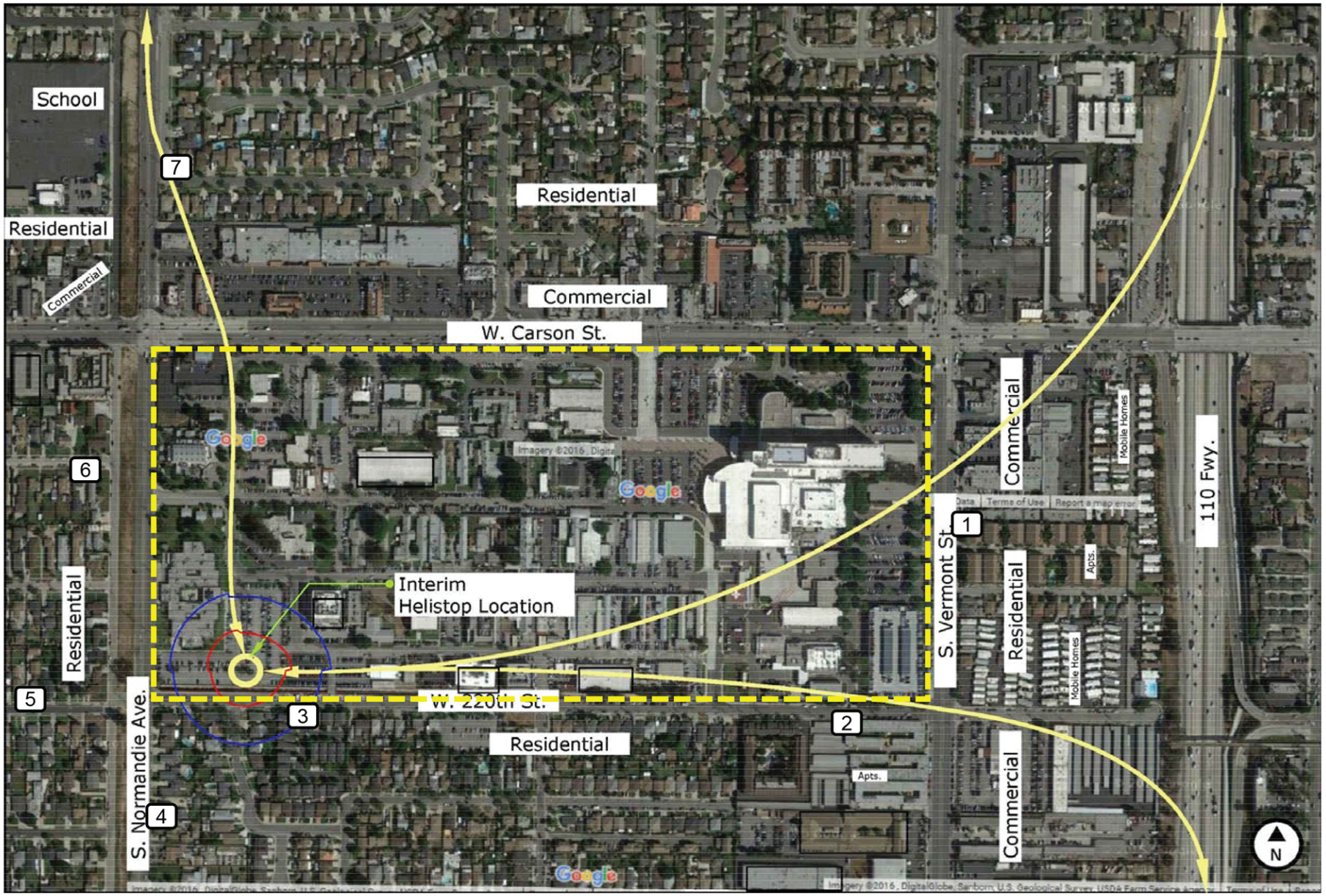
[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

with helicopter operations under both existing and future conditions at the Interim 1 Helistop location. As indicated in Table 4.I-15, future helicopter operations would result in a maximum increase of 0.1 dBA CNEL at receptor R4 to 1.0 dBA CNEL at receptor R3 (with no increase in helicopter noise levels at receptors R1, R2 and R7). The estimated increase would be below the Project's significance threshold of 1.5 dBA CNEL.

Table 4.I-16, *Helicopter Single-Event Noise Impacts – Interim 1 Helistop,* presents the predicted helicopter single-event noise levels at R1 through R7 under the existing and the Interim 1 Helistop location in SEL and L_{max}. SEL levels are provided for informational purposes only, as the County does not have criteria as relates to SEL levels. A single helicopter operational event would generate noise levels at receptors in the vicinity of the Helistop, which could result in awakening based on the 1997 FICAN study. However, helicopter nighttime operations would be minimal, approximately 1.8 events per month.

As indicated in Table 4.I-16, the predicted L_{max} due to the helicopter (i.e., Sikorsky S-70) operation at the Interim 1 Helistop location would result in an increase of 2.7 dBA L_{max} (at receptor R4) to 5.6 dBA L_{max} (at receptor R3), as compared with the existing conditions. The estimated L_{max} increase would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, the relocation of the existing Helistop to the Interim 1 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed on the rooftop of the New Hospital Tower.



PCR

Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-5



PCR

Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-6

Table 4.I-16

Helicopter Single-Event Noise Impacts – Interim 1 Helistop

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2470	Residential	100.8/85.4	92.1/81.4	-8.7/-4.0
R2	2040	Residential	102.9/86.5	90.6/81.2	-12.3/-5.3
R3	260	Residential	96.9/84.1	112.4/89.7	15.5/5.6
R4	580	Residential	94.2/82.7	107.0/85.4	12.8/2.7
R5	700	Residential	91.9/81.8	100.3/81.6	8.4/-0.2
R6	870	Residential	90.7/81.8	101.4/85.5	10.7/3.7
R7	1710	Residential/School	88.1/79.5	93.9/83.7	5.8/4.2

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

The calculated CNEL noise contours generated by helicopter operations at the proposed Interim 2 Helistop location are provided on Figure 4.I-6. As shown on Figure 4.I-6, the 65 CNEL noise contour would extend just beyond the southern property line of the Medical Center Campus.

Table 4.I-17, *Helicopter Noise Analysis – Interim 2 Helistop Locations*, presents the predicted helicopter noise levels in CNEL with the helicopter operations at the Interim 2 Helistop location.

As shown in Table 4.I-17, the predicted CNEL levels due to the helicopter operations at the Interim 2 Helistop location ranged from 35.6 dBA CNEL at receptor R7 to 63.7 dBA CNEL at receptor R3. Similar to the Interim 1 Helistop location, the predicted helicopter CNEL levels (from the Interim 2 Helistop location) would result in higher CNEL levels at receptors (R3 through R7). When considering the ambient noise levels with the helicopter operations under both existing and future conditions at the Interim 2 Helistop location, future helicopter operations would result in a maximum increase of 0.2 dBA CNEL at receptor R6 to 2.7 dBA CNEL at receptor R3 (with no increase in helicopter noise levels at receptors R1, R2, R4 and R7). The estimated increase of 2.7 dBA CNEL would exceed the Project's significance threshold increase of 1.5 dBA CNEL at receptor R3. Therefore, the impact would be significant, albeit temporary and periodic, lasting only until implementation of the future permanent Helistop on the New Hospital Tower rooftop.

Table 4.I-18, *Helicopter Single-Event Noise Impacts – Interim 2 Helistop,* presents the predicted helicopter single-event noise levels under the existing and the Interim 2 Helistop location.

As indicated in Table 4.I-18, the predicted L_{max} due to the helicopter operation at the Interim 2 Helistop location would result in an increase of 0.3 dBA L_{max} (at receptors R4 and R5) to 15.4 dBA L_{max} (at receptor R3, directly south of the Interim 2 Helistop), as compared to the existing conditions. The estimated L_{max} increase would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts

Table 4.I-17

Helicopter Noise Analysis – Interim 2 Helistop Locations

Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2250	70.5	47.6	70.5	38.0	70.5	0.0
R2	1820	65.6	50.0	65.7	38.3	65.6	-0.1
R3	130	64.3	41.3	64.3	63.7	67.0	2.7
R4	720	70.7	38.0	70.7	50.2	70.7	0.0
R5	930	53.1	35.8	53.2	45.3	53.8	0.6
R6	1030	56.4	35.4	56.4	43.3	56.6	0.2
R7	1765	64.6	33.5	64.6	35.6	64.6	0.0

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*

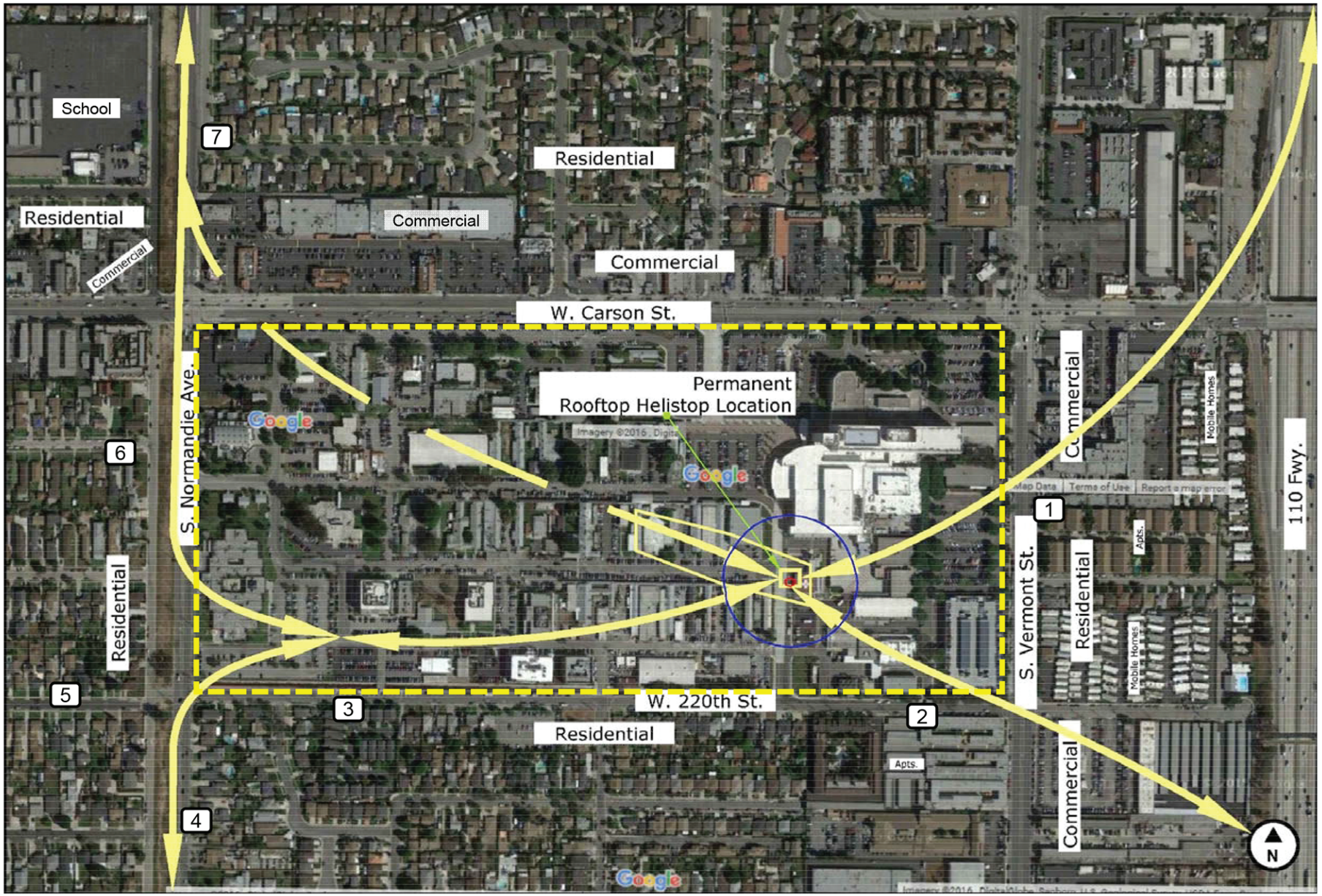
Source: Acoustical Engineering Services, Inc., 2016.

associated with the relocation to the existing Helistop to the Interim 2 Helistop location would result in a significant impact, which would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building. However, there are no feasible mitigation measures to reduce the increase at receptor R3 below the level of significance. Therefore, the impact would be significant and unavoidable; however, impacts would be temporary, lasting only until the implementation of the future permanent Helistop location.

The permanent Helistop would be located at the roof level of the future hospital building, approximately 133 feet above local grade. **Figure 4.I-7**, *Helistop Operation Noise Contour – Permanent Rooftop Helistop,* shows the helicopter flight paths with the future permanent helistop. The future helicopter operations (i.e., number of flights per day) are assumed to be similar to the existing conditions. The calculated CNEL noise contours generated by the future helicopter operations are illustrated on Figure 4.I-7. As shown on Figure 4.I-7, the 60 and 65 dBA CNEL noise contour falls within the medical campus.

Table 4.I-19, *Helicopter Noise Analysis – Permanent Rooftop Helistop,* presents the predicted helicopter noise levels in CNEL with the helicopter operations at the future permanent helistop location.

As shown in Table 4.I-19, the predicted CNEL levels due to the helicopter operations ranged from 35.1 dBA CNEL at receptor R7 to 49.8 dBA CNEL at receptor R2. Similar to the existing conditions, the future predicted helicopter noise levels in term of CNEL would be lower than that of the existing measured ambient noise levels (non-helicopter noise). Included in Table 4.I.19 are the ambient noise levels plus helicopter operations under both existing and future conditions. As indicated therein, the future helicopter operations would not



PCR

Helistop Operation Noise Contour – Permanent Rooftop Helistop

Harbor-UCLA Medical Center Master Plan

Source: Acoustical Engineering services, Inc., 2016.

FIGURE
4.I-7

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Table 4.I-18

Helicopter Single-Event Noise Impacts – Interim 2 Helistop

Location	Longitudinal Distance from Interim 2 Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2250	Residential	100.8/85.4	93.0/83.4	-7.8/-2.0
R2	1820	Residential	102.9/86.5	91.7/83.9	-11.2/-2.6
R3	130	Residential	96.9/84.1	117.7/99.5	20.8/15.4
R4	720	Residential	94.2/82.7	105.0/83.0	10.8/0.3
R5	930	Residential	91.9/81.8	101.2/82.1	9.3/0.3
R6	1030	Residential	90.7/81.8	96.0/79.2	5.3/-2.6
R7	1765	Residential/School	88.1/79.5	88.2/79.3	0.1/-0.2

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

result in an increase (in terms of CNEL), as compared to the existing conditions, and therefore, would be below the Project's significance threshold of 1.5 dBA CNEL.

Table 4.I-20, *Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop,* presents the predicted helicopter single-event noise levels under the existing and the future permanent location.

As indicated in Table 4.I-20, the predicted L_{max} due to the helicopter under the future conditions would result in a lower noise level, compared to existing conditions. As such, noise impacts associated with the proposed helicopter relocation to the future location (roof top of the future hospital building) would be less than significant.

Threshold NOISE-4: Would Project-related operational (i.e., non-roadway) noise sources such as building mechanical/electrical equipment or outdoor amenity spaces exceed ambient noise levels at noise sensitive uses, thus causing a violation of the County Noise Ordinance?

Impact Statement NOISE-4*: Project implementation would not increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. Therefore, impacts would be less than significant.*

(i) Fixed Mechanical Equipment

The operation of mechanical equipment such as air conditioners, fans, and related equipment may generate audible noise levels. These types of equipment would be used on the Medical Center Campus. Mechanical equipment would typically be located on rooftops or within buildings, shielded from nearby land uses to attenuate noise and avoid conflicts with adjacent uses. In addition, to ensure compliance with noise limitation requirements of the LACC shown in Table 4.I-7, PDF-NOISE-7 requires an acoustical analysis of the

Table 4.I-19

Helicopter Noise Analysis – Permanent Rooftop Helistop

		Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E-C"
Location	Longitudinal Distance from Interim 1 Helistop,[a] Feet	Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	850	70.5	47.6	70.5	47.4	70.5	0.0
R2	620	65.6	50.0	65.7	49.8	65.7	0.0
R3	1440	64.3	41.3	64.3	41.9	64.3	0.0
R4	2060	70.7	38.0	70.7	38.3	70.7	0.0
R5	2340	53.1	35.8	53.2	36.1	53.2	0.0
R6	2185	56.4	35.4	56.4	36.8	56.4	0.0
R7	2330	64.6	33.5	64.6	35.1	64.6	0.0

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the nearest edge of the permanent Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

mechanical plans of the proposed building so that all mechanical equipment would be designed with appropriate noise control devices, such as sound attenuators, acoustics louvers, or sound screen/ parapet walls. Therefore, operation of mechanical equipment would not exceed the Project thresholds of significance and impacts would be less than significant.

(ii) Loading Dock and Refuse Collection Areas

The Project would incorporate new Materials and Waste Management facilities including a loading dock. The new loading dock and Waste Management Center would be located at the back of the New Hospital Tower, with the new storeroom located on the lower level of the tower.

Loading dock and refuse service-related activities such as truck movements/idling and loading/unloading operations would generate noise levels that have a potential to adversely impact adjacent land uses during long-term Project operations. Based on measured noise levels, delivery trucks (at loading dock) and trash compactors (from refuse collection) would generate noise levels of approximately 71 dBA (L_{eq}) and 66 dBA (L_{eq}) at 50 feet distance, respectively.

The nearest noise-sensitive use, the single and multi-family residential uses on along 220th Street (R3), is approximately 200 feet south of the proposed loading dock and Waste Management Center. The Central Plat building would partially block the line-of-sight between the noise source and sound receptor locations. Based on a noise level source strength of 71 dBA at a reference distance of 50 feet, and accounting for barrier-insertion loss (minimum 5 dBA insertion loss), loading dock noise would be 54 dBA and would not

Table 4.I-20

Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop

Location	Longitudinal Distance from Permanent Rooftop Helistop,[a] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, Permanent Conditions, L_{max} (dBA)
			Existing Helistop	Permanent Rooftop Helistop	
R1	850	Residential	100.8/85.4	101.0/83.8	0.2/-1.6
R2	620	Residential	102.9/86.5	103.0/84.2	0.1/-2.3
R3	1440	Residential	96.9/84.1	97.4/82.9	0.5/-1.2
R4	2060	Residential	94.2/82.7	94.3/81.5	0.1/-1.2
R5	2340	Residential	91.9/81.8	90.5/80.8	-1.4/-1.0
R6	2185	Residential	90.7/81.8	93.3/80.8	2.6/-1.0
R7	2330	Residential/School	88.1/79.5	89.0/79.0	0.9/-0.5

[a] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the permanent Helistop to the sidewalk adjoining the receptor locations.*

Source: Acoustical Engineering Services, Inc., 2016.

exceed the significance threshold of the ambient noise level of 66 dBA at the receptor locations, R3. As such, impacts to surrounding uses would be less than significant.

(iii) Composite Noise Level Impacts from Proposed Project Operations

Primary noise sources associated with the proposed Project would include traffic on nearby roadways, on-site mechanical equipment, on-site loading dock/waste management center, and parking areas. An evaluation of noise from all the Project's noise sources (i.e., composite noise level) was conducted to conservatively ascertain the potential maximum Project-related noise level increase that may occur at the noise-sensitive receptor locations included in this analysis. The overall sound environment at the areas surrounding the project is comprised of contributions from each individual noise source associated with the typical daily operation of the Project.

Based on a review of the noise-sensitive receptors and the project noise sources, the only noise-sensitive location wherein composite noise impacts could occur is single- and multi-family residences (R3). Due to a combination of distance and the presence of intervening structures that would serve as noise barriers, the predominant Project noise source that could potentially affect the other noise-sensitive locations is roadway noise.

Based on the traffic noise analysis above, Project -generated traffic is expected to increase the traffic-related noise by a maximum of 0.7 dBA (CNEL) along 220th Street, between Myler Street and Vermont Avenue, which is represented by the receptor R3. Noise associated with activities in parking structures and at the loading docks and refuse collection transference would increase the overall ambient noise levels by 0.3 dBA at the receptor location R3. Mechanical related noise is expected to be the maximum 50 dBA as shown in Table 4.I-7, which would not increase the ambient noise level of 66 dBA at R3 since, according to industry engineering

references, a 16 dB difference between two noise sources results in an increase of 0.1 dBA to the composite noise level of the two sources.[13] Overall, relative to the existing noise environment, the Project is estimated to increase the ambient noise level at the nearest noise-sensitive receptor R3, but by a less than the threshold of significance of 5 dBA. Composite noise level increases at all other receptor locations are expected to be less than significant as well, given their distance from the Medical Center Campus and the presence of intervening structures. As such, the composite noise level impact due to the proposed Project's future operations would be less than significant.

Threshold NOISE-5 Would the maximum noise (L_{max}) generated from the operation of the parking structure (e.g., car alarms) exceed the average (L_{eq}) ambient noise level by 10 dBA?

Impact Statement NOISE-5: *Project implementation, including noise from the parking structure, would increase noise levels at adjacent noise-sensitive receptors in the Project vicinity. However, Project-related noise generation would not exceed established thresholds and therefore impacts would be less than significant.*

Currently, large parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots located throughout the Medical Center Campus interior. Parking is also allowed on one or both sides of most internal roadways. Nonetheless incidental on-street parking also occurs in areas not officially designated as parking areas, as shown in Figure 2-5.

With implementation of the Master Plan Project, parking structures would be built. The new parking structures would be located in the southeastern corner of the Harbor-UCLA Medical Center Campus, north of New Hospital Tower, the east end of the Medical Center Campus, and immediately north of the proposed new Central Plan. These proposed new/modified parking structures and lots would not bring parking areas into closer proximity to nearby residential uses. Because the distance between the parking areas and the nearest residential uses would generally be unchanged from current conditions, the parking lot related noise impacts at the offsite receptors would be consistent with the existing ambient noise levels and would not exceed the significance threshold of the average ambient noise level by 10 dBA. As such, impacts would be less than significant.

(3) Vibration

Threshold NOISE 6: Would Project construction activities cause ground-borne vibration levels to exceed the applicable building damage threshold of 0.5 inch-per-second PPV at the nearest residential buildings?

Impact Statement NOISE-6: *Construction activities would result in sporadic, temporary vibration effects adjacent to the Project area. However, ground-borne vibration levels would not exceed established thresholds. Thus, construction vibration impacts would be less than significant and no mitigation measures are required.*

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. The operation of construction equipment generates

[13] *Engineering Noise Control, Bies & Hansen, 1988.*

vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. Impacts from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibration from construction activities rarely reach levels that damage structures. The FTA has published standard vibration velocities for construction equipment operations. The PPV for construction equipment pieces anticipated to be used during Project construction are listed in **Table 4.I-21**, *Typical Vibration Velocities for Potential Project Construction Equipment.*

Table 4.I-21

Typical Vibration Velocities for the Project Construction Equipment

Equipment	Reference Vibration Velocity Levels at 25 ft, inch/second PPV[a,b]	Vibration Velocity Levels at 55 ft, inch/second PPV[a,b]
Large bulldozer	0.089	0.027
Loaded trucks	0.076	0.023

[a] *PPV=Peak particle velocity.*
[b] *FTA's "Transit Noise and Vibration Impact Assessment", Table 12-2.*

Source: USDOT Federal Transit Administration, 2005.

The construction of the Project would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Based on the vibration data provided in Table 4.I-21, vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. As shown previously in Table 4.I-12, the nearest off-site residential structures are the single- and multi-family residential buildings, R3, located approximately 55 feet south of the construction site during Phase 5.

As shown in Table 4.I-21, the maximum vibration velocities to which receptors could be exposed ranges from 0.01 to 0.027 inches per second PPV. As this value is considerably lower than the 0.5 inches per second PPV significance threshold regarding potential building damage for older residential buildings, vibration impacts associated with construction would be less than significant at the nearest residential building.

Due to the sensitivity of on-site receptors, the potential for noise to affect on-site receptors is presented in this Draft EIR. On-site hospital uses, such as surgical suites, are vibration-sensitive. At various times throughout the construction of the Master Plan, use of heavy duty construction equipment could be as close as 100 feet to occupied on-site operating rooms. The vibration velocity of a large bulldozer generates 0.89 inches per second PPV at 25 feet from the equipment. If a large bulldozer operates within 125 feet of an operating room, the operating room would be exposed to vibration levels of 0.008 inches per second PPV (the level established for the protection of operating rooms and other uses with sensitive equipment and systems). With implementation of PDF Noise-6, which would ensure appropriate site-specific studies are

conducted and additional noise reduction practices implemented as necessary, impacts would be less than significant even when construction is planned within 125 feet of on-site vibration-sensitive uses.

Threshold NOISE-7: Would Project construction and operational activities cause ground-borne vibration levels to exceed 0.04 inch per second PPV at nearby residential uses?

Impact Statement NOISE-7*: Project implementation would not generate excessive vibration levels to nearby sensitive receptors. Thus, construction and long-term vibration impacts would be less than significant and no mitigation measures are required.*

As discussed above, the nearest residential uses, R3 would be exposed to maximum vibration velocities during construction of approximately 0.027 inches per second PPV. As this value is lower than the 0.04 inches per second PPV significance threshold for human perception, vibration impacts associated with construction would be less than significant at the nearest residential building.

Operation of the Project would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration generated by each of the above-mentioned activities would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the closest off-site buildings would be up to 0.01 inches per second PPV[14] and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, vibration impacts associated with operation of the Project would be below the significance threshold and impacts would be less than significant.

e. Cumulative Impacts

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. Noise is by definition a localized phenomenon, and significantly reduces in magnitude as the distance from the source increases. As such, only projects and growth due to occur in the immediate project area would be likely to contribute to cumulative noise impacts.

As discussed in Section 3.0, General Description of Environmental Setting, of this EIR, there are 26 related projects in the surrounding areas. The closet related projects situated approximately 1,300 feet from the Medical Center Campus, including Related Project No. 2 – 1028 W 223rd Street, Condos. All other related projects are 2,600 feet or more from the proposed Project.

(1) Construction Noise

Noise from construction of the proposed Project and related projects would be localized, thereby potentially affecting areas within 500 feet from each of the construction sites. Due to distance attenuation of projects more than 1,000 feet from each other and intervening structures, construction noise from one site would not result in a noticeable increase in noise at sensitive receptors near the other site, which would preclude a

[14] *Transportation Related Earthborne Vibrations, California Department of Transportation, February 2002.*

cumulative noise impact. As such, cumulative impacts associated with construction noise would be less than significant.

(2) Operation

Cumulative operational noise impacts would occur primarily as a result of increased traffic on local roadways due to the Project and other projects within the Medical Center Campus. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of the Project to the future cumulative base traffic volumes in the project vicinity. The noise levels associated with cumulative base traffic volumes without the project, and cumulative base traffic volumes with the project are identified in **Table 4.I-22**, *Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth*. Noise level increases in the Project area would reach a maximum of 1.5 dBA CNEL along Carson Street, between Budlong Avenue and Medical Center Drive, which would not exceed the Project's 3 dBA significance threshold. As such, roadway noise impacts due to cumulative traffic volumes would be less than significant.

Table 4.I-22

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
Carson Street				
Between Western Avenue and Normandie Avenue	70.6	71.8	1.2	No
Between Normandie Avenue and Budlong Avenue	70.6	71.9	1.3	No
Between Budlong Avenue and Berendo Avenue	70.5	72.0	1.5	No
Between Berendo Avenue and Medical Center Drive	70.6	72.1	1.5	No
Between Medical Center Drive and Vermont Avenue	70.9	72.1	1.2	No
220th Street				
Between Western Avenue and Normandie Avenue	60.6	61.4	0.8	No
Between Normandie and Myler Street	62.7	63.6	0.9	No
Between Myler Street and Vermont Avenue	63.7	64.8	1.1	No
East of Figueroa Street	67.5	68.6	1.1	No
Figueroa Street				
South of 220th Street	69.3	70.1	0.8	No

Table 4.I-22 (Continued)

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
223rd Street				No
Between Western Avenue and Normandie Avenue	69.6	70.2	0.6	No
Between Normandie Avenue and Myler Street	69.8	70.5	0.7	No
Between Myler Street and Vermont Avenue	69.7	70.4	0.7	No
Between Vermont Avenue and I-110 SB Ramps	70.6	71.5	0.9	No
Between I-110 SB Ramps and Figueroa Street	70.5	71.3	0.8	No
Western Avenue				
Between Carson Street and 220th Street	70.5	71.1	0.6	No
Between 220th Street and 223rd Street	70.6	71.2	0.6	No
Between 223rd Street and Sepulveda Boulevard	70.7	71.3	0.6	No
Myler Street				
Between 220th Street and 223rd Street	60.6	61.6	1.0	No
Normandie Avenue				
Between Torrance Boulevard and Carson Street	69.0	69.7	0.7	No
Between Carson Street and 220th Street	68.8	69.6	0.8	No
Between 220th Street and 223rd Street	68.5	69.2	0.7	No
Budlong Avenue				
North of Carson Street	56.2	56.7	0.5	No

Table 4.I-22 (Continued)

Off-Site Traffic Noise Levels – Future 2030 with Area-Wide Growth

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA)			
	Existing (A)	Future with Project (2030 Area Wide Growth)[a] (B)	Cumulative Increment (B-A)	Exceed Threshold?
Berendo Avenue				
North of Carson Street	57.3	57.8	0.5	No
Vermont Avenue				
Between Torrance Boulevard and Carson Street	70.1	70.8	0.7	No
Between Carson Street and 220th Street	70.4	71.1	0.7	No
Between 220th Street and 223rd Street	70.0	70.8	0.8	No
Medical Center Drive				
North of Carson Street	56.1	56.6	0.5	No

[a] *Include future growth plus related (cumulative) projects and proposed project traffic.*

Source: ESA PCR, 2016.

LACC provisions that limit stationary-source noise from items such as roof-top mechanical equipment, noise levels would be less than significant at the property line for each related project. For this reason, on-site noise produced by any related project would not be additive to project-related noise levels. As the project's composite stationary-source impacts would be less than significant, composite stationary-source noise impacts attributable to cumulative development would also be less than significant.

(3) Ground-Borne Vibration

Due to the rapid attenuation characteristics of ground-borne vibration and distance of the related projects to the Project, there is no potential for a cumulative construction- or operational-period impact with respect to ground-borne vibration.

(4) Helicopter Noise

In addition to cumulative operational noise impacts from increased vehicle traffic (discussed under (b) above), potential cumulative operational noise impacts could occur as a result of increased air traffic in the local air space due to the Project and other air traffic in proximity to the Medical Center Campus. However,

there are no facilities similar to the project (i.e., with helicopter traffic) proposed in proximity to the Medical Center Campus. As such, noise impacts due to cumulative helicopter air traffic would be less than significant.

4. MITIGATION MEASURES

The following mitigation measures address the potential significant noise impacts from the proposed Project.

a. Construction Noise and Vibration

Construction-related activities on the Medical Center Campus have the potential to result in significant impacts at nearby sensitive receptors. Thus, the following mitigation measures are required to minimize construction-related noise and vibration impacts:

(1) Noise **Mitigation Measure NOISE-1:** Temporary noise barriers shall be used to block the line-of-site between the construction equipment and noise-sensitive receptors during project construction, as follows:

- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the southern boundary of the Project construction site to reduce construction noise at the single- and multi-family residential uses across 220th Street during Phase C, Phase 2, Phase 3, Phase 5, Phase 6, and Phase LA Biomed.
- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundaries of the Project construction site to reduce construction noise at the multi-family residential uses across Carson Street during Phase 4.
- Provide a temporary 15-foot tall noise barrier capable of achieving a 15 dB reduction along the northern boundary of the Project construction site to reduce construction noise at the single-family residential uses across Vermont Avenue during Phase 2, Phase 4, and Phase 5.

(2) Vibration

No mitigation measures are necessary.

b. Operational Noise and Vibration

(1) Noise

No mitigation measures are necessary.

(2) Vibration

No mitigation measures are necessary.

(3) Helicopter

The noise impacts associated with the proposed interim helistops would result in a significant temporary and periodic impact. No mitigation measures are feasible to reduce the temporary and periodic helicopter

noise associated with operation of the interim helistops. The proposed permanent helistop that would be located on the roof top of the proposed future hospital building would result in a less than significant permanent impact. Therefore, once the permanent helistop is operational, the significant temporary and periodic impact associated with the interim helistop would no longer occur.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

The temporary sound barriers prescribed in Mitigation Measure NOISE-1 can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. Therefore, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4. However, even with implementation of the mitigation measure, construction-related noise could reach up to approximately 85 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this will exceed the significance threshold of 60 dBA, construction noise impacts would be significant and unavoidable at the single- and multi-family residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.b. Operation

Temporary helicopter operations associated with use of the Interim 1 Helistop and Interim 2 Helistop would result in significant and unavoidable, albeit temporary and periodic, impacts at receptor R3. There are no feasible mitigation measures to reduce the noise increases caused by the use of these interim helistops below the level of significance at receptor R3. Therefore, the impacts of temporary use of the Interim 1 Helistop and Interim 2 Helistop would be significant and unavoidable. However, impacts would last only until completion of the permanent Helistop location on the rooftop of the proposed New Hospital Tower. Noise impacts associated with use of the permanent Helistop would be less than significant.

Operation of the Project would result in less than significant traffic-related noise and vibration impacts on off-site noise sensitive receptors and no mitigation is required.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS
J. POPULATION, HOUSING, AND EMPLOYMENT

1. INTRODUCTION

This section analyzes the potential effects of the Project's contribution to population, housing, and employment growth within the County of Los Angeles and the County's South Bay Planning Area**.** Project effects on demographic characteristics are compared to adopted and advisory growth forecasts and relevant policies and programs regarding planning for future development. The information in this section is based primarily on the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) and any associated documents. Related information regarding the effects of the new development on the relationship between land uses and resulting land use patterns is further addressed in Section 4.H., *Land Use and Planning*. Potential growth-inducing impacts of the Project are further addressed in Section 6.0, *Other CEQA Considerations*.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) On-Site Conditions

The 72-acre Harbor-UCLA Campus is located in the unincorporated Los Angeles County community of West Carson. The Medical Center Campus is generally flat and developed with 1,279,284 square feet of floor area, including the Harbor-UCLA Medical Center and multiple medical and research tenants. Harbor-UCLA Medical Center is licensed for 453 inpatient beds and houses more than 70 primary and secondary care clinics and plays a critical role in meeting the healthcare needs of more than 700,000 residents of the greater South Bay region. There are currently approximately 340,000 patient visits to the Campus annually, including admittances and discharges, diagnostics and treatment, and patient exam visits. Total existing employment at the Medical Center Campus, including the Hospital and both major and minor tenants is approximately 5,464 employees. Existing building heights range from one to eight floors, with the Existing Hospital Tower in the northeast portion of the Medical Center Campus representing the tallest building at eight floors. See Figure 2-3, Existing Campus Buildings, in Chapter 2.0, *Project Description*, of this Draft EIR for an illustration of the layout of the existing buildings, parking areas, and internal streets at the Medical Center Campus.

(2) County of Los Angeles 2014 Population and Housing Estimates

The Medical Center Campus is located within unincorporated Los Angeles County, and Project impacts within the Unincorporated County and County-wide levels are considered in this analysis. Population and housing data is shown in **Table 4.J-1**, *Population and Housing Summary (2014),* which is based on information and data from SCAG's 2016 RTP/SCS and associated documents. As indicated in Table 4.J-1, the 2014 population for the South Bay Cities Subregion was 867,885 people residing in 304,945 household units. The 2014 population for the Unincorporated County population was 1,046,557 people residing in 293,427 household units. The 2014 population for the Los Angeles County was 10,041,797 people residing in 3,268,347 household units. The average household size is 2.8 persons for the South Bay Cities Subregion, 3.5 persons in the Unincorporated County areas, and 3.0 persons in the Los Angeles County.

Table 4.J-1

Population and Housing Summary (2014)

	Population	Housing Units	Average Household Size
South Bay Cities Subregion[a]	867,885	304,945	2.8
Unincorporated County of Los Angeles	1,046,557	293,427	3.5
Los Angeles County	10,041,797	3,268,347	3.0

[a] *For the purposes of this analysis and comparison, we will include analysis based on the South Bay Cities Council of Governments (SBCCOG), which is one of 15 subregions that serve as a conduit between SCAG and the cities and counties of the region. Input from the subregions help shape the SCAG policies and RTP/SCS even though the subregions are not represented specifically in the 2016 RTP/SCS. The data used for the South Bay Cities Subregion is interpolated from the 2012 and 2020 estimations in the 2016 RTP/SCS Draft Growth Forecast for South Bay Cities Council of Governments, available at http://hermosabeach.granicus.com/MetaViewer.php?view_id=6&clip_id=3027&meta_id=148821.*

Source: Data for the Unincorporated County of Los Angeles and Los Angeles County are taken from the SCAG Profile of the Unincorporated Area of Los Angeles County (May 2015). Available at http://www.scag.ca.gov/documents/unincarealosangelescounty.pdf.

(3) Projected Population, Housing and Employment Estimates

The SCAG 2016 RTP/SCS is based on growth projections for population, households, and employment prepared for regional, county, and local jurisdictional areas and transportation analysis zones (TAZs). The 2016 RTP/SCS reports demographic data for 2012, 2020, 2035, and 2040.[1] The 2016 RTP/SCS forecasts represent the likely growth scenario for the Southern California region in the future, taking into account recent and past trends, reasonable key technical assumptions, and local or regional growth policies. An estimate of the 2016 baseline population, growth projections for Project buildout in 2030, and the SCAG 2040 Horizon Year, are shown in **Table 4.J-2**, *Projected Population, Housing and Employment Estimates*, and discussed below.[2]

(a) Population

As indicated in Table 4.J-2, the South Bay Cities Subregion population is expected to increase by 48,893 people or 5.6 percent by the time of Project buildout in 2030. Population within the Unincorporated Los Angeles County communities is expected to grow by 120,030 people or 11.2 percent during that same period. The total population of the County, including both incorporated and Unincorporated Los Angeles County communities, is expected to increase by 834,240 people, or 8.2 percent also during that same period.

By 2040, the Horizon year of the SCAG projections, the population is expected to increase in the South Bay Cities Subregion by 81,489 people, or 9.3 percent. Population within the Unincorporated Los Angeles County communities is expected to grow by 200,050 people or 18.6% percent during that same period. The total

[1] *SCAG provides City and County population, housing, and employment estimates for 2012, 2020, 2035 and 2040 in the 2016 RTP/SCS Demographics & Growth Forecast. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed June 2016. Data specifically for the South Bay Cities Subregion is taken from http://hermosabeach.granicus.com/MetaViewer.php?view_id=6&clip_id=3027&meta_id=148821.*

[2] *The 2016 baseline estimate was determined by interpolating from data presented in the SCAG projections.*

Table 4.J-2

Projected Population, Housing and Employment Estimates

	2016 Baseline	Projected Buildout Year – 2030			SCAG 2040 Horizon Year		
		Projected	Total Growth	Percentage Increase	Projected	Total Growth	Percentage Increase
Population							
South Bay Cities Subregion	873,308	922,201	48,893	5.6%	954,797	81,489	9.3%
Unincorporated Los Angeles County	1,073,650	1,193,680	120,030	11.2%	1,273,700	200,050	18.6%
Total Los Angeles County	10,124,400	10,958,640	834,240	8.2%	11,514,800	1,390,400	13.7%
Housing							
South Bay Cities Subregion	308,206	327,311	19,105	6.2%	340,047	31,841	10.3%
Unincorporated Los Angeles County	312,700	360,520	47,820	15.3%	392,400	79,700	25.5%
Total Los Angeles County	3,375,650	3,718,220	342,570	10.1%	3,946,600	570,950	16.9%
Employment							
South Bay Cities Subregion	393,525	421,691	28,166	7.2%	440,469	46,944	11.9%
Unincorporated Los Angeles County	230,200	265,120	34,920	15.2%	288,400	58,200	25.3%
Total Los Angeles County	4,454,550	4,917,300	462,750	10.4%	5,225,800	771,250	17.3%

Source: Based on SCAG data prepared for the 2016 – 2040 RTP/SCS. Estimates for years presented in the table are based on interpolation of data presented in the RTP/SCS for 2012, 2020 and 2040. Compiled by PCR Services Corporation, 2016.

population of Los Angeles County is expected to increase by 1,390,400 people, or 13.7 percent also during that same period.

(b) Housing

As indicated in Table 4.J-2, the number of households/occupied housing units is expected to increase in the South Bay Cities Subregion by 19,105 units or 6.2 percent by the time of Project buildout in 2030. The number of households within the Unincorporated Los Angeles County communities is expected to grow by 47,820 units or 15.3 percent by the time of Project buildout in 2030. The total number of households in the County, including both incorporated and Unincorporated Los Angeles County communities, is expected to increase by 342,570 units, or 10.1 percent also during that same period.

By 2040, the number of households in the South Bay Cities Subregion is expected to increase by 31,841 units or 10.3 percent. The number of households within the Unincorporated Los Angeles County communities is expected to grow by 79,700 units or 25.5 percent during that same period. The total number of households in Los Angeles County is expected to increase by 570,950 units, or 16.9 percent also during that same period.

(c) Employment

As shown in Table 4.J-2, the number of workers in the South Bay Cities Subregion is expected to increase by 28,166 workers or 7.2 percent by the time of Project buildout in 2030. The number of workers within the Unincorporated Los Angeles County communities is expected to grow by 34,920 employees or 15.2 percent during that same period. The total number of workers in Los Angeles County is expected to increase by 462,750 people, or 10.4 percent also during that same period.

By 2040, the number of workers in the South Bay Cities Subregion is expected to increase by 46,944 workers or 11.9 percent. The number of workers within the Unincorporated Los Angeles County communities is expected to grow by 58,200 workers, an increase of 25.3 percent during that same period. The total number of workers in Los Angeles County is expected to increase by 771,250 people, or 17.3 percent also during that same period.

b. Regulatory Framework Summary

No federal or state regulations are applicable to population and housing impacts resulting from the Project. Below is a summary of the applicable regional and local regulatory requirements.

(1) Regional

The Project is located within the jurisdiction of SCAG, a Joint Powers Agency established under California Government Code Section 6502 et seq. Pursuant to federal and State law, SCAG serves as a Council of Governments, a Regional Transportation Planning Agency, and the Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties. SCAG's mandated responsibilities include developing plans and policies with respect to the region's population growth, transportation programs, air quality, housing, and economic development. Specifically, SCAG is responsible for preparing the Regional Comprehensive Plan (RCP), the RTP/SCS, and Regional Housing Needs Assessment (RHNA), in coordination with other State and local agencies. These documents include population, employment, and housing projections for the region and its 13 subregions. The Medical Center Campus is located within the South Bay Cities Subregion.

(a) Regional Comprehensive Plan

As part of its planning obligations, SCAG prepares the RCP, most recently updated in 2008. The RCP does not itself include population projections, but serves as a policy guide upon which population projections are prepared in updates to the RTP. The 2008 RCP is an advisory document that may be voluntarily used by local jurisdictions when developing local plans and addressing local issues of regional significance. It addresses issues related to future growth and provides a means for assessing the potential impact of individual development projects within a regional context. Local governments are asked to consider the RCP's recommendations in the preparation of General Plan updates, municipal code amendments, design guidelines, incentive programs and other actions.

(b) Regional Transportation Plan/Sustainable Communities Strategy

In April 2016, SCAG adopted the 2016 RTP/SCS. The 2016 RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. As previously discussed, the RTP/SCS also contains baseline socioeconomic projections that are the basis for SCAG's transportation planning, and the provision of

services by other regional agencies. It includes projections of population, households, and employment at the regional, county, and local jurisdictional levels, and TAZs that provide small area data for transportation modeling.[3] The Project area is also located within a SCAG-identified high-quality transit area (HQTA). A high-quality transit area is generally a walkable transit village or corridor, consistent with the adopted 2016 RTP/SCS, that has a minimum density of 20 dwelling units per acre and is within a ½-mile of a well-serviced transit stop with 15-minute or less service frequency.

The RTP/SCS identifies the amount of expected growth in the region and provides the expected distribution of that growth. The distribution reflects goals cited in the 2016 RTP/SCS. These goals seek to align the plan investments and policies with improving regional economic development and competitiveness; maximizing mobility and accessibility; ensuring travel safety and reliability for all people and goods in the region; preserving and ensuring a sustainable regional transportation system; maximizing productivity of the transportation system; protecting the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking); actively encouraging and creating incentives for energy efficiency, where possible; encouraging land use and growth patterns that facilitate transit and non-motorized transportation; and maximizing the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.

(c) Regional Housing Needs Assessment

SCAG prepares the RHNA as mandated by State law as part of the periodic updating of the Housing Elements of General Plans by local jurisdictions. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate income groups. The most recent RHNA allocation, the "5th Cycle RHNA Allocation Plan", was adopted by the Regional Council on October 4, 2012. This allocation identifies housing needs for the planning period between October 2013 and October 2021. Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation.

(2) Local

(a) County of Los Angeles 2035 General Plan Update

California law requires that every city and county prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. The County of Los Angeles 2035 General Plan Update was approved and adopted by the Board October 6, 2015. The General Plan Update serves as a document to provide decision-makers with a policy framework to guide specific, incremental decisions, and establishes the long range vision for how and where Unincorporated Los Angeles County areas will achieve the Plan's stated goals and objectives, which focus on fostering healthy, livable, and sustainable communities. The following five guiding principles work to emphasize the concept of sustainability throughout the General Plan:

[3] *SCAG provides City and County population, housing, and employment estimates for 2012, 2020, 2035 and 2040 in the 2016 RTP/SCS Demographics & Growth Forecast. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed June 2016.*

1. Employ Smart Growth: Shape new communities to align housing with jobs and services; and protect and conserve the County's natural and cultural resources, including the character of rural communities.

2. Ensure community services and infrastructure are sufficient to accommodate growth: Coordinate an equitable sharing of public and private costs associated with providing appropriate community services and infrastructure to meet growth needs.

3. Provide the foundation for a strong and diverse economy: Protect areas that generate employment and promote programs that support a stable and well educated workforce. This will provide a foundation for a jobs-housing balance and a vital and competitive economy in the unincorporated areas.

4. Promote excellence in environmental resource management: Carefully manage the County's natural resources, such as air, water, wildlife habitats, mineral resources, agricultural land, forests, and open space in an integrated way that is both feasible and sustainable.

5. Provide healthy, livable and equitable communities: Design communities that incorporate their cultural and historic surroundings, are not overburdened by nuisance and negative environmental factors, and provide reasonable access to food systems. These factors have a measureable effect on public well-being.

(i) General Plan Update Elements

The General Plan Update contains nine elements, including Land Use, Mobility, Air Quality, Conservation and Natural Resources, Parks and Recreation, Noise, Safety, Public Services and Facilities, and Economic Development. The General Plan Update is the foundational document for all community-based plans that serve the County's unincorporated areas. The Medical Center Campus is located in the County's South Bay Planning Area, one of 11 Planning Areas which make up the County, but is not located within an adopted County Specific Plan area.

The Medical Center Campus is designated for "P" (Public and Semi-Public) land use by the General Plan Update which permits a broad range of public and semi-public uses, including but not limited to hospitals, universities/colleges, offices, medical clinics, and medical research/laboratories, at a maximum FAR of 3:1.[4] Also, the eastern two-thirds of the Medical Center Campus is designated as a Transit Overlay District (TOD) by the General Plan Update due to its proximity to the Metro Transit Station (Silver Line) (approximately 0.10 miles to the east), which has associated with it development and design standards and incentives to facilitate transit-oriented development.[5]

(ii) General Plan Update Economic Development Element

The Economic Development Element outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of Los Angeles County. The overall performance of the

[4] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

[5] *Ibid, p.72.*

economy and economic development efforts strongly impact land use and development patterns. It also identifies target industries, or industry clusters, which have the most potential to contribute to a broad-based, stable, and expanding economy for Los Angeles County. Health sciences and biomedical research represent a growing industry that provides high-paying jobs. Los Angeles County cannot capitalize on this sector without addressing the lack of high-tech industrial or office space.

Policy ED 1.4 seeks to encourage the expansion and retention of targeted industries and other growth economic sectors, such as the entertainment industry, aerospace industry, agriculture, transportation and logistics, healthcare, biomedical/biotechnology, hospitality and tourism.

(b) General Plan Housing Element

The Housing Element of the General Plan was prepared pursuant to State law and adopted on April 30, 2014, prior to the General Plan Update. The Housing Element is one of the seven required elements of the Los Angeles County General Plan. The Housing Element serves as a policy guide to address the comprehensive housing needs of Unincorporated Los Angeles County areas. The primary focus of the Housing Element is to ensure decent, safe, sanitary, and affordable housing for current and future residents of the unincorporated areas, including those with special needs. The Housing Element does the following:

- Determines the existing and projected housing needs of the unincorporated areas.
- Establishes goals, policies, and implementation programs that guide decision-making on housing needs.
- Implements actions that encourage the private sector to build housing, and ensure that government policies do not serve as unnecessary constraints to housing production.[6]

Although the County General Plan Housing Element contains a number of goals, policies and objectives related to housing development within unincorporated County areas, they are not directly relevant to the proposed Master Plan Project, as no new housing is being proposed as a part of the Project. However, the Housing Element establishes quantifiable objectives regarding the number of new housing units it anticipates being constructed, in order to accommodate its fair share of the regional housing need and fulfill its allocation under the RHNA. The Housing Element's objective for new housing in unincorporated County areas during the 2014 to 2021 planning is 30,145, units, of which 12,581 units would be for above moderate income units, 5,060 units would be for moderate-income families, 4,650 new units would be for low-income, 7,854 would be for very and extremely low-income families.[7]

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of Population, Housing and Employment impacts compares the Master Plan Project's contribution to population, housing, and employment growth to the South Bay Planning Area, unincorporated County and Countywide projections and policies regarding future development. The

[6] *County of Los Angeles, Los Angeles County Housing Element, 2014-2021. Adopted April 30, 2014.*

[7] *Ibid, at page 8.*

analysis evaluates whether the Project's employment creation are consistent with those projections and related policies.

b. Thresholds of Significance

The potential for populations and housing impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State CEQA Guidelines. These questions are as follows:

XIV. Population and Housing. Would the project:

a) Induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Initial Study determined that the Project would have less than significant impacts with respect to Checklist questions XIV.b) and c. Accordingly, these environmental topics are not evaluated in this EIR.

In consideration of the above factors, the Project would result in potentially significant impacts on population and housing if it would:

PH-1 Induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

c. Project Characteristics or Design Features

(1) Project Characteristics

The Harbor-UCLA Medical Center Master Plan Project would include construction of a new Hospital tower (New Hospital Tower) to meet increasing state law seismic requirements for acute care facilities as mandated by SB 1953, renovation of the existing Hospital building (Existing Hospital Tower) to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. Implementation of the Master Plan Project is expected to meet short-term needs of the Hospital, associated facilities, and other tenants of the Campus, as well as long-term needs beyond 2030. It is anticipated that implementation of the Project would occur in approximately eight phases, with construction commencing in 2017 and anticipated to be completed by 2030. Under the Master Plan Project, the number of Campus-wide employees would increase by 2,030 employees, from approximately 5,464 to approximately 7,494. With new employee positions at the Medical Center Campus, the Project would generate a new indirect residential population in the South Bay Cities Subregion.

(2) Project Design Features

No specific Project Design Features (PDFs) regarding population and housing impacts are proposed by the Project.

d. Project Impacts

Threshold PH-1 Would the project induce substantial population growth in an area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Statement PH-1: *Given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not have a notable impact on the demand for housing, nor affect general housing occupancy and population patterns. Thus, construction activities would not cause growth (i.e. new housing or employment generators) or accelerate development that exceeds projected/planned levels for the year of the Project occupancy/buildout, as compared to growth otherwise occurring, and would not result in a significant adverse physical change in the environment. Operation of the Master Plan Project would create new employment opportunities. The Project's contributions to employment would be consistent with SCAG's short-term and long-term growth projections for the South Bay Cities Subregion, unincorporated Los Angeles County communities and all of Los Angeles County, and would help the County meet or exceed its economic development objectives per the General Plan Economic Development Element, and housing allocation established in the SCAG RHNA. Overall, construction-related and long-term operational impacts regarding the relationship of the Project to growth projections would be less than significant.*

(1) Project-Related Growth

(a) Construction

Construction of the Project would require the participation of construction employees that would be hired from a mobile regional construction work force that moves from project to project. Typically, construction workers pass through various development projects on an intermittent basis as their particular trades are required. Given the mobility and short durations of work at a particular site, and large construction labor pool that can be drawn upon in the region, construction employees would not be expected to relocate residences within this region or move from other regions as a result of their work on the Project.

The number of construction workers would vary on a day to day basis over the course of Project construction. The number of construction workers is estimated to range from approximately 212 workers per day during less intensive construction activity in the initial Project phases up to a maximum of approximately 1,650 construction workers on a given day during the peak construction period (i.e., during Phase 4, which would be expected to overlap with Phase 6 improvements). As the Project would draw on an existing labor pool, the construction impacts of the Project on the number of employees in the region would not be substantial. Further, given the temporary nature of the construction activity, the mobility of construction workers, and availability of a labor pool to draw upon in the area, construction workers would not be expected to have notable impact on the demand for housing, nor affect general housing occupancy and population patterns.

The addition of construction employment opportunities, which is expected to be up to 1,650 workers on a given day during maximum construction activity, would contribute to the economic well-being of the County and region by creating direct employment opportunities for the individuals hired and indirect contributions to the local and regional economy through expenditures of those employees, particularly at retail operations in the Project vicinity.

Overall, based on the above, impacts from construction activity would be considered less than significant.

(b) Operation

As described in the Environmental Setting section above (Subsection 2.a.(1)), the total existing employment at the Medical Center Campus, including the Hospital and both major and minor tenants, is approximately 5,464 employees. The Master Plan Project would create new biomedical research uses (LA BioMed and Bioscience Tech Park), outpatient medical uses, and hospital uses that would add approximately 2,030 new employees to the Medical Center Campus, representing an increase of 37 percent. There would also be an increase in existing site visits, from approximately 340,000 annual patient visits to approximately 410,000, for an increase of approximately 70,000 visits, representing an increase of approximately 20 percent. The Master Plan Project would not contribute new housing stock or add a new residential population to the Medical Center Campus.

The Project's contribution to employment opportunities is compared to growth projections in the SCAG 2016 RTP/SCS for the South Bay Cities Subregion, Unincorporated Los Angeles County communities and Los Angeles County in its entirety in **Table 4.J-3,** *Project Employment Impacts.* The Project would not develop any housing that would cause a direct increase in population.

(i) Proposed Master Plan Employment Impacts

Impacts of the Project on Projections from 2016 Baseline to 2030 Project Buildout Year

As indicated in Table 4.J-3, the Master Plan Project would create 2,030 new employment opportunities. Estimated employment in the South Bay Cities Subregion in 2016, as shown in Table 4.J-2, is 393,525 jobs; with incorporation of the Project, employment would increase to 395,555. The Project's percentage of the estimated growth suggested by SCAG for the 2016 to 2030 time period are shown in Table 4.J-3. As indicated, the Project would provide 5.2 percent of the employment growth reflected in the SCAG data for the South Bay Cities Subregion at Project buildout in 2030. The Project's contribution to employment growth in Unincorporated Los Angeles communities is 5.8 percent of estimated growth for this same period, while for Los Angeles County, the Project's contribution to growth represents a less than one percent increase in projected growth through the 2030 buildout period. Increases in employment are consistent with SCAG's growth projections for the period between 2016 and 2030, the Project buildout year, for the South Bay Cities Subregion, Unincorporated Los Angeles County communities and the County as a whole. Therefore, impacts regarding consistency with the projections would be less than significant.

Table 4.J-3

Project Employment Impacts

Employment	Project Increase	SCAG Projected Growth	Project Percentage of Growth
2016 - 2030 Buildout			
South Bay Cities Subregion	2,030	28,166	7.2%
Unincorporated Los Angeles County	2,030	34,920	5.8%
Total Los Angeles County	2,030	462,750	0.4%
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	2,030	46,944	4.3%
Unincorporated Los Angeles County	2,030	58,200	3.5%
Total Los Angeles County	2,030	771,250	0.3%

Source: PCR Services Corporation, 2016. Projected Growth and Percentage of Growth are based on Table 4.J-2, which in turn is based on SCAG 2016 RTP/SCS projections.

Impacts at the 2016 RTP/SCS 2040 Horizon Year

Similarly to the Project's 2030 buildout year, the Project's contribution to employment in the 2040 SCAG planning horizon year is also consistent with growth projections. Table 4.J-3 shows the Project's impacts with projected growth between 2016 and 2040, the time horizon of the 2016 RTP/SCS. The Project would comprise a smaller increment of growth over that longer period, representing 4.3 percent of the added employees within the South Bay Cities Subregion, 3.5 percent of added employees in Unincorporated Los Angeles County communities, and less than one percent of added growth projected for all of Los Angeles County through the 2040 SCAG planning horizon. As discussed previously, this growth is expected, desirable and within the projected levels, for the County. Impacts regarding these estimates would be less than significant.

(ii) Jobs-to-Housing Ratio

SCAG uses the jobs-to-housing ration as a general tool for evaluating where people live and work and how efficiently they can travel between the two. A jobs-to-housing balance is achieved by increasing employment opportunities for people to live within close proximity to work. The ratio is expressed by the number of jobs divided by the number of housing units. The closer to 1.0 or slightly above is the range which expresses the desired balance.

The Project would add 2,030 permanent jobs, as well as many temporary construction jobs, which may result in a demand for housing in the surrounding area. **Table 4.J-4,** *Jobs-to-Housing Ratio*, compares the current number of jobs and available housing, while also looking at the anticipated impact of the increased jobs generated by the Master Plan Project on existing and forecasted housing stock. The increased employment from the Project, which is 2,030 jobs, is added onto the 2016 baseline of jobs and divided by the projected number of housing units for that time period to assess impacts on housing from Project-generated employment opportunities.

Table 4.J-4

Jobs –to-Housing Ratio

Employment	2016 Baseline	Projected Growth - 2030 Buildout	Projected Growth - 2040 Planning Horizon
Based on SCAG Projections			
South Bay Cities Subregion	1.28	1.29	1.30
Unincorporated Los Angeles County	0.74	0.74	0.74
Total Los Angeles County	1.32	1.32	1.32
Including 2,030 Project-Generated Jobs			
South Bay Cities Subregion	1.28	1.18	1.30
Unincorporated Los Angeles County	0.74	0.74	0.74
Total Los Angeles County	1.32	1.32	1.32

Source: PCR Services Corporation, 2016. Based on SCAG 2012 RTP/SCS projections.

As shown in Table 4.J-4, the current jobs-to-housing ratio in the South Bay Cities Subregion is 1.28, which means that there are more jobs than homes in the area. When the new jobs generated by the Master Plan Project are added on to the existing jobs, the jobs-to-housing ratio remains roughly the same. The increase in jobs caused by the Master Plan Project would not vary significantly from the projected growth in the 2030 buildout year or the 2040 SCAG Planning Horizon. The difference in percentage is very small, and therefore, the Project's increase in jobs as compared to housing is consistent with the forecasted growth in South Bay Cities Subregion, Unincorporated Los Angeles County communities, and the County as a whole. Added employment would be considered beneficial to the economy as new local jobs would contribute to reducing unemployment in the Los Angeles County area. Therefore, impacts regarding consistency with these projections would be less than significant.

(c) Consistency with Growth Projections in Regulatory Documents

(i) General Plan Update

The 2015 General Plan Update was developed to provide direction in land use development for a County population that was estimated to reach 4,827,000 people beyond the 2035 planning horizon. The Master Plan Project proposes to add 0.3 percent to employment growth through the planning horizon Countywide, which is generally consistent with growth projections for the County and General Plan guidelines for accommodating growth. The General Plan Update states five goals, including Principle 3, to "Provide the foundation for a strong and diverse economy: Protect areas that generate employment and promote programs that support a stable and well educated workforce. This will provide a foundation for a jobs-housing balance and a vital and competitive economy in the Unincorporated areas." The Master Plan Project's added contribution to employment growth is consistent with this goal, as the increase in high-quality hospital and biotechnology jobs improves the jobs-to-housing ratio for the South Bay Cities Subregion, unincorporated County Communities and the County as a whole.

(ii) General Plan Update Economic Development Element

As previously discussed, the Economic Development Element outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of Los Angeles County. It also identified health sciences and biomedical research as a target industry with the most potential to contribute to a broad-based, stable, and expanding economy for Los Angeles County.

Policy ED 1.4 seeks to encourage the expansion and retention of targeted industries and other growth economic sectors, such as the entertainment industry, aerospace industry, agriculture, transportation and logistics, healthcare, biomedical/biotechnology, hospitality and tourism. The Master Plan Project would support the General Plan Update Policy ED 1.4 encouraging the expansion of this target industry, particularly within the South Bay Planning Area and the West Carson Employment Protection District, by adding 2,030 permanent, high-quality health care and biomedical jobs. As such, the Project is consistent with General Plan Economic Development Policy 1.4.

(iii) General Plan Housing Element

As previously discussed, the purpose of the General Plan Housing Element is to provide guidance for meeting the County's need for housing per the allocation defined in the RHNA. As noted above, the 2014 – 2021 Housing Element identifies a need for 30,145, new housing units in Unincorporated County communities, of which 12,581 units, i.e. 41.7 percent of all units, would be marketed at above moderate income levels. The remaining 58.3 percent of the needed housing units consist of 5,060 moderate-income units (16.8 percent), 4,650 low-income units (15.4 percent), and 7,584 very and extremely low-income units (25.1 percent). Although the Master Plan Project does not propose to construct any housing, the number of employees who may choose live in the transit-oriented Project area could increase as a result of Project implementation. As discussed above regarding existing housing stock, there are currently enough housing units in the South Bay Planning Area and in unincorporated County communities to accommodate this increase in employees, as the projected housing stock in these regions is anticipated to increase during both the Housing Element and SCAG planning horizons in response to the projected increase in population County-wide. As such, the Project is consistent with the General Plan Housing Element's projections regarding regional housing.

(iv) SCAG Policies

SCAG is tasked with providing demographic projections for use by local agencies and public service and utility agencies. Regional policies and goals are achieved and future service demands are based on SCAG projections. Projections in the SCAG 2016 RTP/SCS serve as the bases for demographic estimates in this analysis of Project consistency with growth projections. The findings regarding growth in the region are consistent with the methodologies prescribed by SCAG and reflect SCAG goals and procedures.

SCAG data is periodically updated to reflect changes in development activity and provisions of local jurisdictions (e.g. zoning changes). Through this updating, service agencies have advance information regarding changes in growth that must be addressed in planning for their provision of services. The 2016 RTP/SCS projections take into account the increase in growth rates that have recently occurred. Changes in the growth rates would be reflected in the new projections for service and utilities planning through the long-term time horizon. Also, SCAG establishes policies pertaining to regional growth and efficient development patterns to reduce development impacts on traffic congestion and related increases in air

quality emissions. These policies are discussed in detail in Section 4.H., *Land Use and Planning,* Section 4.L. *Transportation and Traffic*, and Section 4.B., *Air Quality*.

SCAG, like the County, is encouraging increased density in High Quality Transit Areas as a means of reducing vehicle miles traveled in furtherance of the 2016 RTP/SCS goals, as the reduction in vehicle miles travelled is called for to reduce energy consumption and impacts on the environment. Project implementation would support the attainment of the SCAG policies by providing increased employment opportunities in an extremely well-served High Quality Transit Area. The Project has access to the Carson Street Metro Silver Line Transit Station (0.10 mile away), as well as multiple bus and shuttle lines, including Metro and Torrance Transit lines. The Medical Center Campus is also readily accessible to the regional roadway system, with access provided by the Harbor Freeway (I-110), which is located approximately 1/8th of a mile to the east. As discussed in Section 4.H., growth attributed to the Project would support the attainment of SCAG policies by providing increasing employment opportunities in a High Quality Transit Area.

Based on the 2016 employment and household estimates presented in Tables 4.J-2 and 4.J-4, above, the 2016 jobs-to-housing ratio in the South Bay Cities Subregion is approximately 1.28. The projected 2030 estimate is 1.29. Both of these estimates reflect a healthy balance in employment and housing in the South Bay Cities Subregion, and SCAG projections indicate a trend toward the desired increased employment in the area. This will allow more opportunities for people to reside and work in near proximity, avoiding transit; support greater use of public transit and enhance the jobs-to-housing balance. Based on the information in Table 4.J-4, above, the Project's contribution of net new jobs would further bolster the jobs to housing ratio, thereby contributing to a desired increase in the jobs-to-housing ratio. As such, Project implementation would support and enhance the anticipated trends.

(v) Conclusions Regarding Consistency with Growth Projections in Regulatory Documents

The Project's growth projections are within the growth anticipated in the South Bay Cities Subregion, unincorporated County Communities and the County as a whole, with regard to projections for the longer term in the SCAG data. SCAG projections have been used in the analyses of impacts consistent with the 2016 RTP/SCS. The growth pattern is encouraged in the County and in SCAG policies for increasing employment opportunities in a High Quality Transit Area, improving the trend for reaching a higher jobs-to-housing balance, and promoting development that reduces reliance on individual automobiles, with related lessening of impacts on the environment. Therefore, the Project is consistent with the growth projections contained in the applicable regulatory documents.

(2) Introduction of Unplanned Infrastructure

The Project would link with and tie-into an existing infrastructure system. New infrastructure that would be required, e.g., service connections to local water and sewer systems or electrical transformation facilities, would be sized to serve the Project's needs. No new roadways would be created as a Project component. As discussed in Section 4.M.1, *Water Supply*, and 4.M.2, *Wastewater*, of this Draft EIR, adequate water and wastewater infrastructure would be available to serve the Project, with limited improvements to provide new service connections as necessary. The Project would not open a new area currently not served by infrastructure nor add new facilities that would encourage growth, not otherwise planned in the Project vicinity. Impacts regarding growth associated with the provision of new infrastructure would be less than significant.

e. Cumulative Impacts

(1) Cumulative Growth and SCAG Projections

The cumulative impact analysis addresses the impacts of known and anticipated development in the Project vicinity in combination with the proposed Project, with respect to the anticipated amount and distribution of population, housing and employment. The 26 related projects are listed in Table 3-1 of Chapter 3.0, *General Description of Environmental Setting* of this Draft EIR. Out of 26 related projects, eleven (11) are located in the city of Carson, three (3) are located in the city of Los Angeles, eight (8) are located in the city of Torrance and the remaining four (4) are located in unincorporated Los Angeles County areas. The Project along with the related projects would contribute to the population, housing and employment impacts in the South Bay Cities Subregion. As such, all 26 related projects are considered in this analysis without regard to the jurisdictional boundaries.

The calculation of the cumulative number of housing units, population, and employees is provided in Appendix I of this Draft EIR. A summary of the growth associated with the related projects and the total cumulative growth in combination with the proposed Project is shown in **Table 4.I-5**, *R Development Summary*. As indicated therein, the Project plus related projects would create a total of 7,762 new residents and generate 2,772 new housing units and 7,794 new employees, of which 2,030 would be from the proposed Master Plan Project. There would be no housing developed as a part of the Project that would result in a direct increase in residential population; however, there would be an indirect increase in population to the area.

Table 4.J-5

Cumulative Development Summary

Development	Population [b]	Housing Units [b]	Employment [c]
South Bay Cities Subregion			
Related Projects[a]	7,762	2,772	5,764
Proposed Project - Total at Buildout	**0**	**0**	**2,030**
Total Cumulative Growth	**7,762**	**2,772**	**7,794**

[a] *A list of the Related Projects is Provided in Table 3-1 of Chapter 3.0 of this Draft EIR..*
[b] *The tabulation of cumulative project housing units and calculation of associated population is presented in Table 1 of Appendix I of this Draft EIR.*
[c] *The tabulation of employment generation for the related projects is presented in Table 2 of Appendix I of this Draft EIR.*

Source: PCR Services Corporation, 2016.

(a) Analysis of Cumulative Growth

Table 4.I-6, *Cumulative Population, Housing and Employment Impacts,* compares projected cumulative growth inclusive of the Project to 2040 horizon year projections in the 2016 RTP/SCS. The related projects include a broad array of housing, retail, entertainment, office and studio uses. As noted above and reflected in Table 4.J-6, cumulative development would create 2,772 residential units with housing for a population of 7,762. As indicated in Table 4.J-6, this would comprise approximately 9.5 percent of the population growth estimated in the SCAG projections for the South Bay Cities Subregion by the 2040 horizon year, 3.4 percent of

Table 4.I-6

Cumulative Population, Housing and Employment Impacts

	Cumulative Increase[a]	SCAG Projected Growth	Cumulative Percentage of Growth
Population			
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	7,762	81,489	9.5%
Unincorporated County	7,762	200,050	3.4%
Los Angeles County Total	7,762	1,390,400	0.6%
Households			
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	2,772	31,841	8.7%
Unincorporated County	2,772	79,700	3.5%
Los Angeles County Total	2,772	570,950	0.5%
Employment			
2016 - 2040 Projection Horizon			
South Bay Cities Subregion	7,794	46,944	16.6%
Unincorporated County	7,794	58,200	13.4%
Los Angeles County Total	7,794	771,250	1.0%

[a] *The cumulative increase is calculated by comparing the total growth from related projects, including the proposed Project's increase in employment, to growth projected by SCAG through the 2040 planning horizon.*

Source: PCR Services based on the SCAG 2016 RTP/SCS projections. PCR Services Corporation, 2016

population growth in unincorporated County communities, and 0.6 percent of growth for Los Angeles County in its entirety. The new units developed by related projects would represent approximately 8.7 percent of the new households expected in the South Bay Cities Subregion, 3.5 percent in the Unincorporated County Communities, and 0.5 percent of expected households Countywide. The number of new employees, including from the proposed Master Plan Project would represent approximately 16.6 percent of the projected new employees in the South Bay Cities Subregion, 13.4 percent of employees in Unincorporated Communities, and 1.0 percent of employees Countywide.

The population, housing and employment growth estimates for the related projects plus the proposed Project are within the estimated growth rates for the South Region Cities Subregion, the Unincorporated Los Angeles County communities, and the County as a whole. It should be noted that the estimate of cumulative development is conservative, as it does not fully account for existing development that would be replaced, as opposed to net new development, and it is likely that some of the related projects may never be developed. At the same time, other related projects would be proposed in later years in the Project vicinity and other development is occurring elsewhere. The two factors would off-set to a certain degree. However, as the cumulative household estimate is less than one half of the anticipated growth and given that SCAG updates are currently underway and repeated at four year intervals, SCAG will be able to sufficiently monitor growth for future planning purposes. SCAG performs a regular monitoring of factors affecting growth in the region, including monitoring of EIRs, provides self-correcting mechanisms for longer term projections suitable for use by service agencies for their long-term planning.

To the extent that employment might exceed current projections, it is expected that the new employees would come mostly from an existing employment pool and would not require movement of population or additional housing units. The County is still suffering from and seeking to recover job losses that occurred during the 2000s. The Los Angeles County seasonally adjusted unemployment rate was 5.8 percent in December 2015, which is approximately the same percent as the state rate of 5.8.[8]

The increased amount of employment would highlight the Project Site's designations as a Transit Overlay District and the West Carson Employment Protection District, a regional center, and Regional Center Commercial Area. New employment would support County policies that encourage employment growth in such areas. It would also support numerous County and SCAG policies that encourage denser employment in proximity of public transit systems such as those in the Project vicinity, most notably the Metro Silver Line. Such development reduces environmental impacts associated with transportation, air quality, noise and the consumption of natural resources. (For further discussion, refer to Section 4.H., *Land Use and Planning).* The added employment within the South Bay Cities Subregion would absorb new jobs that might otherwise locate in lower density areas that do not provide these advantages.

As noted above, the projected growth associated with the cumulative housing and population would be within the 2040 SCAG projections identified in the 2016 RTP/SCS and would not be cumulatively significant. With regard to employment, given the SCAG mechanisms for updating projections on a timely basis, the ability to accommodate an existing labor pool in the near term, and the potential of the added employment in proximity to public transportation to provide reductions in environmental impacts by contributing to sustainable development patterns, the additional employee growth would not be considered a significant impact. Even if the added employment were significant, which it is not, the Project's contribution would not be cumulatively considerable.

Furthermore, as discussed in Section 4.H., *Land Use and Planning*, the Project would be located within the area identified in as a Transit Overlay District and a High Quality Transit Area. As such, the Project has been anticipated and identified for new housing and employment growth. As discussed in the Initial Study for the Project, located in Appendix A-1 of this Draft EIR, the Medical Center Campus is located in an urbanized area that is served by current infrastructure (e.g., roads and utilities), and community service facilities. The Project's only off-site infrastructure improvements would consist of tie-ins to the existing utility main-lines already serving the Project area, as well as other limited improvements in surrounding areas as necessary to address system reliability and function. The Project would not require the construction of off-site infrastructure that would provide additional infrastructure capacity for other future development beyond the demand of the Master Plan Project itself.

(2) Cumulative Growth Projections and Consistency with Regulatory Documents

(a) Regional/SCAG Policies

As noted previously, the SCAG 2016 RTP/SCS projections have served as the basis for the demographic estimates in this analysis of Project and related projects regarding consistency with growth projections. The

[8] *State of California, Employment Development Department, Labor Market Division, December 2015 California Employment Highlights.*

findings regarding growth in the region are consistent with the methodologies proscribed by SCAG and reflect SCAG goals and procedures.

SCAG data is periodically updated to reflect changes in development activity and provisions of local jurisdictions, e.g. zoning changes. Through this updating, service agencies have advance information regarding changes in growth that must be addressed in planning for their provision of services.

As was the case with the proposed Project, the related projects generally support the development of the South Bay Cities Subregion with a mix of residential, commercial, and target industries, such as biomedical/biotechnology. Development through the vicinity is generally well-served by same transportation infrastructure as the proposed Project, Metro Silver Line, numerous regional Metro Bus lines, and local Torrance Transit lines. All of this development is occurring within an identified SCAG High Quality Transit Area, and such development channeling growth in a manner that reduces vehicle miles traveled supporting regional sustainability development. Therefore, the cumulative development is supportive of recommended growth patterns.

(3) Introduction of Unplanned Infrastructure

Of the related projects, none are new unplanned infrastructure projects that would open new areas for development or increase the capacity of the South Bay Cities Subregion. The South Bay Cities Subregion contains a mature system of service, utility and infrastructure facilities. The cumulative development represents mixed-use infill projects that would generally utilize available capacity and add project-related infrastructure where necessary for local infrastructure connections for the individual projects. This is the case with the proposed Project, which would not create new unplanned infrastructure, but rather would improve, as necessary, existing facilities already serving the Medical Center Campus. Therefore, cumulative development would not introduce unplanned infrastructure or accelerate development in an undeveloped area and cumulative impacts regarding such unplanned development would be less than significant.

4. MITIGATION MEASURES

Project impacts regarding population, housing and employment would be less than significant and no mitigation measures are required. The proposed Project includes Project Design Features and mitigation measures to reduce its impacts on transportation infrastructure and public services that are associated with growth impacts. These Project Design Features and mitigation measures are discussed in the analyses of cumulative impacts for the environmental topics evaluated in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project impacts regarding population, housing and employment are less than significant. As such, no mitigation measures are required.

4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
1 FIRE PROTECTION AND EMERGENCY SERVICES

1. INTRODUCTION

This section analyzes the Project's potential impacts on fire protection and emergency medical services (EMS) provided by the Los Angeles County Fire Department (LACFD). The analysis addresses potential fire protection and EMS impacts related to service capacity, fire flow, emergency response times, emergency access, and fire safety, and determines whether the Project would generate the need for new or physically altered fire stations. This section is based, in part, on information provided by the LACFD (provided as Appendix G-1, *Fire Department Correspondence*, of this Draft EIR), including November 2014 and July 2015 LACFD comments on the Project's Notice of Preparation, and February 2016 LACFD correspondence. This section also incorporates information from the LACFD 2014 Statistical Summary, LACFD 2012 Strategic Plan, Los Angeles County 2035 General Plan Update Safety Element (Safety Element, 2015) and associated EIR (2015), and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Fire Protection Facilities, Services, and Response Times

The Harbor-UCLA Medical Center Campus is located within the unincorporated Harbor Community Plan Area of the County of Los Angeles, within relatively short distance of several incorporated cities including Los Angeles, Torrance and Carson. Fire protection and EMS is provided to the Project Site by LACFD, with assistance from the fire departments of the surrounding cities under mutual aid agreements with the County.

LACFD provides 24-hour, all-risk emergency services to a population of over four million residents in 58 cities and all of the County's unincorporated communities[1] within a 2,305-square-mile service area.[2] There are three major geographic regions and associated bureaus (North Regional Operations Bureau, Central Regional Operations Bureau, and East Regional Operations Bureau) within the LACFD service area, which are divided into nine divisions and 22 battalions.[3] LACFD provides emergency services in response to a wide range of incidents, including structure fires, wildfires, commercial fires, hazardous materials incidents, urban search and rescue, and swift water rescue.[4] In 2014, LACFD responded to approximately 8,080 fire incidents daily from 171 fire stations and provided over 277,000 emergency medical services.[5] In 2014, LACFD consisted of 4,663 total personnel of whom approximately 2,100 were firefighters, 259 engine companies, 32

1 *Los Angeles County Fire Department Strategic Plan, Engineering our Future, 2012.*

2 *Los Angeles County Fire Department 2014 Statistical Summary.*

3 *Ibid.*

4 *Los Angeles County Fire Department Strategic Plan, op. cit.*

5 *Los Angeles County Fire Department 2014 Statistical Summary.*

truck companies, 67 paramedic squads, 24 paramedic assessment engines, and nine helicopters.[6] LACFD specialty services include four emergency support teams, two urban search and rescue task forces, and four hazardous materials task forces.[7]

The Project Site is located in Division 1, Battalion 7 of LACFD's Central Regional Operations Bureau.[8] LACFD Fire Station 36, located at 127 W. 223rd Street in Cason, approximately 0.7 miles southeast of the Project Site, is the first-in fire station to the Project Site.[9] Fire Station 36 is equipped with two engines and one paramedic unit, is staffed by 30 full-time personnel, had average emergency and non-emergency response times within its service area in 2015 of 4:34 minutes and 6:23 minutes, respectively, and has an estimated emergency response time to the Project Site of 3:33 minutes (LACFD does not have estimated response times for non-emergency calls to the Project Site).[10] During 2015, Fire Station 36 responded to a total of 6,416 emergency and 248 non-emergency incidents, with the emergency incidents including 136 fires, 5,538 medical, and 742 other.[11] The LACFD uses the national guidelines for response times of five minutes for fire and EMS responses and eight minutes for advanced life support (paramedic unit) in urban areas.[12] Therefore, LACFD emergency response times to the Project Site are currently within LACFD's response time goals.

LACFD Fire Station 127, located at 2049 E. 223rd Street in Carson, approximately 3.5 miles east of the Project Site, is the second-in fire station to the Project Site.[13] Fire Station 127 is equipped with one engine and one engine/ladder truck, is staffed by 18 full-time personnel, had average emergency and non-emergency response times within its service area in 2015 of 5:09 minutes and 6:54 minutes, respectively, and has an estimated emergency response time to the Project Site of 7:30 minutes.[14] During 2015, Fire Station 127 responded to a total of 937 emergency and 53 non-emergency incidents, with the emergency incidents including 39 fires, 730 medical, and 168 other.[15]

While LACFD has identified Fire Stations 36 and 127 as the first-in and second-in fire stations serving the Project Site, LACFD operates under a regional concept whereby emergency response units are dispatched as needed to an incident anywhere in LACFD's service territory based on distance and availability, without regard to service areas.[16] Therefore, stations other than the two LACFD fire stations referenced above may respond to emergencies at the Project Site. The locations of the LACFD fire stations referenced above are shown in **Figure 4.K.1-1**, LACFD *Fire Stations Map*, and data about these stations is provided in **Table 4.K.1-1**, *LACFD Fire Stations in the Project Vicinity*, and **Table 4.K.1-2**, *LACFD First-In Fire Station (Station 36) Calls and Response Times*.

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6 *Ibid.*

7 *Ibid.*

8 *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, Figure 5.14-1. Certified March 24, 2015.*

9 *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

10 *Ibid.*

11 *Ibid.*

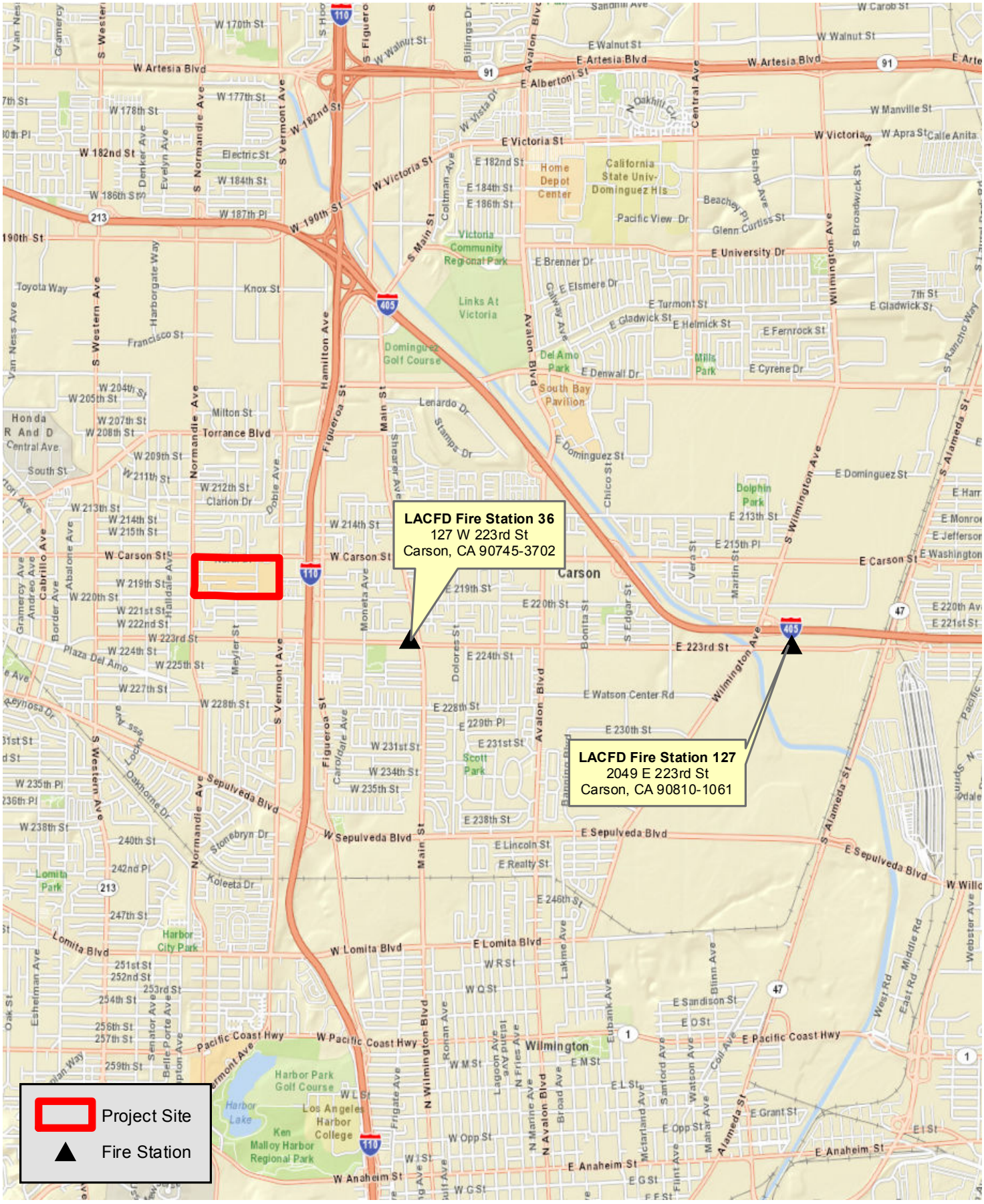
12 *Ibid.*

13 *Ibid.*

14 *Ibid.*

15 *Ibid.*

16 *Ibid.*



PCR

N

0 0.75 1.5 Miles

LACFD Fire Stations Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.1-1

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Table 4.K.1-1

LACFD Fire Stations in the Project Vicinity

Facility Name	Address	Jurisdiction	Distance (miles)	Equipment and Personnel
LACFD Fire Station 36	223rd Street, Carson	LACFD	0.7	2 engines, paramedic unit, 30 full-time personnel[a]
LACFD Fire Station 127	2049 E 223rd Street, Carson	LACFD	3.5	1 engine, 1 engine/ladder truck, 18 full-time personnel[a]

[a] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

Source: PCR Services Corporation, February 2016.

Table 4.K.1-2

LACFD First-In Fire Station (Station 36) Calls and Response Times

Calls		Response Times (minutes)	
Type	Total Number in 2015	Average Within Service Area	Estimated to Project Site
Emergency	6,416	4:34	3:33
Non-Emergency	248	6:23	N/A[b]

[a] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

[b] *LACFD does not have estimated non-emergency response time estimates to the Project Site.*

Source: PCR Services Corporation, February 2016.

According to the LACFD, there are no automatic aid agreements with any other fire protection agency (e.g., cities of Los Angeles, Carson, Torrance, etc.) that affect the Project Site - mutual aid is, by definition, available everywhere but is meant to be invoked only in rare and unusual circumstances.[17] Also according to the LACFD, there are currently no plans for new fire stations in the Project area.[18] Lastly, based on Figure 12.5 (Fire Hazard Severity Zones Policy Map) in the County's 2035 General Plan Update Safety Element, the Project Site is not located within a designated Wildland Fire Hazard Area.[19] Therefore, the Project Site is not subject to wildland fires, and this issue is not addressed further in this section.

(2) Emergency Access

The Project Site is bordered on the north, east and west by major arterials (W. Carson Street, S. Vermont Avenue, and Normandie Avenue, respectively), and is bordered on the south by a collector street (W. 220th Street). Emergency access to the Project Site is available from each of these streets, with direct routes from LACFD Fire Station 36 to the Project Site via either West 220th Street or West Carson Street (0.7 miles). According to Figure 12.6 (Disaster Routes Map) in the County's 2035 General Plan Update Safety Element,

[17] *Ibid.*

[18] *Ibid.*

[19] *County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 12: Safety Element. Adopted October 6, 2015.*

designated disaster routes within the Project Site vicinity include the Harbor Freeway (I-110) and West Carson Street.[20]

(3) Fire Flow

In general, fire flow requirements are closely related to land use, as the quantity of water necessary for fire protection varies with the type of development, life hazard, type of occupancy, and degree of fire hazard (based on such factors as building age or type of construction). Water service to the Project Site is currently provided by the California Water Service Company (CWS) and the City of Los Angeles Department of Water and Power (LADWP).[21] The CWS provides water service to the Project Site via four connections to CWS water mains in 220th and Carson Streets ranging in size from six to 33 inches, while LADWP provides non-continuous backup water service to the Project Site via one connection to a 78-inch LADWP water main in 220th Avenue.[22] Water pressure tests were conducted in 2009 and 2010 of the CWS water mains serving the Project Site (a pressure test was not conducted of the 78-inch LADWP water main since LADWP does not typically allow new individual connections to its distribution mains).[23] The results of the pressure tests are provided in **Table 4.K.1-3**, *Water Pressure Test Results – Existing Conditions*.

Table 4.K.1-3

Water Pressure Test Results – Existing Conditions

Location	Static Pressure	Residual Pressure	Total Flow Observed	Calculated Flow at 20 PSI
220th Street and Vermont Avenue, west of Vermont Avenue	78 psi	63 psi	4,545 gpm	9,434 gpm
Carson Street and Normandie Avenue	75 psi	68 psi	2,148 gpm	6,538 gpm
220th Street and Vermont Avenue, east of Vermont Avenue	80 psi	28 psi	1,358 gpm	1,467 gpm

Source: Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.F-5, July 11, 2011.

The pressure test conducted at 220th Street and Vermont Avenue, east of Vermont, was obtained from a hydrant connected to a 6-inch water main in 220th which may have caused the significant pressure drop for this test compared to the other tests which were taken off of 10-inch or larger mains.[24] Although there appears to be significant pressure in the area, the Project's civil engineer recommended that future development at the Project Site verify if the existing system can supply adequate pressures and flows based on final development type and building fire flow requirements.[25]

The existing Hospital tower, recently completed hospital expansion, Harbor-UCLA Professional Building, and several other of the more modern buildings on the Campus are currently sprinklered and standpiped, with

[20] *Ibid, Figure 12.6.*

[21] *Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.F-4, July 11, 2011.*

[22] *Ibid.*

[23] *Ibid.*

[24] *Ibid.*

[25] *Ibid.*

existing Hospital water pressure deemed adequate at around 80-85 psi.[26] It is assumed that most of the smaller on-site buildings, including most if not all of the World War II-era army barracks, are currently unsprinklered.

b. Regulatory Framework Summary

The following subsections discuss the various codes, regulations and polices applicable to fire protection and EMS services at the federal, state and local levels.

(1) Federal

There are no federal fire protection and EMS regulations pertinent to the Project.

(2) State

(a) California Code of Regulations (CCR)

The California Code of Regulations (CCR) Title 24, 2013 California Building Standards Code, Part 2, California Building Code (CBC) and Part 2.5, California Residential Building Code, is a compilation of building standards including fire safety standards for residential and commercial buildings. CBC standards are based on building standards that have been adopted by State agencies without change from a national model code, building standards based on a national model code that have been changed to address particular California conditions, and building standards authorized by the California legislature not covered by the national model code. Title 24, Part 9 contains the California Fire Code (CFC). Typical fire safety requirements of the CFC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The CFC applies to all occupancies in California, except where more stringent standards have been adopted by local agencies. The County has adopted the 2013 Edition of the CFC, by reference, with certain changes and amendments.

(3) Local

(a) Los Angeles County General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element and the Safety Element. Applicable goals and polices from these Elements are identified below:

> **Goal PS/F 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.
>
> - **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
>
> - **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction

[26] *Perkins+Will, Harbor-UCLA Medical Center Campus Master Plan, p.63, June 30th, 2012*

with development through phasing or other mechanisms.

- **Policy PF/F 1.6:** Support multi-faced public facility expansion efforts, such as substations, mobile units, and satellite offices.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.1:** Ensure that residents are protected from natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.

- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.

- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.

(b) LACFD Strategic Plan, Engineering Our Future (2012)

LACFD's Strategic Plan is designed to address short- and long-term challenges by providing a roadmap to maximize operational effectiveness, strengthen fiscal sustainability, and maximize integrated services delivery. The Strategic Plan is designed to carry out the County's public safety mission in meeting the current and future needs of over four million residents living and working in communities throughout the County.

(c) LACFD Response Time Standards

LACFD's current response time standard for urban areas is five minutes for fire EMS and eight minutes for advanced life support (paramedic) service.[27]

(d) Los Angeles County Code

(i) Title 32, Fire Code

The County of Los Angeles Fire Code (Fire Code) includes provisions that address fire apparatus access roads, adequate road widths, fire flow requirements, and fire hydrant spacing. For example, Section 105.7.10.1, Land Development Review, requires LACFD review and approval for applications, including parcel maps, final maps, conditional use permits, environmental impact reviews, zone changes, and water plan reviews. Section 503.1.2, et seq., contains requirements for fire apparatus access roads, marking of fire lanes and high-voltage transmission lines, and traffic-calming devices. Section 903.2.11.3, requires the installation of an automatic sprinkler system for buildings with more than three stories. Section 903.7 states that in multistory buildings four stories or higher, the automatic fire sprinkler system shall include an indicating control valve, water flow detector with an alarm bell, drain valve, and inspector's test valve with sight gauge.

[27] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, p.5.14-1. Certified March 24, 2015. Also, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

LACFD personnel have indicated that on-site fire flow requirements will be determined using Table B105.1 of the Fire Code.[28] The maximum required fire flow established in the table is 6,000 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for Type IA, IB, IIA, and IIA building construction types, and 8,000 gpm at 20 psi residual pressure for Type IIB, IIIB, IV, V-A, and V-B building construction types.[29] Appendix B, Section B105.2 states that a reduction in required fire flow of up to 50 percent is allowed when automatic sprinkler systems are provided.[30]

(ii) Title 20, Utilities

Los Angeles County Code (LACC) Title 20, Part 2, Design, Section 12.16.060, Minimum Fire Flow and Fire Hydrant Requirements, specifies that the minimum fire flow and fire hydrant requirements shall be determined by the Fire Chief or Fire Marshal based on local conditions, exposure, congestion, and construction of buildings. Should a minimum fire flow in excess of 5,000 gpm be required by the Fire Chief or Fire Marshal, the determination must first be approved by the water appeals board. Where buildings are constructed of fire-resistive materials and/or provided with automatic sprinkler systems, required fire flow may be reduced. For required fire flows greater than 2,000 gpm, the total required fire flow must be available from no more than the two closest public street fire hydrants to the proposed structure.

(iii) Title 21, Subdivisions

LACC Title 21, Chapter 21.24, Part 1, Design Standards, contains additional access road requirements to ensure adequacy of a route of access during evacuation and on the deployment of fire equipment or other services under emergency conditions. Part 2, Mapping Specifications, Section 21.44.250, requires that each easement shown for any storm drain or sewer or fire access to be designated on the final map or parcel map. Part 3, Local Streets and Ways, Section 21.24.220, requires the provision of fire protection access easements or fire breaks.

(e) Office of Emergency Management and Operational Area Emergency Response Plan

The Office of Emergency Management (OEM) is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of the County and is the day-to-day County Operational Area coordinator. As part of this effort, OEM prepares and maintains an Operational Area Emergency Response Plan (OAERP) which establishes the coordinated emergency management system including prevention, protection, response recovery, and mitigation.[31]

3. ENVIRONMENTAL IMPACTS

a. Methodology

Fire protection and EMS needs relate to the size of the population and geographic area served, the number and types of calls for service, and the characteristics of the community and the project. Changes in these factors resulting from the proposed Project may increase the demand for services. LACFD evaluates the

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[28] *Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.F-6, July 11, 2011.*

[29] *Ibid. Also, Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated July 16, 2015. Included in Appendix G-1, Fire Department Correspondence, of this EIR.*

[30] *Ibid.*

[31] *Los Angeles County, Office of Emergency Management, About OEM, http://lacoa.org/aboutoem.html. Accessed July 15, 2015.*

demand for fire prevention and protection services on a project-by-project basis, including review of the proposed land uses, fire protection needs, design features, and estimated emergency response times, to determine if the Project would require new or altered fire-fighting facilities, personnel, and service. Additionally, consideration is given to the size and components of the Project, fire flow necessary to accommodate the Project, fire hydrant sizing and placement standards, access, and the potential to use or store flammable and/or hazardous materials. Based on these factors, a determination is made as to whether LACFD would require new or physically altered facilities to maintain acceptable service levels, the construction of which could result in a potentially significant environmental impact. As part of this analysis, LACFD staff was consulted and their responses incorporated regarding the Project, and applicable information sources, plans and requirements were reviewed and the Project's consistency with them assessed.

b. Thresholds of Significance

The potential for impacts on fire protection and EMS is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines*. This question is as follows:

(XIV) Public Services. Would the project:

a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

- Fire protection?

Based on this factor, the Project would have a potentially significant impact on fire protection and EMS if it would result in the following:

FIRE-1: Would the Project require the addition of a new fire station, or the expansion, consolidation or relocation of an existing fire station, to maintain services, which would result in a substantial adverse physical impact on the environment?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus. The existing Campus contains 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities (including approximately a dozen WWII barracks), reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, an increase in building heights across the Campus by an average of two floors above

grade (with the Existing and New Hospital Towers eight floors each above grade), and increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively. The Project would also include a temporary ground-level helistop just west of the LA BioMed Campus along the Project Site's southern boundary, as well as a new permanent rooftop helistop on the New Hospital Tower. Project construction would be anticipated to occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further project description, including Figure 2-6, *Harbor-UCLA Medical Campus Master Plan Site Plan*, and Table 2-1, *Existing and Proposed Land Use Summary*.

The Project would connect to the CWS water system at various locations along Carson Street, Vermont Avenue, and 220th Street, with domestic water and water for fire flow provided on-site via a combined looped network of primarily 12-inch mains generally located within the primary vehicular circulation areas.[32] It is anticipated that backup water service would continue to be provided by LADWP.[33]

(2) Project Design Features

The Master Plan Project includes the following Project Design Features (PDFs) that are specific to fire protection and emergency medical services:

PDF-FIRE-1: The applicants, designers, construction contractors, and tenants for/of development under the Project will implement the conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, which are included in Appendix G-1, *Fire Department Correspondence*, of this Draft EIR.

The LACFD conditions of approval referenced above are summarized below and include, but are not limited to, the following:

- Provide multiple ingress/egress access for circulation of traffic and emergency response vehicles.
- Every building constructed shall be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads of not less than the minimum widths prescribed in Fire Code Section 503.2.1, with roadways extending to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.
- Fire Apparatus Access Roads shall be a minimum unobstructed width of 28 feet exclusive of shoulders and have unobstructed vertical clearance "clear to sky"
- Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround.
- Provide approved signs or other approved notices or markings that include the words "NO PARKING – FIRE LANE".

[32] *Perkins + Will, Harbor UCLA Medical Center Master Plan, Utility and Circulation Existing Conditions Assessment, p.D-2, July 11, 2011.*

[33] *Ibid.*

- Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction.
- Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property.
- The method of gate control shall be subject to review by the Fire Department prior to approval, and shall meet specified width, positioning, emergency power, and emergency access requirements.
- The development may require fire flows up to 8,000 gpm at 20 psi residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used.
- Fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants, with no portion of a lot frontage more than 200 feet via vehicular access from a public hydrant, and no portion of a building exceeding 400 feet via vehicular access from public fire hydrant.
- All required public fire hydrants shall be installed, tested, and accepted prior to beginning construction.
- Provide a Fire Department-approved fire sprinkler system in all proposed buildings.

d. Project Impacts

Threshold FIRE-1: Would the Project require the addition of a new fire station, or the expansion, consolidation or relocation of an existing fire station, to maintain services, which would result in a substantial adverse physical impact on the environment?

Impact Statement FIRE-1: *The Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing fire station to maintain service due to compliance with County Code and LACFD requirements and PDF-FIRE-1 that address fire safety, emergency access, emergency response times, and fire flow. Therefore, construction and operational impacts would be less than significant.*

(1) Construction

Construction activities associated with the Project would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through the year 2030. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, in compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements, construction managers and personnel would be trained in fire prevention and emergency response. Fire suppression equipment specific to construction would be maintained on-site. As required by the LACFD and Project Design Feature PDF-FIRE-1, all required fire

hydrants would be nstalled, tested, and accepted prior to construction. Additionally, Project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, given State, County and LACFD regulations that require construction personnel to be trained in fire prevention and emergency response, required maintenance of fire suppression equipment, and implementation of proper procedures for storage and handling of flammable materials on the Project Site during construction, the demand for fire protection and EMS during construction would be less than significant.

Regarding emergency access and response times during construction, construction staging and construction worker parking associated with the Project would be accommodated on the Project Site, limiting potential conflicts with traffic on local streets. In addition, as required by the LACFD and PDF-FIRE-1, emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. Furthermore, while the Project would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site: (1) as discussed in Section 4.L., *Transportation and Traffic*, with the implementation of PDF-TRAF-1, which requires the implementation of a County-required construction traffic management plan, Project traffic impacts during construction would be less than significant; and (2) the Project would implement Mitigation Measure FIRE-1, which requires that Project construction contractors coordinate with LACFD concerning any planned temporary lane closures and other construction activities that could affect emergency access and emergency response times. Therefore, impacts on emergency access and response times during Project construction would also be less than significant.

(2) Operation

(a) Fire Safety

The Project would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, Utilities Code, and Subdivision Code) for new construction that address structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. Per PDF-FIRE-1, the Project would also implement the LACFD fire protection and EMS conditions of approval identified by LACFD in its November 2014, July 2015, and January 2016 correspondence, including but not limited to: provision multiple ingress/egress for emergency response vehicles; provision of Fire Apparatus Access Roads extending to within 150 feet of all structures; provision of the LACFD-specified fire flow; provision of fire hydrants every 300 feet and no portion of a building exceeding 400 feet from a fire hydrant; and provision of fire sprinklers in all buildings. In addition, the LACFD would review and approve all Project plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. Furthermore, the Applicant would be required to submit an Emergency Response Plan for review and approval by LACFD to include, but not be limited to, mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because the Project would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Project Site would be improved. Therefore, with compliance applicable County Code requirements and implementation of Project Design Feature PDF-FIRE-1, Project operation would not have fire safety issues that would require the construction of new or physically altered fire stations, and the impact would be less than significant.

The Project would increase the net floor area, employee population, and annual patient visits at the Project Site by 48 percent (1,178,071 sf), 37 percent (2,030 employees), and 34 percent (185,745 patient visits), respectively. These increases could potentially result in an increase in calls for LACFD fire protection and EMS service from the Project Site. However, several factors would minimize any such increase. First, because the Project would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, calls for fire protection service resulting from dangerous or flammable conditions would be expected to decrease. Second, because a portion of the new on-site employees would be expected to be derived from the existing local labor pool, and because patients visiting the Project would already reside in the area, many of the additional employees and most if not all of the additional patients already generate a demand for service from LACFD Fire Stations 36 and 127. Third, the Project Site is already fully developed and already generates service calls from LACFD such that the Project would not generate service demand in an area where service demand does not already exist. Fourth, the Project would include an increase in hospital and other medical uses, such that it is reasonable to assume that a portion of the on-site EMS needs under the Project would be provided by the proposed uses themselves rather than be provided by LACFD. Fifth, per Mitigation Measure FIRE-2, the Project would pay the LACFD Developer Fee which would help pay for any new LACFD equipment/personnel required at LACFD Station 36 to serve the Project. Lastly, the LACFD did not identify the need for new or physically altered fire stations associated with the Project in its comments on the Project's Notice of Preparation or other LACFD correspondence included in Appendix G-1 of this Draft EIR. Therefore, with compliance applicable County Code requirements and implementation of PDF-FIRE 1 and Mitigation Measure FIRE-2, Project operation would not be expected to increase calls for LACFD fire protection and EMS service that would require new or physically altered fire stations, and the impact would be less than significant.

(b) Emergency Response Times

As discussed previously, LACFD Fire Station 36 is located 0.7 miles southeast of the Project Site and has an estimated existing emergency response time to the Project Site of 4:34 minutes which falls within the LACFD's response time goals of five minutes for the first-arriving unit for fire and emergency medical services and eight minutes for the advance life support unit (paramedic) unit in urban areas.

Development of the Project would increase the existing employee population and annual patient visits at the Project Site, and would increase operational traffic in the Project vicinity. As determined by the traffic analysis in Section 4.L., *Transportation and Traffic*, of this Draft EIR, Project operational traffic would significantly impact 10 intersections, even with implementation of all feasible mitigation measures. Accordingly, traffic associated with the Project could potentially affect LACFD emergency vehicle response times in the area.

Impacts on traffic that could cause delays in emergency response times are addressed through PDF-TRAF-1 and PDF-TRAF-2. These measures would provide for the installation roadway and traffic control improvements, including a Construction Traffic Management Plan, flag persons, prohibition of construction worker parking on residential streets, and more, which would improve traffic conditions and facilitate emergency access to the Project Site. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Project Site from Station 36 are currently within the LACFD's response time goals, Project operational impacts on emergency response times would not require new or physically altered fire stations, and the impact would be less than significant.

(c) Emergency Access

As discussed previously, emergency access to the Project Site is provided by each of the four streets bordering the Project Site (e.g., West Carson Street, W 220th Street, Normandie Avenue, and S. Vermont Avenue), with three of these streets representing major arterials (e.g. major streets). Also as discussed previously, West Carson Street and I-110 represent the designated disaster routes serving the Project Area. The Project would not permanently close any of these streets or any of the lanes of any of these streets. Furthermore, any roadway and traffic improvements on any of these streets would comply with all applicable County Code requirements and would be reviewed and approved by the Los Angeles County Department of Public Works (see Section 4.L., *Transportation and Traffic*, for further discussion). Therefore, emergency access to the Project Site and the other properties in the Project vicinity would be maintained during Project operation, Project operational impacts on emergency access would not require new or physically altered fire stations, and the impact would be less than significant.

As indicated in Figure 2-8, *Vehicular Circulation Plan*, in Chapter 2.0, *Project Description*, of this Draft EIR, vehicular access into the Project Site would be provided by: a signalized driveway on Carson Street, near the Existing Hospital, which would serve as the main public entry into the Project Site; a second new signalized driveway on Carson Street west of the main entry, one driveway each on Vermont Avenue and Normandie Avenue, and two driveways on 220th Street. A comprehensive on-site signage and wayfinding program would also be implemented to aid in navigation, including naming of the internal streets, naming and numbering of on-site buildings, the provision of street signs at intersections (unlike under existing conditions), and the provisions of directory boards throughout to aid in navigation. Furthermore, all Project driveways and internal streets would be designed and constructed in accordance with applicable County cross-section requirements, as opposed to many of the driveways and on-site streets which were added on a piecemeal basis in the 1940s in the absence of Code requirements. Finally, in accordance with PDF-FIRE-1: every building constructed would be accessible to Fire Department apparatus by way of Fire Apparatus Access Roads designed to County Fire Code specifications and extending to within 150 feet of all exterior walls; Fire Apparatus Access Roads would be marked "NO PARKING – FIRE LANE"; all gate controls would be reviewed and approved by the Fire Department; and the Fire Department would be provided with all gate and building access codes. And again, much of the existing on-site circulation system is not currently designed to County Fire Code specifications. Therefore, emergency access into and within the Project Site would be substantially improved, Project operational impacts on emergency access would not require new or physically altered fire stations, and a beneficial impact would occur.

(d) Fire Flow

The Project would intensify the hospital, medical and office use of the Project Site. According to the LACFD's Land Development Unit: (1) the Project may require fire flows of up to 8,000 gallons per minute (gpd) at 20 pounds per square inch (psi) residual pressure for up to a five-hour duration, although final fire flow requirements will be determined during the building permit and fire plan check phases; (2) fire hydrant spacing shall be every 300 feet for both the public and on-site fire hydrants, which each proposed building either located a maximum of 25 feet from a fire hydrant or constructed with two hour fire walls; and (3) an approved automatic fire sprinkler system is required for all proposed on-site buildings.[34] In accordance with PDF-FIRE-1, the above would be provided under the Project.

[34] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

As discussed previously, water service to the Project Site is currently provided by CWS and LADWP, with the CWS providing water service via four connections to CWS water mains in 220th and Carson Streets ranging in size from six to 33 inches, while LADWP provides non-continuous backup water service via one connection to a 78-inch LADWP water main in 220th Avenue.[35] Based on the 2009 and 2010 water pressure test results discussed previously for the CWS water mains and summarized in Table 4.K.1-3, adequate water pressure (i.e., 9,434 gpm at 20 psi residual[36]) appears to be available in the 220th Street and Vermont Avenue water main to meet the LACFD-identified preliminary fire flow requirements for the Project, although final fire flow requirements would be determined during the building permit and fire plan check phases of the Project, and such fire flow requirements shall be complied with by the Project, in accordance with PDF-FIRE-1.

Based on the above, adequate fire flow is available to serve the Project, Project operational impacts on fire flow would not require new or physically altered fire stations, and the impact would be less than significant.

e. Cumulative Impacts

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within an approximately 2.4 mile radius of the Project. These projects are summarized in Table 3-1, *Related Projects List*, and shown on Figure 3-1, *Related Projects Map.* As shown in Figure 3-1, these related Projects occur in several jurisdictions, including unincorporated Los Angeles County and the Cities of Los Angeles Carson and Torrance. The Project and related projects would increase the daytime and 24-hour populations and introduce structures that would create increased demand for LACFD fire protection and EMS. This increase in demand could potentially require additional personnel and resources at the LACFD to provide adequate service levels and to maintain existing response times. LACFD operates under a regional concept in its approach to providing fire protection and emergency medical services anywhere in the LACFD service territory without regard to jurisdictional or municipal boundaries.[37] Therefore, all 26 related projects are considered in this analysis without regard to the jurisdictional boundaries of a specific fire station.

Although a cumulative demand for LACFD fire protection and EMS could occur, this demand would be reduced through regulatory compliance, similar to the Project. All the related projects would be subject to review by the LACFD (or the Cities of Los Angeles, Carson and Torrance) for compliance with applicable fire and building code requirements related to fire safety, emergency response times, emergency access, and fire flow which have been formulated to avoid significant fire protection and EMS impacts.

In addition, the LACFD's operating budget, and the operating budgets of the other jurisdictions, include funds generated by property tax revenues which are supplemented by tax-base expansion. Tax-base revenue from Project development—together with revenues from past, present, and reasonably foreseeable future projects—would generate funding for fire protection services. This funding would support any needed increases in staffing, fire stations, and equipment to keep response times within acceptable limits (i.e., five minutes for first arrival and eight minutes for paramedic response within urban areas and eight minutes for first arrival and 12 minutes for paramedic response within suburban areas). Also, some or all of the

[35] *Perkins + Will, Harbor-UCLA Medical Center Master Plan, Utility and Circulation Exiting Conditions Assessment, p.F-4, July 11, 2011.*

[36] *Ibid, p.F-5.*

[37] *Kevin T. Johnson, Acting Chief, Forestry Division, Prevention Services Bureau, LACFD, letter dated February 10, 2016 and included in Appendix G-1 of this Draft EIR.*

jurisdictions within which the related projects are located require payment of developer fees to help funding additional fire protection and EMS facilities and services necessitated by new development.

Lastly, while the cumulative demand for fire protection facilities could potentially contribute to the future need for a new fire station in the West Carson community, and while the construction of any such station could potentially result in substantial adverse physical impacts, it would be speculative to predict where and when a new station would be needed as LACFD does not currently have plans for new fire protection facilities in the area. Therefore, it would be speculative to predict the environmental effects resulting from any such improvements, and per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required.

Based on the above, the Project would not substantially contribute to cumulatively considerable impacts regarding fire protection and EMS. Therefore, cumulative impacts would be less than significant.

4. MITIGATION MEASURES

In order to reduce impacts related to fire protection and EMS to less than significant, the following mitigation measures are required:

Mitigation Measure FIRE-1: The Project construction contractors shall regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times.

Mitigation Measure FIRE-2: Prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee, as applicable.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant impacts on fire protection and EMS with adherence to applicable fire protection and emergency services requirements and implementation of the Project Design Features and mitigation measures provided above.

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4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
2 SHERIFF PROTECTION

1. INTRODUCTION

This section describes existing police protection services and analyzes potential impacts related to these services that would occur as a result of Project implementation. The focus of the analysis is on Los Angeles County Sheriff's Department (LACSD) facilities and staffing resources that currently serve the Project Site and vicinity, including whether the Project would generate the need for new or physically altered sheriff's stations or other facilities. This section is based, in part, on information provided by the LACSD (included in **Appendix G-2**, *Sheriff Department Correspondence*, of this Draft EIR). This section also incorporates information from the: Los County General Plan Update (2035) Safety Element (Safety Element, 2015) and associated EIR (2015); and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) County of Los Angeles Sheriff's Department

The Harbor-UCLA Medical Center Campus is located within the unincorporated Harbor Community Plan Area of the County of Los Angeles, within relatively short distance of several incorporated cities, including Los Angeles, Torrance and Carson. Police protection service in the Harbor Community Plan Area and the Project Site is provided by LACSD, with assistance from the police departments of the surrounding cities (e.g., the cities of Los Angeles, Long Beach, Torrance, and Gardena) under mutual aid agreements with the County.[1]

LACSD provides police protection services to more than one million residents living within 90 unincorporated communities, as well as to more than four million residents living within 42 contract cities.[2] LACSD, which is divided into 10 divisions, also provides police protection services to nine community colleges, Metro, 48 superior courts, and County-owned facilities located in incorporated cities (e.g., parks, marinas, government buildings, hospitals, community colleges, etc.).[3] LACSD, along with the Los Angeles County Fire Department (LACFD), also provides provide first response during declared emergencies such as natural disasters and terrorist events.[4]

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[1] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

[2] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH. No. 2011081042, page 5.14-12. Certified March 24, 2015.*

[3] *Ibid.*

[4] *Ibid.*

(2) LACSD Carson Sheriff's Station

The Project Site is located within LACSD's South Patrol Division and within the service area of the LACSD's Carson Sheriff's Station[5]. The Carson Sheriff's Station, which provides general police protection services within the South Patrol Division, is located at 21356 S. Avalon Boulevard in Carson, approximately two miles east of the Project site.[6] The Carson Sheriff's Station has an approximately 24.21 square mile service area that includes the City of Carson and the unincorporated communities of Rancho Dominguez, Torrance, and Harbor City.[7] The estimated resident population of this service area is 117,000. Other LACSD stations in the vicinity include the Lomita, Compton, and Lakewood Stations, located five, eight and 14 miles from the Project Site, respectively.[8]

As of January 1, 2016, the Carson Sheriff's Station: was staffed by approximately 177 sworn officers and 40 civilian employees; has assigned assets of an undisclosed number of patrol vehicles, motorcycles, unmarked vehicles, and other specialty vehicles; is equipped with a helistop for emergency flight operations; operated on a 24-hour basis utilizing multiple shifts (day, night, and early morning); and had an undisclosed number of personnel per shift.[9] **Table 4.K.2-1**, *Carson Sheriff's Station*, provides summary information concerning this station, while **Figure 4.K.2-1**, *Carson Sheriff's Station*, identifies the location of this station relative to that of the Project Site. According to the LACSD, the Carson Sheriff's Station has operated above capacity for many years, although there are presently no plans in development to expand the station in order to meet the growing needs of the community it serves.[10]

Table 4.K.2-1

Carson Sheriff's Station

Facility Name	Address	Jurisdiction	Distance (miles)	Personnel
Carson Sheriff's Station	21356 S. Avalon Blvd.	LACSD	2.0	177 sworn officers 40 civilian employees

Source: Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.

[5] *Tracey Jue, Director, Facilities Planning Division, LACSD, correspondence dated March 31, 2016. Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016. Also Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

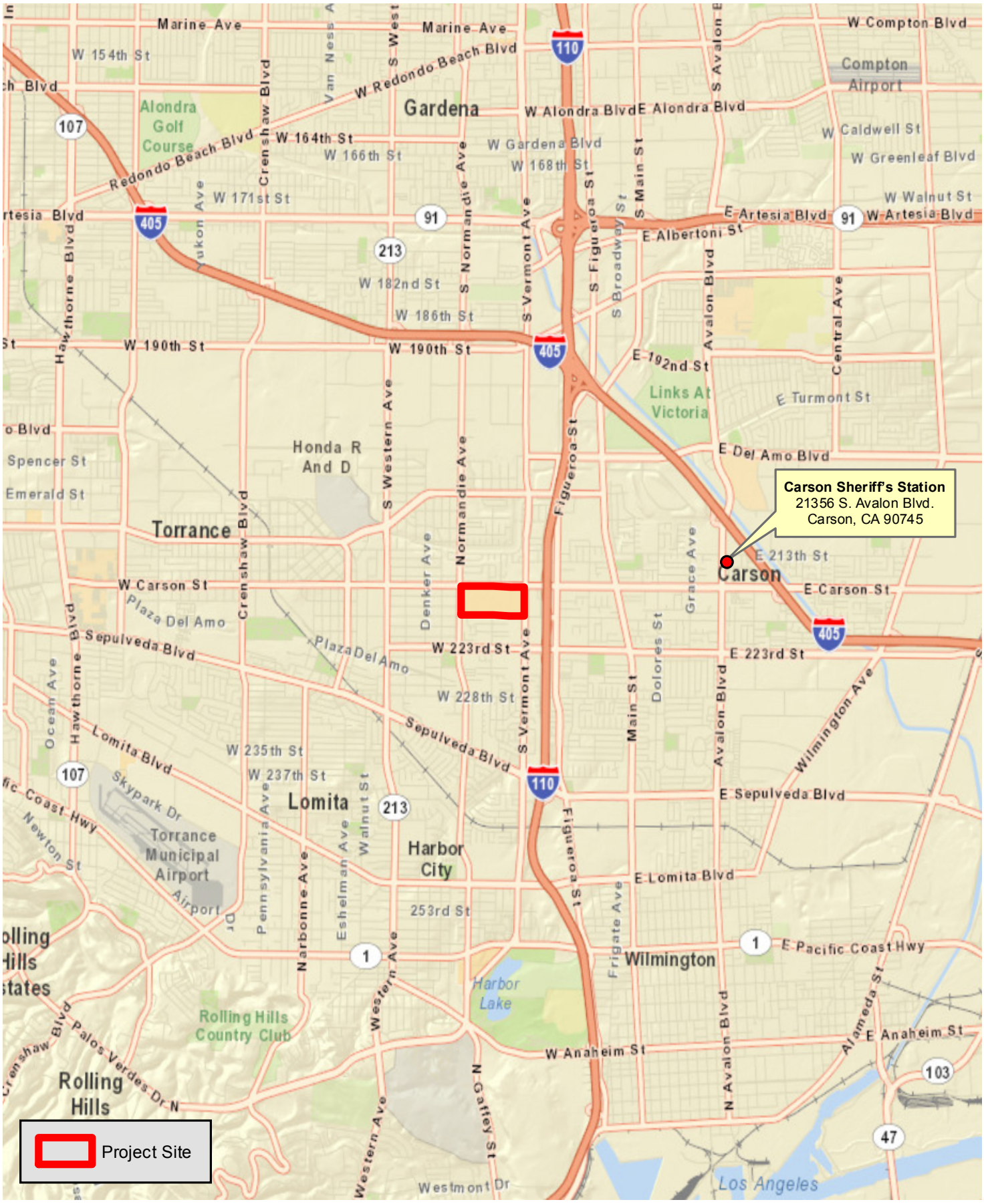
[6] *Ibid.*

[7] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[8] *Ibid.*

[9] *Tracey Jue, Director, Facilities Planning Division, LACSD, letter dated March 31, 2016.*

[10] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*



PCR

Carson Sheriff's Station

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.2-1

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Table 4.K.2-2, *LACSD Call, Response Time, and Crime Data for the Unincorporated Communities Surrounding the Project Site*, provides 2011-2015 LACSD call, response time, and crime data for the unincorporated communities surrounding the Project Site. As indicated therein, the LACSD received a total of 6,444 calls for Service, had average response times of 4.2 minutes for emergent (crimes in progress that are life threatening), 7.7 minutes for priority (crimes in progress that are not life threatening), and 32.2 minutes for routine calls (crimes that have already occurred and are not life threatening), and had a total of 648 Part I crimes (criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny theft, grand theft auto, arson) reported, in the given geography in 2015. As further indicated, of the 648 crimes reported in the given geography in 2015, the majority were of four types: petty theft (127), vehicle burglary (119), grand theft auto (108), and burglary from a residence (103). Last, as indicated, while average response times within the given geography between 2011 and 2015 decreased, both calls for service and Part I crimes increased during the same period. According to the LACSD, these increases are partly attributable to an increase in homelessness in the area which is believed to be at least partly due to the transport of indigents to the Medical Center from outside the area for treatment, and the lack of transportation and placement services for these patients once released.11 According to LACSD, police response times to the Project Site from the Carson Sheriff's Station are currently four minutes for emergency calls, seven minutes for priority calls, and 28 minutes for routine calls.12 This is compared to the widely-accepted police protection industry standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[13] Therefore, LACSD response times to the Project site are currently well within accepted standards.

(3) LACSD County Services Bureau

Because the Harbor-UCLA Medical Center Campus is a County facility, police protection service for the Project Site is provided primarily by LACSD's County Services Bureau (CSB) rather than by LACSD's Carson Station.[14] As indicated in **Table 4.K.2-3**, *LACSD Harbor-UCLA Medical Center Satellite Station*, CSB operates a satellite station (927 sf) in the Existing Hospital Tower of the Medical Campus which, as of January 1, 2016, was staffed by 24 sworn officers, 25 civilian employees, and 82 non-LACSD contract security guards, with assets assigned to the office including four patrol cars, one Sheriff's security officer vehicle, two unmarked vehicles, two T3 Chariots, and four bicycles.[15] CSB also occupies a locker room facility (1,672 sf) at 21840 Normandie Avenue at the west end of the Campus.[16] CSB operates at the Project Site on a 24-hour basis utilizing multiple shifts (day, night, and early morning).

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[11] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[12] *Ibid.*

[13] *Ibid.*

[14] *Tracey Jue, Director, Facilities Planning Division, LACSD, letter dated March 31, 2016 and included in Appendix G-2 of this Draft EIR. Also, Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, memorandum dated March 18, 2016 and included in Appendix G-2. Also Chris E. Marks, Carson Station Commander, LACSD, memorandum dated March 22, 2016 and included in Appendix G-2*

[15] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, memorandum dated March 18, 2016 and included in Appendix G-2 of this Draft EIR.*

[16] *Ibid.*

Table 4.K.2-2

LACSD Call, Response Time, and Crime Data for the Unincorporated Communities Surrounding the Project Site

Calls for Service

Call Type	2011	2012	2013	2014	2015
Emergent	298	384	308	336	420
Priority	887	1,084	1,123	1,170	1,241
Routine	3,582	3,826	3,822	4,231	4,783
Total	**4,767**	**5,294**	**5,253**	**5,737**	**6,444**

Average Response Times (Minutes)

Call Type	2011	2012	2013	2014	2015
Emergent	5.1	5.5	4.6	5.2	4.2
Priority	8.2	9	8.4	7.9	7.7
Routine	42.1	49.3	38.5	36.1	32.2

Part I Crimes

Crime Type	2011	2012	2013	2014	2015
Homicide	0	4	2	4	1
Rape	1	1	1	3	1
Robbery, Weapon	8	17	14	11	13
Robbery, Strong-arm	12	15	9	7	10
Aggravated Assault	58	57	48	45	47
Burglary, Residence	82	82	98	81	103
Burglary, Other Structure	39	43	47	56	57
Grand Theft	61	47	52	58	59
Grand Theft Auto	89	106	97	121	108
Arson	3	2	6	2	3
Vehicle Burglary	103	118	113	95	119
Petty Theft	118	144	107	121	127
Total	**574**	**636**	**594**	**604**	**648**

Source: Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.

CSB also maintains several special purpose details in its central office which are available to respond to calls at the Project Site, including an Arson Explosives Detail, Canine Services Detail, Emergency Services Detail

Table 4.K.2-3

LACSD Harbor-UCLA Medical Center Satellite Station

Facility Name	Address	Jurisdiction	Distance	Personnel	Assets
LACSD Harbor-UCLA Medical Center Satellite Station	1000 W. Carson St.	LACSD (CSB)	On-site	24 sworn officers 25 civilian employees 82 non-LACSD security guards	4 patrol cars 1 security vehicle 2 unmarked vehicles 2 T3 chariots 4 bicycles

Source: Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.

(including emergency preparedness and management), Haz-Mat Detail, and Special Enforcement Detail (e.g., involved in high-risk tactical operations).[17]

During 2015, there were a total of 67 Part 1 crimes committed in RD 8545 (which includes the Harbor-UCLA Medical Center site) as set forth in **Table 4.K.2-4**, *2015 Crime Data for RD 8545*. Based on the total existing daytime population at the Project Site of 7,560[18] and the total number of existing officers operating out of the LACSD on-site satellite station of 106[19], the existing on-site officer to daytime population ratio at the Project Site is 1:71.3. Based on the existing daytime population of 7,560 and the total number of Part I crimes on the Project Site in 2015 of 67, the existing annual crimes per capita at the Project Site is 0.009.

Since CSB occupies offices within the Medical Center, CSB police protection response times to the Project Site are extremely rapid.[20] Response times for emergent, priority, and routine calls are often within five minutes.[21] This is compared to the widely-accepted police protection industry standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[22] Therefore, LACSD response times to the Project site are currently well within accepted standards.

(4) LACSD Transit Bureau South

[17] *Ibid.*

[18] *The total existing daytime population at the Project Site was estimated by adding the existing number of on-site employees (5,464) to the existing number of daily patient visits (2,096). The existing number of daily patient visits (2,096) was estimated by dividing the total number of existing annual patient visits (545,079) by the total number of weekday days per year (260). This provides a conservative estimate since it assumes that daily patient visits occur only during weekdays since most of the on-site clinics and other on-site patient-serving uses are only open during weekdays.*

[19] *The total number of existing officers operating out of the LACSD on-site satellite station (106) includes both sworn LACSD officers (24) and non-LACSD contract security guards (82)*

[20] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

[21] *Ibid.*

[22] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

Table 4.K.2-4

2015 Crime Data for RD 8545

Part 1 Crime Type	Number of Crimes
Murder/non-negligent homicide	0
Forcible rape	0
Robbery	1
Aggravated assault	1
Burglary	1
Motor vehicle theft	19
Larceny/theft	45
Arson	0
Total	**67**

Source: Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.

LACSD's Transit Bureau South (TBS) provides transit related police protection service (transit-related crimes only) for County Metropolitan Transportation Authority (Metro) facilities, including the Metro Transit Station located on Carson Street approximately 0.10 miles to the east.[23] Because of the proximity of the transit station to the Project Site, and because the Project Site is located within a County-designated Transit Overlay District (TOD) associated with the transit station, TBS assists in providing police protection

service to the Project Site (transit-related crimes only).[24] There were no reported transit-related crimes at the Project Site in 2015; there were a minimal number of transit-related crimes in the area immediately surrounding the Project Site in 2015, but none were related to the Harbor-UCLA Medical Center.[25]

(5) Emergency Management and Response

The CSB's Emergency Operations Bureau, specifically the Tactical Planning Unit and Sheriff's Response Team, is responsible for responding to natural or manmade disasters or emergencies at the Project Site that require the provision of law, order, emergency care, and shelter for disaster victims.[26] The Bureau adheres to the policies and procedures of the Los Angeles County Operational Area Emergency Response Plan (OAERP), maintained by the County Office of Emergency Management (OEM), which outlines the

[23] *Tracey Jue, Director, Facilities Planning Division, LACSD, correspondence dated March 31, 2016. Also, Karl R. Schow, Captain, Transit Bureau South, LACSD, correspondence dated March 17, 2016.*

[24] *Ibid.*

[25] *Ibid.*

[26] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

organizational structure for the County's coordinated response to catastrophic events.[27]

(6) Project Site

The 72-acre Project Site, which is bordered by Carson Street, 220th Street, Vermont Avenue, and Normandie Avenue, is currently fully developed with the Harbor-UCLA Medical Center. The Medical Center currently includes a total of 1,279,284 square feet of hospital/inpatient, medical office/outpatient, biomedical research and development (R&D), administrative office, day-care, warehouse/storage, library, central plant, and retail uses, and 453 hospital beds. These land uses support 5,464 existing employees and an estimated 545,079 annual patient visits (including admittances/discharges, diagnostics/treatment, and patient exam visits).

For the most part, the perimeter of the Medical Center Campus is demarcated with chain- link fences and concrete block walls, with limited landscape screening. The parking structures and some of the private streets used for maintenance are also gate-controlled, while most of the public streets and public surface parking lots are not gate-controlled.

The Los Angeles County Department of Health Services (DHS) maintains an existing Security Management Plan for the Harbor-UCLA Campus.[28] The purpose of the Security Management Plan is to minimize the risk of personal injury or property loss/damage due to criminal activity or workplace violence.[29] It is designed to minimize crimes against persons and property, provide security awareness, prepare for the successful management of sentinel security events, and to ensure compliance with applicable codes and regulations.[30] It incorporates patients, visitors, and staff as well as the facilities and grounds of the Medical Center and clinics.[31] The primary provisions of the Security Management Plan are summarized below[32]:

- Provide a visible security presence and patrol to reduce crime and increase the feeling of security by patients, visitors, and staff;
- Provide a timely response to emergencies and requests for assistance, including assistance in subduing violent or aggressive patients or visitors;
- Control vehicle movement on facility grounds, including control of parking and access to the Emergency Department and helistop;
- Provide an employee security orientation and education program;
- Implement routine and emergency incident reporting procedures;
- Implement a program of inspection, preventative maintenance and testing of security equipment;

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27 *Ibid.*

28 *Los Angeles County Department of Health Services, Security Management Plan for the Harbor-UCLA Medical Center, Policy No. 405, effective date March 1996, last revised March 2011.*

29 *Ibid.*

30 *Ibid.*

31 *Ibid.*

32 *Ibid.*

- Implement a plan for access control provisions and employee identification procedures; and
- Conduct annual evaluations of the scope, objectives, performance, and effectiveness of the program.

As part of the Security Management Program, LACSD uses a round-the-clock integrated combination of police protection officers and private security guards for: inspections, preventive maintenance, and testing of security equipment; security hazard identification and correction; monitoring of closed circuit surveillance cameras; weapons screening; access screening/control (including magnetometer screening at the main hospital, key card controls, etc.); and employee security education.[33] The Security Management Plan also outlines requirements for perimeter fencing, area lighting, provision of panic alarms in high risk areas, access controls to buildings and parking structures, and other on-site security features.[34] Finally, the Security Management Plan outlines emergency security procedures for handling security incidents, civil disturbances, bomb threats, infant abductions, hostage situations, and traffic control during security/emergency incidents.[35]

b. Regulatory Framework Summary

(1) Federal

There are no federal police protection regulations pertinent to the Project.

(2) State

There are no State police protection regulations pertinent to the Project.

(3) Local

(a) Los Angeles County General Plan

As a County-run facility on County-owned land in the unincorporated area, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element and the Safety Element. Applicable goals and polices from these Elements are identified below:

> **Goal PS/F 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.
>
> - **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
> - **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.
> - **Policy PF/F 1.6:** Support multi-faced public facility expansion efforts, such as substations,

[33] *Ibid.*

[34] *Ibid.*

[35] *Ibid.*

mobile units, and satellite offices.

Goal S 4: Effective County emergency response management capabilities.

- **Policy S 4.1:** Ensure that residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
- **Policy S 4.2:** Support County emergency providers in reaching their response time goals.
- **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.

(b) LACSD Level-of-Service Standards

LACSD has indicated that an officer-to-population ratio of one officer to every 1,000 residents provides the desired level of service for its service area.[36] This ideal standard typically is applied in EIRs for proposed projects that are served by LACSD as a means to develop a rough assessment of a project's impacts on police protection services.[37]

(c) LACSD Response Time Standards

As indicated previously, LACSD responses are within widely-accepted police protection industry standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[38]

(d) Los Angeles County Office of Emergency Management

The Los Angeles County Office of Emergency Management's (OEM) is responsible for emergency operations in unincorporated Los Angeles County. OEM's Operational Area Emergency Response Plan (OAERP) establishes the coordinated emergency response system, which includes prevention, protection, response, recovery, and mitigation. The OAERP also provides an overview of emergency management in the area.

(e) Crime Prevention Through Environmental Design

LACSD generally subscribes to the principles of Crime Prevention Through Environmental Design (CPTED).[39] The goal of CPTED is to reduce opportunities for criminal activities by employing physical design features that discourage anti-social behavior, while encouraging the legitimate use of the site.[40] The overall tenets of

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[36] *County of Los Angeles, Los Angeles County General Plan Update (2035), page 5.14-12. Adopted October 6, 2015.*

[37] *Ibid.*

[38] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[39] *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, memorandum dated March 18, 2016 and included in Appendix G-2 of this Draft EIR.*

[40] *Ibid.*

CPTED include defensible space, territoriality, surveillance, lighting, landscaping, and physical security.[41] LACSD ensures that new development adheres to CPTED principals through the provision of comments on development plans during the CEQA and development review processes.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of impacts on police protection services in this section addresses the Project's effects on the ability of LACSD to adequately serve existing and future population at the Project Site, taking into consideration the Project's security and/or design features intended to reduce the demand for police protection services; and potential need for new or expanded LACSD facilities. Because police protection services are provided to the Project Site primarily by the LACSD CBS satellite station on the Project rather than by the Carson Sheriff's Station, this analysis presents statistical for the satellite station and the RD within which the Project Site is located, including the ratio of satellite station sworn officers and contract security personnel to the on-site population, and the ratio of crimes within the RD to the on-site population, as a basis for measuring the increase in policing required for the Project. The analysis uses the above, rather than the LACSD level of service standard of one officer to every 1,000 residents, because the Project does not include a residential component and would not directly increase the number of residents in the West Carson community.

The analysis of impacts on police access and response times in this section focuses on existing response times to the Project Site, the consistency of these response times with LACSD response time standards, and whether the Project would potentially increase these response times due to increased traffic or other factors such that they would no longer be within the response time standards.

The analysis in this section is based on the information sources identified at the beginning of this section.

b. Thresholds of Significance

The analysis of potential impacts on police protection is based on thresholds derived from the Los Angeles County Department of Regional Planning Initial Study Checklist screening question, which is based in part on Appendix G of the State CEQA Guidelines. This question is as follows:

15. Public Services

    a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

        - Police protection?

[41] *Ibid.*

Based on this factor, the Project would have a potentially significant impact on police protection if it would result in the following:

SHER-1: Would the Project require the addition of a new police station, or the expansion, consolidation or relocation of an existing police station, to maintain service, which would result in a substantial adverse physical impact on the environment?

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Campus). The existing Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project), 5,464 existing employees, and an estimated 545,079 annual patient visits. The Master Plan Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities (including approximately a dozen WWII barracks), reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, and net increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 annual visits or 714[42] daily visits), respectively. Project construction would be anticipated to occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further project description, including Figure 2-6, *Harbor-UCLA Medical Campus Master Plan Site Plan*, and Table 2-1, *Existing and Proposed Land Use Summary*.

(2) Project Design Features

The Master Plan Project includes the following Project Design Features (PDFs) that are specific to sheriff protection services:

PDF-SHER-1: The County Department of Public Works shall provide the LACSD CSB with the on-site satellite station space, locker space, and associated parking spaces, required to serve the Project. This shall include, at a minimum, the existing amount of satellite station space (927 sf), locker room space (1,672 sf), and associated parking spaces, plus an additional 36 percent (approximately 1,000 sf) of this operational space and associated parking to serve the net increase in on-site employees and patients under the Project.

PDF-SHER-2: Project design shall adhere to the Crime Prevention Through Environmental Design (CPTED) principles. This shall include, but not be limited to, the provision of physical design features that discourage crime such as defensible space, territoriality, surveillance, lighting,

[42] *Daily visits were estimated based on the following formula which assumes that patients visits occur during workdays: 52 weeks per year times 5 days a week = 260 weekdays. So, 185,745 patients ÷ 260 days = ~715 patients a day. This provides a conservative estimate because it assumes that patient visits are restricted to weekdays, largely because most of the on-site clinics and other non-hospital on-site medical uses would only be open during weekdays.*

landscaping, and physical security. The CPTED features shall be identified on the design plans for the Project which shall be provided to the LACSD for review and approval.

d. Project Impacts

Threshold SHER-1: Would the Project require the addition of a new police station, or the expansion, consolidation or relocation of an existing police station, to maintain service, which would result in a substantial adverse physical impact on the environment?

Impact Statement SHER-1: *The Project would not require the addition of a new police station but would require the relocation and expansion of the existing on-site sheriff substation in order to maintain service levels, the construction of which could have potentially significant environmental effects. However, given implementation of Project Design Features and mitigation measures that address police protection service, response times, and Crime Prevention Through Environmental Design (CPTED), construction and operational impacts would be less than significant.*

(1) Construction

(a) Police Protection Services

Construction activities associated with the Project would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through the year 2030. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by Mitigation Measure SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during Project construction would not require new or altered police protection facilities to maintain service, and the impact would be less than significant.

(b) Police Access and Response Times

Regarding police access and response times during construction, construction staging and construction worker parking associated with the Project would be accommodated on the Project Site, limiting potential conflicts with traffic on local streets. In addition, as required by the Mitigation Measure SHER-2, emergency access would be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site: (1) as discussed in Section 4.L., *Transportation and Traffic*, with the implementation of PDF-TRAF-1, which requires the implementation of a County-required construction traffic management plan, Project traffic impacts during construction would be less than significant; (2) the Project would implement Mitigation Measure SHER-3, which requires that Project construction contractors coordinate with the LACSD concerning any planned temporary lane closures and other construction activities that could affect emergency access and emergency response times; and (3) an LACSD satellite station is located on-site such that LACSD response times to calls for service at the Project

Site would continue to be well below LACSD response time standards, even with the addition of Project construction traffic on local streets. Therefore, impacts on police access and response times during Project construction would not require new or altered police protection facilities to maintain service, and the impact would be less than significant.

(2) Operation

(a) Police Protection Services

As indicated previously, the Project would result in a net increase of up to 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of up to 2,030 employees and 185,745 annual patients' visits. This would translate to a net increase in the daily on-site population of up to 2,744 persons (an approximately 36 percent increase over the existing on-site daily population of 7,560).[43]. Based on the existing officer to daytime population ratio at the Project Site of 1:71.3, and the existing annual crimes per capita at the Project Site of 0.009, the Project would result in an increase in demand for up to 38 additional officers (both LACSD sworn officers and non-LACSD security guards, a 36 percent increase over the 106 existing officers), and an increase in on-site crimes of an estimated 25 crimes per year. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, per Project Design Feature PDF-SHER-1, the Project would continue to provide space for LACSD's satellite station, locker room, and associated parking on-site, and would increase these by a minimum of 36 percent (approximately 1,000 sf) to accommodate the additional officers required to serve the Project's demand for sheriff protection services. The construction of the expanded sheriff substation facilities at the Medical Center Campus would be carried out in the context of the larger Master Plan Project implementation phases, and thus the environmental impacts of such construction activities has been accounted for in the evaluation of impacts presented throughout Chapter 4 of this Draft EIR. Thus, given that the Project would not result in the need for additional construction, consolidation, relocation, or expansion of any other off-site police or sheriff facilities, impacts would be considered less than significant.

In addition, Project design would adhere to the Crime Prevention Through Environmental Design (CPTED) principles as required by PDF-SHER-2, and DHS would revise the Security Management Plan for the Harbor-UCLA Campus, as required, to address the proposed physical and operational changes to the Campus under the Project as required by Mitigation Measure SHER-4. These would include structural and operational security features that would reduce the incremental increase in crime and the need for additional officers under the Project.

Because the environmental impacts associated with constructing the additional on-site LACSD facility space and parking is already evaluated as part of the Project in this Draft EIR (as part of the 1,178,071 sf net increase in Campus-wide square footage), the development of the additional LACSD facility square footage and parking required to serve the Project would not result in additional significant environmental effects.

[43] *The total net increase in daytime population at the Project Site was estimated by adding the net increase in on-site employees (2,030) to the net increase in daily patient visits (714). The net increase in daily patient visits (714) was estimated by dividing the total net increase in annual patient visits (185,745) by the total number of weekdays per year (260). This provides a conservative estimate since it assumes that daily patient visits occur only during weekdays since most of the on-site clinics and other on-site patient-serving uses are only open during weekdays.*

Furthermore, the Project would increase County tax revenues which the County could use to hire the additional officers required to serve the Project. Therefore, Project operational impacts on police protection services would be less than significant.

(b) Police Access and Response Times

The LACSD's Carson Sheriff's Station is located 2.0 miles east of the Project Site and has responses times to the Project Site of four minutes for emergency calls, seven minutes for priority calls, and 28 minutes for routine calls[44], while LACSD's Harbor-UCLA Medical Center satellite station is located on-site and has response times to all three types of calls on-site that are often within five minutes.[45] These are compared LACSD's response time standards of 10 minutes or less for emergency calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.[46] Based on the above, LACSD's responses times to the Project Site from both the Carson Sheriff's Station and the on-site satellite station are well within LACSD response time standards.

Development of the Project would increase the existing employee population and annual patient visits at the Project Site, and would increase operational traffic in the Project vicinity. As determined by the traffic analysis in Section 4.L, *Transportation and Parking*, of this Draft EIR, Project operational traffic would significantly impact a total of six intersections under Cumulative (2030) Plus Project Impacts, even with implementation of all feasible mitigation measures. Accordingly, traffic associated with the Project could potentially affect LACSD emergency vehicle response times in the area from the Carson Sheriff's Station, but would not be expected to affect LACSD response times from the on-site satellite station given the on-site location of that facility.

Construction traffic impacts are addressed through PDF-TRAF-1, which requires a Construction Traffic Management Plan. Furthermore, emergency response is routinely facilitated, particularly for high priority calls, through such means as the use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. Also, emergency response times to the Project Site from both the Carson Sheriff's Station and the on-site satellite station are well within the LACSD's response time times standards, and that the majority of on-site calls would be responses to from the on-site satellite station that would be unaffected by off-site traffic. For all these reasons, LACSD response times to the Project Site would continue to be within LACSD response time standards, Project operational impacts on LACSD response times would not require new or physically altered police stations given the provision of an expanded on-site sheriff substation on the Medical Center Campus as required by PDF-SHER-1, and the impact would be less than significant.

e. Cumulative Impacts

(a) Police Protection Services

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR provides a list of 26 related

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44 *Ibid.*

45 *Britta S. Steinbrenner, Captain, County Services Bureau, LACSD, correspondence dated March 18, 2016.*

46 *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

projects that are planned or are under construction within an approximately 2.4 mile radius of the Project. These projects are summarized in Table 3-1, *Related Projects List*, and shown on Figure 3-1, *Related Projects Map*, in Chapter 3.0. As shown in Figure 3-1, these related Projects occur in several jurisdictions, including unincorporated Los Angeles County and the Cities of Los Angeles Carson and Torrance. Of these related projects, four occur within unincorporated Los Angeles County and, along with the Project, would create a demand for service from LACSD. These four related projects are listed in **Table 4.K.2-4**, *Related Projects for Sheriff Protection*. As indicated therein, these related projects would include a total of 211 dwelling units and 3,900 sf of retail.

Table 4.K.2-4

Related Projects for Sheriff Protection

Map ID	Address	Land Use	Size
1	24500 Normandie Ave.	Apartments	112 du
		Retail	3,900 sf
2	1028 W 223rd St.	Condos	19 du
3	22700 Meyer St.	Condos	60 du
4	19208 Vermont Ave.	Condos	20 du
	Total		**211 du**
			3,900 sf

Source: PCR Services Corporation, May 2016. Based on related projects list from Fehr & Peers Traffic Study, 2016.

Based on the 177[47] sworn officers operating out of the Carson Sheriff's Station and the existing resident population within the Carson Station service area of this station of 117,000[48], the existing officer to resident population in the Carson Station service area is 1:661. Applying this ratio to the 597 residents projected for the related project's 211 dwelling units (based on 2.83 persons per household within the County's South Bay Planning Area), the related projects would create a demand for one additional LACSD officer. And, as discussed previously under the Project analysis, the Project would create a demand for up to 38 additional LACSD officers (both LACSD sworn officers and non-LACSD security guards).

While the Project and the related projects together would generate a demand for up to 39 additional LACSD officers, the related projects would create the demand from the Carson Sheriff's Station while the Project would create the demand primarily from the LACSD CSB on-site satellite station. In this respect, the Project would not contribute to the cumulative demand for service from LACSD's Carson Sheriff's Station. However, even if the demand from the related projects and the Project were considered together, this demand would not be expected to require new or expanded LACSD that would result in additional significant environmental

[47] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

[48] *Ibid.*

effects because: (1) the Project would provide the additional on-site operational space and parking required to accommodate its demand for 38 additional officers, and the impacts of constructing this space and parking is already evaluated as part of the Project in this Draft EIR; (2) it is anticipated that the one additional officer required by the related projects would be able to be accommodated at the Carson Sheriff's Station without expansion because this would represent a less than one percent increase in the number of officers at the station; (3) the Project and the related projects would be required to implement security features, such as those outlined in CPTED, to reduce their demand for service from LACSD; (4) the Project and related projects would be subject to review by LACSD to ensure that required security features are incorporated; and (5) the Project and the related projects would generate tax revenues for the County that the County could use to hire the additional LACSD officers; etc.). Therefore, the cumulative impact on police protection services would be less than significant.

(b) Police Access and Response Times

The Project and the related projects could potentially block access to on-site and adjacent off-site uses, could include construction activities (such as temporary lane closures) that disrupt area traffic, and could generate construction traffic that that results in localized traffic congestion and slows LACSD emergency response. As indicated in the Project analysis above, Project construction activities would not result in significant impacts in terms of these issues because: (1) the Project would restrict most construction staging and parking to the Project Site, implement a construction management plan, and coordinate with LACSD in advance of any lane closures or other activities that could impact emergency access and response times; (2) LACSD response times to the Project Site from both the Carson Sheriff's Station and the LACSD on-site satellite station are both well below LACSD response time standards; and (3) the traffic analysis in Section 4.L., *Transportation and Traffic*, of this Draft EIR concludes that Project construction traffic would result in less than significant traffic congestion. Similarly, as indicated in the Project analysis above, Project operation would not result in significant impacts associated with these issues because: (1) LACSD response times to the Project Site from both the Carson Sheriff's Station and the LACSD on-site satellite station are both well below LACSD response time standards; and (2) while the traffic analysis in Section 4.L., *Transportation and Traffic*, of this Draft EIR concludes that Project operational traffic would significantly impact 10 intersections, even with implementation of all feasible mitigation measures, this traffic would not be expected to adversely affect LACSD response times to the Project Site given the on-site location of the LACSD satellite station.

Several of the above considerations that lead to the conclusions of less than significant Project impacts on police access and response times during Project construction and operation would also apply to the related Projects. For example, like the Project, the related Projects would be required to implement a construction management plan to minimize traffic disruptions during construction, and like the Project, LACSD response times from the Carson Sheriff's Station to the related projects are likely well below LACSD response time standards. Furthermore, emergency response is routinely facilitated through the use of sirens to clear a path of travel, given the grid pattern of the local street system there are likely multiple routes for the Carson Station to each of the related projects such that traffic congested streets could likely be avoided, and LACSD maintains mutual aid agreements with the surrounding cities such that police response could potentially originate from multiple stations in the area. However, it is unknown whether all 26 of the related projects would restrict construction staging and parking on-site, or that the traffic analysis for each of these related projects would conclude less than significant construction and operational traffic impacts. Hence, this analysis conservatively concludes that cumulative impacts to police access and response times would be significant, although the Project's contribution to any such impacts would not be cumulatively considerable

(because the Project would result in less than significant impacts to police access and response times).

While the cumulative impact on police access and response times could potentially contribute to the future need for new or expanded LACSD facilities in the West Carson community, and while the construction of any such facilities could potentially result in substantial adverse physical impacts, it would be too speculative to predict where and when such new or expanded facilities would be needed as LACSD does not currently have plans for new or expanded LACSD facilities in the area.[49] Therefore, per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required.

4. MITIGATION MEASURES

In order to reduce impacts related to sheriff protection to less than significant, the following mitigation measures are required:

Mitigation Measure SHER-1: During Project construction, construction sites shall be fully fenced, lighted with security lighting, and patrolled by either the LACSD on-site satellite station personnel (either sworn officers or contract security guards) or private security hired by DHS.

Mitigation Measure SHER-2: Emergency access to the LACSD shall be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction.

Mitigation Measure SHER-3: The Project construction contractors shall regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times.

Mitigation Measure SHER-4: The Security Management Plan for the Harbor-UCLA Campus shall be updated by DHS, in consultation with the LACSD, to address the proposed physical and operational changes to the Campus under the Project. At a minimum, the primary security features and measures currently in place at the Campus under the Security Management Plan shall be carried forward under the Project.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant impacts on sheriff protection with implementation of the Project Design Features and mitigation measures provided in this section.

[49] *Chris E. Marks, Captain, Carson Station Commander, LACSD, correspondence dated March 22, 2016.*

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4. ENVIRONMENTAL IMPACT ANALYSIS

K. PUBLIC SERVICES

3 PARKS AND RECREATION

1. INTRODUCTION

This section identifies and describes the public parks and recreational facilities serving the Project Site, including those operated by the Los Angeles County Department of Parks and Recreation (LACDPR) and the surrounding cities (Los Angeles, Carson and Torrance), and analyzes the potential impacts of the Project on these facilities, including whether the Project would generate the need for new or physically altered parks and recreation facilities. This section is based, in part, on information provided by LACDPR and the cities of Los Angeles, Carson and Torrance (included in Appendix G-3, *Parks and Recreation Department Correspondence*, of this Draft EIR). This section also incorporates information from the LACDPR website, Los County General Plan Update (2035) and associated EIR (2015); and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

The Harbor-UCLA Medical Center Campus is located within the unincorporated Harbor Community Plan Area of the County of Los Angeles, within a relatively short distance of several incorporated cities including Los Angeles, Torrance and Carson. Within the unincorporated areas of the County, LACDPR is responsible for providing public parks and recreational facilities. LACDPR owns and administers 70,000 acres of parks and recreational facilities, in both unincorporated areas and cities within the County, broken into a local and regional park system.[1] The local park system is intended to meet the needs of local residents, and consists of neighborhood parks, community parks, pocket parks, and park nodes. The regional park system is intended to meet the needs of residents and visitors throughout the County, and consists of community regional parks, regional parks, and special use facilities (County beaches, golf courses, etc.). In addition, County residents may be served by LACDPR multi-use trails, parks and recreational facilities owned and maintained by the Cities of Los Angeles, Torrance and Carson, parks shared with local schools, and private recreational facilities.

Los Angeles County has an existing average of 3.3 acres of local parkland per 1,000 residents.[2] Within the unincorporated West Carson Community, the ratio is 0.02 acres of parkland per 1,000 residents (e.g., 0.53

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[1] *County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 10: Parks and Recreation Element. Adopted October 6, 2015.*

[2] *Clement Lau, Department Facilities Planner II, LACDPR, e-mail dated February 22, 2016 and included in Appendix G-3 of this Draft EIR.*

acres / 21,715 residents x 1,000).[3] Hence, the West Carson community is substantially under-served by County parks.

Nine public parks and recreational facilities are located within a two mile radius of the Project site (the service radius for County community parks). The closest County parks are: Learning Grove County Park, a 0.53-acre pocket part located approximately 0.2 miles to the south and the only County park in the West Carson community; the Links at Victoria Golf Course, a special use park located approximately 1.7 miles to the northeast; and Victoria Community Regional Park, a community/regional park located approximately 2.0 miles to the northeast. The closest City parks are: Normandale Recreation Center, a City of Los Angeles neighborhood park located approximately 0.3 miles to the south; Veteran's Park, a City of Carson park located approximately 0.7 miles to the southeast; and Carson Park, a City of Carson park located approximately 0.8 miles to the northeast. Lastly, a new County Neighborhood Park is under construction approximately 1.3 miles north of the Project Site. The locations of these 10 public park and recreational facilities are shown in **Figure 4.K.3-1**, *Public Parks and Recreation Facilities Map*, and while data about these parks and recreation facilities is provided in **Table 4.K.3-2**, *Public Parks and Recreation Facilities in the Project Vicinity*.

There are no public parks and recreational facilities currently located on the HUCLA Campus. As indicated in Figure 2-2, *Aerial Photograph with Surrounding Land Uses*, in Chapter 2.0, *Project Description*, of this Draft EIR, existing on-site landscaped open space areas are limited and discontinuous, with several landscaped courtyards at the western end of the Campus surrounding the MFI and CII buildings, on the LA BioMed Campus, and in scattered locations in the north-central portion of the Campus. The peripheries of the on-site surface parking lots along Vermont Avenue are also planted with trees. However, the remainder of the Campus has little in the way of landscaped open space areas, and there are very few places for patients or visitors to congregate outdoors. Furthermore, there are no landscaped parkways or street trees along the four streets bordering the Project Site.

b. Regulatory Setting

The following subsections discuss the various parks and recreation codes, regulations and polices applicable to the Project at the federal, state and local levels.

(1) Federal

There are no federal parks and recreation regulations applicable to the Project.

(2) State

There are no State parks and recreation regulations applicable to the Project.[4]

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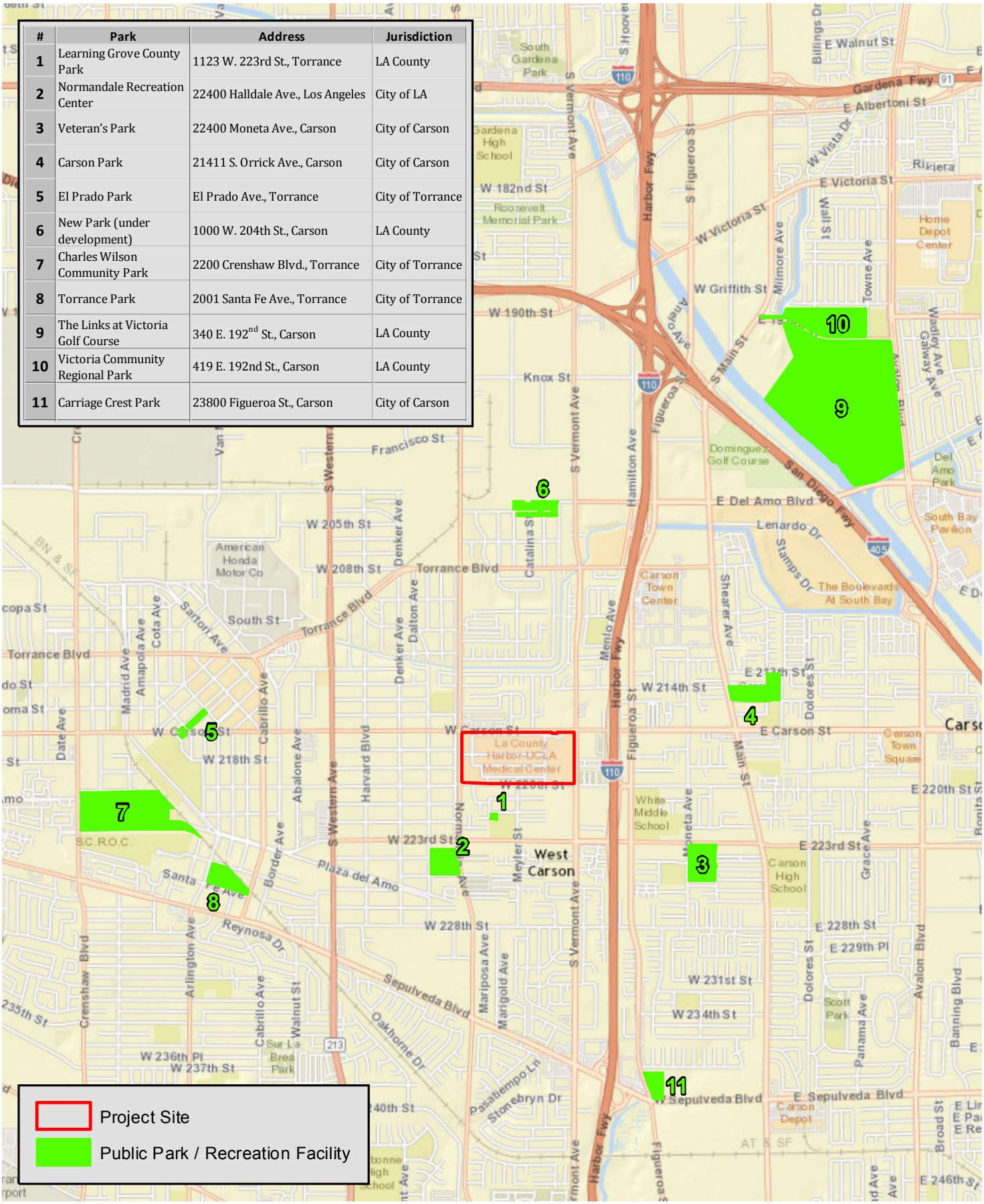
[3] *Ibid.*

[4] *Section 66477 of the California Government Code, also known as the Quimby Act, was enacted by the California legislature in 1975 to promote the availability of park and open space areas in response to California's rapid urbanization. The Act authorizes cities and counties to enact ordinances requiring the dedication of land, the payment of fees for park and/or recreational facilities in lieu thereof, or both, by developers of residential subdivisions as a condition of subdivision approval. Because the proposed Project does not propose a residential subdivision, the Quimby Act does not apply to the proposed Project.*



#	Park	Address	Jurisdiction
1	Learning Grove County Park	1123 W. 223rd St., Torrance	LA County
2	Normandale Recreation Center	22400 Halldale Ave., Los Angeles	City of LA
3	Veteran's Park	22400 Moneta Ave., Carson	City of Carson
4	Carson Park	21411 S. Orrick Ave., Carson	City of Carson
5	El Prado Park	El Prado Ave., Torrance	City of Torrance
6	New Park (under development)	1000 W. 204th St., Carson	LA County
7	Charles Wilson Community Park	2200 Crenshaw Blvd., Torrance	City of Torrance
8	Torrance Park	2001 Santa Fe Ave., Torrance	City of Torrance
9	The Links at Victoria Golf Course	340 E. 192nd St., Carson	LA County
10	Victoria Community Regional Park	419 E. 192nd St., Carson	LA County
11	Carriage Crest Park	23800 Figueroa St., Carson	City of Carson

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Public Parks and Recreation Facilities Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.3-1

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Table 4.K.3-1

Public Parks and Recreation Facilities in the Project Vicinity

Facility Name	Address	Jurisdiction	Classification[a]	Amenities[a]	Size (ac)[a]	Distance (miles)
Learning Grove County Park	1123 W. 223rd St., Carson	County	Pocket Park	Turf	0.5	0.2
Normandale Rec. Center	22400 Halldale Ave., Torrance	LA	Neighborhood Park	Auditorium, baseball diamond, basketball/volleyball courts, children's play area, football field, gym, soccer field	10.1	0.3
Veteran's Park	22400 Moneta Ave., Carson	Carson	City Park (Community Use)	Baseball diamonds, multi-purpose rooms, play area, picnic area, skate park, tennis courts, amphitheater	12.3	0.7
Carson Park	21411 S. Orrick Ave., Carson	Carson	City Park Community Use)	Baseball diamonds, swimming pool, play area, multi-purpose game courts, multi-purpose building, picnic area, restrooms	10.8	0.8
El Prado Park	El Prado Ave., Torrance	Torrance	City Park	Passive recreation, greenbelt, park benches	2.9	1.2
New Park (under development)	1000 W. 204th St., Carson	County[b]	Neighborhood Park	Baseball/softball field, basketball court, volleyball court, walking/jogging trails, children's play area, benches/picnic tables, restrooms	8.5	1.3
Charles Wilson Community Park	2200 Crenshaw Blvd., Torrance	Torrance	City Park	Picnic areas, barbecues, softball diamonds, basketball courts, outdoor amphitheater, tennis/paddle tennis courts, roller hockey rink, batting cages, fitness course, restrooms	44.1	1.3
Torrance Park	2001 Santa Fe Ave., Torrance	Torrance	City Park	Outdoor band shell, baseball diamond, basketball court, picnic area, children's play area, barbecues, restrooms.	10.2	1.3
The Links at Victoria Golf Course	340 E. 192nd St., Carson	County	Special Use Park	Golf course	167.0	1.7

Table 4.K.3-1

Public Parks and Recreational Facilities in the Project Vicinity

Facility Name	Address	Jurisdiction	Classification[a]	Amenities[a]	Size (ac)[a]	Distance (miles)
Carriage Crest Park	23800 Figueroa St., Carson	Carson	City Park (Community Use)	--	4.9	1.8
Victoria Community Regional Park	419 E. 192nd St., Carson	County	Community/ Regional Park	Gym, multi-purpose room, multipurpose field, baseball diamonds, basketball courts, cricket field, tennis courts, children's play area, heated pool, picnic areas, barbeques	34.0	2.0

[a] *Data for Los Angeles County parks from: http://parks.lacounty.gov/wps/portal/dpr/Parks, accessed February 25, 2015; Clement Lau, Department Facilities Planner II, LACDPR, e-mail dated February 22, 2016 and included in Appendix G-3 of this Draft EIR; and Mark Glassrock, Director of Special Projects, Los Angeles Neighborhood Land Trust, e-mail dated February 29, 2016. Data for City of Los Angeles Parks from: ttp://www.laparks.org /dos/reccenter/facility/normandaleRC.htm, accessed February 25, 2015. Data for City of Carson parks from: http://ci.carson.ca.us/department/communityservices/parks_rec_parks.asp, accessed February 25, 2015. Data for City of Torrance parks from: www.torrance.gov/Parks/Documents/Park AmenitiesGrid(2).pdf), accessed February 25, 2014.*

[b] *Pending lease agreements with Del Amo Neighborhood Park LLC.*

Source: PCR Services Corporation, October 2015

(3) Local

(a) Los Angeles County General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035). The Parks and Recreation Element (Element) of the General Plan Update identifies parkland classifications for County parks and recreational facilities, and provides policy direction for the provision, expansion and maintenance of the County's parks and recreational facilities.[5] The Element breaks the County park system into a local park system consisting of neighborhood parks, local parks, pocket parks and park nodes, and a regional park system consisting of community regional parks, regional parks and special use facilities. **Table 4.K.3-2**, *Los Angeles County Park Classifications*, identifies the Element-specified criteria for each of these park types.

The Element also identifies the following parks and recreation polices applicable to the Project:

- **Policy P/R 1.2:** Provide additional active and passive recreational opportunities based on a community's setting as well as its recreational needs and preferences.
- **Policy P/R 1.3:** Consider emerging trends in parks and recreation when planning new parks and recreational programs.
- **Policy P/R 1.5:** Ensure that County parks and recreational facilities are clean, safe, inviting, usable, and accessible.
- **Policy P/R 3.1:** The County standard for the provision of parkland is 4 acres of local parkland per 1,000 residents of the population in the unincorporated areas, and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.[6]
- **Policy P/R 3.4:** Provide additional parks in communities with insufficient local parkland, as identified through the gap analysis.
- **Policy P/R 3.9:** Site new parks near schools, libraries, senior centers, and other community facilities, where possible.
- **Policy P/R 5.7:** Integrate a range of cultural programs into existing activities, and partner with multicultural vendors and organizations.

[5] *County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 10: Parks and Recreation Element. Adopted October 6, 2015.*

[6] *This policy is identified here for informational purposes. Because the Project does not include a residential component, this policy is not applicable to the Project.*

Table 4.K.3-2

Los Angeles County Park Classifications

Facility	Typical Park Features and Amenities
Local Park System	
Community Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: 10-20 Service Area: 1-2 miles	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, family and group picnic areas with overhead shelters, barbecues. Active sports activities including but not limited to: lighted sports fields, basketball courts and tennis courts, arena soccer, roller hockey, community gardens, dog parks. Park facilities including but not limited to: public restrooms, concession, community, and maintenance buildings, onsite parking/information kiosks.
Neighborhood Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: 3-10 Service Area: ½ mile	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues. Active park amenities including but not limited to: practice sports fields, basketball, tennis, volleyball courts. Park facilities including but not limited to: public restroom, onsite parking/ information kiosks.
Pocket Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: < 3 Service Area: ¼ mile	Passive park amenities including but not limited to: picnic areas, seating areas. Active park amenities including but not limited to: children's play apparatus.
Park Node Acres Per Thousand Population: 4/1,000 Suggested Acreage: ≤ 1/4 Service Area: No service radius area	Varies: can include plazas, rest areas, playgrounds, landmarks, public art installations.
Regional Park System	
Community Regional Park Acres Per Thousand Population: 6/1,000 Suggested Acreage: 20-100 Service Area: ≤ 20 miles	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues. Additional amenities may include one or more of the following features: multiple sports facilities, aquatics center, fishing lake, community building and gymnasium, scenic views/vistas. Park facilities including but not limited to: public restrooms, concession, community, and maintenance buildings, onsite parking/information kiosks.
Regional Park Acres Per Thousand Population: 6/1,000 Suggested Acreage: > 100 Service Area: ≥ 25 miles	Passive park amenities including but not limited to: group picnic areas with overhead shelters, barbecues. Additional amenities may include one more of the following features: lakes, wetlands, auditoriums, water bodies for swimming, fishing and boating, sports fields.
Special Use Facility Acres Per Thousand Population: 6/1,000 Suggested Acreage: No size criteria Service Area: No service radius area	Generally, single purpose facilities. Can include passive features such as: wilderness parks, nature preserves, botanical gardens, nature centers. Active uses can include: performing arts, water parks, golf courses/driving ranges.

Source: County of Los Angeles, Los Angeles County General Plan Update (2035), Chapter 10: Parks and Recreation Element. Tables 10.2 and 10.3, Adopted October 6, 2015.

(b) Los Angeles County Code

The Los Angeles County Code contains several sections (Sections 21.24.340, 21.24.350, etc.) requiring the dedication of parkland or payment of in-lieu fees by new residential subdivision development to offset the increase in park demand associated with this development as authorized by Section 66477 of the California Government Code (Quimby Act). As a condition of zone change, General Plan amendment, specific plan, or development agreement approval, these codes require applicants to dedicate park land, or pay in-lieu fees for such parkland, based on the following formula set in Section 21.24.340: P = 0.003(UP), where P = acres of parkland, U = number of dwelling units, and P = persons per proposed unit type within the given unincorporated community as identified in the table in the Code section. For example, if a Project in the West Carson community included 1,000 single family residential units, it would be required to provide 8.85 acres of parkland or pay equivalent in-lieu fees (e.g., acres of parkland = 0.003(1,000 x 2.95)).

These code sections are identified here for informational purposes and apply to eligible residential development in the areas around the project. Because the proposed Project does not include a residential component, these requirements do not apply to the Project.

(c) Los Angeles County Parks Proposition A

Parks Proposition A, approved in 1992, with a second Parks Proposition A approved in 1996, authorized an annual County assessment on nearly all of the 2.25 million parcels of real property in Los Angeles County. Parks Proposition A Funds may be used to fund: the development, acquisition, improvement, restoration and maintenance of parks; recreational, cultural and communities facilities; and open space lands. These funds are administered by the Los Angeles County Regional Park and Open Space District. A parcel tax measure will be on the November 2016 ballot in the County which, if approved, would provide continued funding for parks.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis in this section evaluates the potential for impacts to public parks and recreational facilities that would serve the Project. The methodology for this analysis included corresponding with the LACDPR and the Cities of Los Angeles, Carson and Torrance to request current information existing parks are recreational facilities that would serve the Project, service ratios, and performance objectives. In addition, available information concerning parks and recreational facilities was obtained from the LACDPR website, Los County General Plan Update (2035) and associated Environmental Impact Report (EIR, 2015), and other County plans and environmental documents. Based on the addition of the Project, the analysis makes a determination of whether the Project would meet County parks requirements and thus not require new or physically altered parks or recreational facilities, or fall short of such requirements in which case: (1) additional parks and recreational facilities could potentially be required; and/or (2) substantial physical deterioration of existing parks and recreational facilities could occur.

b. Thresholds of Significance

The potential for parks and recreation impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. These questions are as

follows:

(XV) Public Services.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Parks?

(XVI) Recreation.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Based on the above factors, the Project would have a potentially significant impact on parks and recreation if it would result in any of the following:

PARKS-1: Would the Project require new or physically altered parks or recreational facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

PARKS-2: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

PARKS-3: Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

c. Project Characteristics and Design Features

(1) Project Characteristics

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Campus). The existing Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower on schedule to meet increasing state law seismic requirements for acute care facilities, renovation of the Existing Hospital Tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, to include new hospital, medical office, medical research, and service commercial uses, a net increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34

percent (185,745 visits), respectively, and an unknown increase in Campus visitors. Project construction would occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further project description, including Figure 2-6, *Harbor-UCLA Medical Campus Master Plan Site Plan*, and Table 2-1, *Existing and Proposed Land Use Summary*.

There is no existing dedicated open space or natural areas on the Project Site, nor does the County have open space dedication requirements applicable to the limited commercial services (e.g., coffee stand, sundry shop, etc.) that are part of the proposed Project. However, the Project would provide on-site open space in the form of landscaped areas (see Figure 2-6 in Chapter 2.0) for use by Project patients, visitors and employees. These landscaped open space areas would include: a central garden spine extending through the Project Site in a north-south orientation from Carson Street; landscape promenades into the Project Site along the proposed vehicular access routes; several courtyards and plazas, including one immediately east of the existing Surgery/Emergency Medical Building, one immediately south of the proposed New Hospital Tower, one along 220th Street in the area of several of the research centers, and several between the buildings in the Biosciences Campus; and, potentially, roof gardens on some of the Project buildings. Landscaped pedestrian paths would also be provided throughout, and landscaped buffers and street trees would be provided along the campus perimeter.

(2) Project Design Features

The Project does not include any Project Design Features (PDFs) related to parks and recreation.

d. Project Impacts

Threshold PARKS-1: Would the Project require new or physically altered parks or recreational facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Threshold PARKS-2: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Threshold PARKS-3: Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Statement PARKS-1: *Project construction and operation would not create a demand for parks and recreational facilities that would require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. In addition, the Project would not include new recreational facilities or require the construction or expansion of existing facilities. Therefore, the impact would be less than significant.*

(1) Construction

Project construction activities would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Project Site. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing parks and

recreational facilities would be maintained during Project construction (see Section 4.L., *Transportation and Traffic*, of this Draft EIR for further discussion). Also, while construction activities at the Project Site would potentially be perceptible by users of some of the local parks and recreational facilities (for example, at Learning Grove County Park located approximately 0.2 miles to the south), this would not result in substantial physical deterioration of these facilities.

Project construction would require construction workers at the Project Site intermittently through the year 2030 as discrete phases of the Project are constructed. The exact number of construction workers during each construction phase is not known at this time. However, given the general accessibility of the Project Site and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities such that new such facilities would be required and substantial physical deterioration of such facilities would occur. Furthermore, construction workers would have limited opportunities during the work day to use local parks and recreational facilities, and any demand for parks and recreational facilities that would occur would be limited and temporary, lasting only as long as the given construction phase.

Finally, construction of the proposed on-site landscaped open space amenities could result in environmental effects (e.g., visual impacts, dust and other air emissions, noise, and traffic during the construction period). However, these environmental effects have been evaluated as part of the construction impacts of the Project in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Parking*, of this Draft EIR, and no additional substantial environmental effects would occur.

Based on the above discussion, Project construction would not require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. Therefore, impacts would be less than significant.

(2) Operation

As indicated previously in Subsection 3.C., *Project Characteristics and Design Features*, the proposed Project is a commercial project to include new hospital, medical office, medical research, and service commercial uses. No residential uses are proposed. Therefore, the Project would not create a direct demand for parks and recreational facilities, and would not be subject to the park dedication and in-lieu fee requirements of the County Code or the park to resident population standards of the County General Plan.

As indicated above in Subsection 3.C, the Project would result in a net increase of 1,178,071 square feet of building floor area, increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors. This increase in Campus patients, employees and visitors would not be expected to result in a substantial increase in demand for public parks and recreational facilities for two reasons. First, substantial on-site landscaped open space would be provided to serve these populations as shown in Figure 2-6 in Chapter 2.0 of this Draft EIR, including a central garden spine, landscape promenades, several courtyards and plazas, roof gardens, landscaped pedestrian paths, and landscaped buffers and street trees would be provided along the campus perimeter. Second, any usage by these populations of existing public parks and recreation facilities would likely be split among the eleven public parks and recreational facilities located within a two-mile radius of the Project Site identified in Figure 4.K.3-1.

Many of the approximately 2,030 new Project employees and families could create a demand for public parks and recreational facilities. However, because a portion of the new on-site employees would be expected to be derived from the existing local labor pool, it is likely that these employees and their families likely already generate a demand for public parks and recreational facilities in the local area. Furthermore, any use of existing public parks and recreational facilities by Project employees and their families would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities identified in Figure 4.K.3-1.

Based on the above, Project operation would not require new or physically altered parks and recreational facilities or result in substantial physical deterioration of such facilities. Therefore, impacts would be less than significant.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within an approximately 2.4 mile radius of the Project. **Table 4.K.3-3**, *Related Projects for Parks and Recreation*, identifies the 17 related projects located within a two-mile radius of the Project Site (the cumulative study area for parks). As indicated, these 17 related projects would include 2,742 dwelling units (du), 300 hotel rooms, and approximately 653,000 square feet of non-residential floor area.

The development of the 17 related projects within a two-mile radius of the Project Site that are identified in Table 4.K.3-3, along with the proposed Project, would increase the demand for public parks and recreational facilities from the County and the Cities of Los Angeles, Carson and Torrance. However, residential subdivisions in the County and City of Los Angeles are required to dedicate parkland or pay in-lieu fees to serve their respective populations, so that any of the 17 related projects that represent residential subdivisions would not be expected to contribute to the cumulative demand for public parks and recreation facilities. Furthermore, non-residential Projects, such as the proposed Project and roughly half of the related projects, generate an indirect rather than a direct demand for parks and recreational facilities and typically provide on-site parks and recreational facilities to help meet this indirect demand. In addition, the Project and the 17 related Projects would pay property and other taxes and fees which could be used by the County and the Cities of Los Angeles, Carson and Torrance to develop new parks, and voters have approved propositions and bonds (for example, Los Angeles County Proposition A) to help fund new park development. Furthermore, pending lease agreements with Del Amo Neighborhood Park LLC, the County will shortly be opening a new Neighborhood Park at 1000 W. 204th Street in Carson to serve the West Carson community which would help serve the Project and related projects. Lastly, as indicated in the analysis in Subsection d, *Project Impacts*, above, the Project would not be expected to generate a substantial demand for public parks and recreational facilities for several reasons, such that it would not be expected to contribute substantially to cumulative demand for public parks and recreational facilities. For all these reasons, cumulative parks and recreation impacts would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required. For measures to mitigate the construction impacts of the Project (including the impacts associated with the construction of the proposed on-site landscaped open space

amenities), please see in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Traffic*, of this Draft EIR.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant parks and recreation impacts.

Table 4.K.3-3

Related Projects for Parks and Recreation

ID	Jurisdiction	Project location	Land use	Size
1	County	24500 Normandie Ave	Apartments	112 du
			Retail	3.9 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
7	Carson	616 E Carson	Apartments	152 du
			Retail	13 ksf
8	Carson	19220 S Main St	Commercial	65 ksf
10	Carson	21521 S Avalon Blvd	Apartments	357 du
			Retail	32 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
14	Carson	22303 Avalon	Automated Car Wash	4.673 ksf
			Office Space	0.48 ksf
15	Carson	Carson Marketplace	Regional Retail	13.07 ksf
			Neighborhood Retail	130 ksf
			Residential	1,550 du
			Hotel	300 rooms
			Restaurants	81.125 ksf
			Commercial Recreational	214 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments	352 du
			Retail	17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments	44 du
			Retail	3.7 ksf
20	Torrance	1752 Border Ave	Warehouse	10 ksf
			Automobile Care Center	3 ksf
25	Torrance	20405 Gramercy Place	Light Industrial	17 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse	30 ksf
			Manufacturing	13 ksf
		Total	**Residential**	**2,742 du**
			Hotel Rooms	**300 rms**
			Non-Residential	**652.688 ksf**

Source: PCR Services Corporation, 2016. Based on the Related Projects Table from the Fehr and Peers Traffic Study, 2016.

4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
4 SCHOOLS

1. INTRODUCTION

This section analyzes the Project's potential impacts on public schools operated by the Los Angeles Unified School District (LAUSD) and other public schools in the Project vicinity. The analysis identifies the potential impacts of the proposed Project on school enrollment and capacity, and whether new or physically altered school facilities may be required. This section is based, in part, on information provided by the LAUSD (included in **Appendix G-4**, *School District Correspondence*, of this Draft EIR). This section also incorporates information from Los County General Plan Update (2035) and associated EIR (2015), and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

The Harbor-UCLA Medical Center Campus is located in the unincorporated community of West Carson in Los Angeles County, within relatively short distance of several incorporated cities including Los Angeles, Torrance and Carson. The site falls within the educational jurisdiction of, and is served by, the Los Angeles County Office of Education (COE) and LAUSD.[1]

(1) Los Angeles County Office of Education (COE)

The role of Los Angeles County in developing and managing educational facilities and programs is limited. However, COE serves as an intermediary between the local school districts in the County (such as LAUSD) and the California Department of Education. The COE provides a vision statement and strategic opportunities for educational facility development to coordinate the assessment of facility needs and the construction of schools that fall to individual school districts. In 2013, there were 88 local school districts within in the COE with a total enrollment of 1,564,205 students.[2]

(2) Los Angeles Unified School District (LAUSD)

LAUSD provides K-12 educational facilities and services to a 720-square-mile service area that includes the unincorporated areas of Los Angeles County and many of the incorporated cities within the county (including Los Angeles and Carson).[3] More than 640,000 students in kindergarten through 12th grade are enrolled in LAUSD, which is comprised of more than 900 schools and 197 public charter schools.[4] LAUSD

[1] *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

[2] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH. No. 2011081042, p.5.14-18. Certified March 24, 2015.*

[3] *County of Los Angeles, Environmental Impact Report for the LAC+USC Medical Center Campus Master Plan Project,, SCH #2014051061, p.3.12-18. Certified November 18, 2014.*

[4] *Ibid.*

provides K-12 educational facilities and services to Project Site and to the majority of community north, east and south of the Project Site (e.g., unincorporated Los Angeles County, the city of Los Angeles, and the city of Carson, but not the city of Torrance which has its own school district).

Funding sources used by LAUSD for new school construction and the expansion, modernization, improvement and repair of existing school facilities include, but are not limited to, a $19.5 billion voter-approved District program initiated in 1997, the collection of State-mandated school impact fees permitted under California Government Code Section 65995 and State Senate Bill (SB) 50, State Proposition 47 and 55 school bonds, and Assembly Bill 16 (Critically Overcrowded School Facilities Program) funds.[5] Funding sources for LAUSD school operation comes primarily from the State general fund and local property taxes.[6]

As indicated in **Figure 4.K.4-1**, *School Facilities Map*, and **Table 4.K.4-1**, *Public Schools in the Project Vicinity*, nine LAUSD schools and three Torrance Unified School District (TUSD) schools occur within a three-mile radius of the Project Site. According to the LAUSD, the Project Site is located within the attendance area of, and is served by, three of the LAUSD schools, including Meyler Street Elementary, M. White Middle School, and Narbonne Senior High (SH) School.[7] Meyler Street Elementary, located at 1123 W. 223rd Street in Torrance approximately 0.5 miles south of the Project Site, is a grade K-5 school which in the 2013-2014 school year had an enrollment of 818 and a capacity of 846.[8] M. White Middle School, located at 22102 Figueroa Street in Carson approximately 0.8 miles southeast of the Project Site, is a grade 6-8 school which in the 2013-2014 school year had an enrollment of 1,428 and a capacity of 1,743.[9] Narbonne SH, located at 24300 S. Western Avenue in Harbor City approximately 3.0 miles southwest of the Project Site, is a grade 9-12 school which in the 2013-2014 school year had an enrollment of 3,207 and a capacity of 3,443, and which hosts as a separate personalized campus LAUSD's Humanities and Arts Academy of Los Angeles (e.g., HArts Academy).[10] According to the LAUSD, while the number of seats at each of these three schools during the 2013-2014 school year exceeded enrollment, because of how LAUSD measures school overcrowding, Meyler Street Elementary was over capacity during the 2013-2014 school year.[11] As indicated in Figure 4.K.4-1 and Table 4.K.4-1, the other LAUSD schools located within a three-mile radius of the Project Site include Halldale Avenue Elementary, Van Deene Avenue Elementary, Caroldale Avenue Elementary, Carson Street Elementary, Dolores Street Elementary, and Carson High School.

According to the LAUSD, no new LAUSD schools are currently planned within the Project vicinity, although the White, Carnegie and Willmington Middle Schools, and the Carodale Learning Community School, provide attendance options for grade 6-8 students located within the M. White Middle School attendance area (subject to space availability at these optional schools).[12]

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5 *LAUSD, Fingertip Facts 2013-2014.*

6 *Ibid.*

7 *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

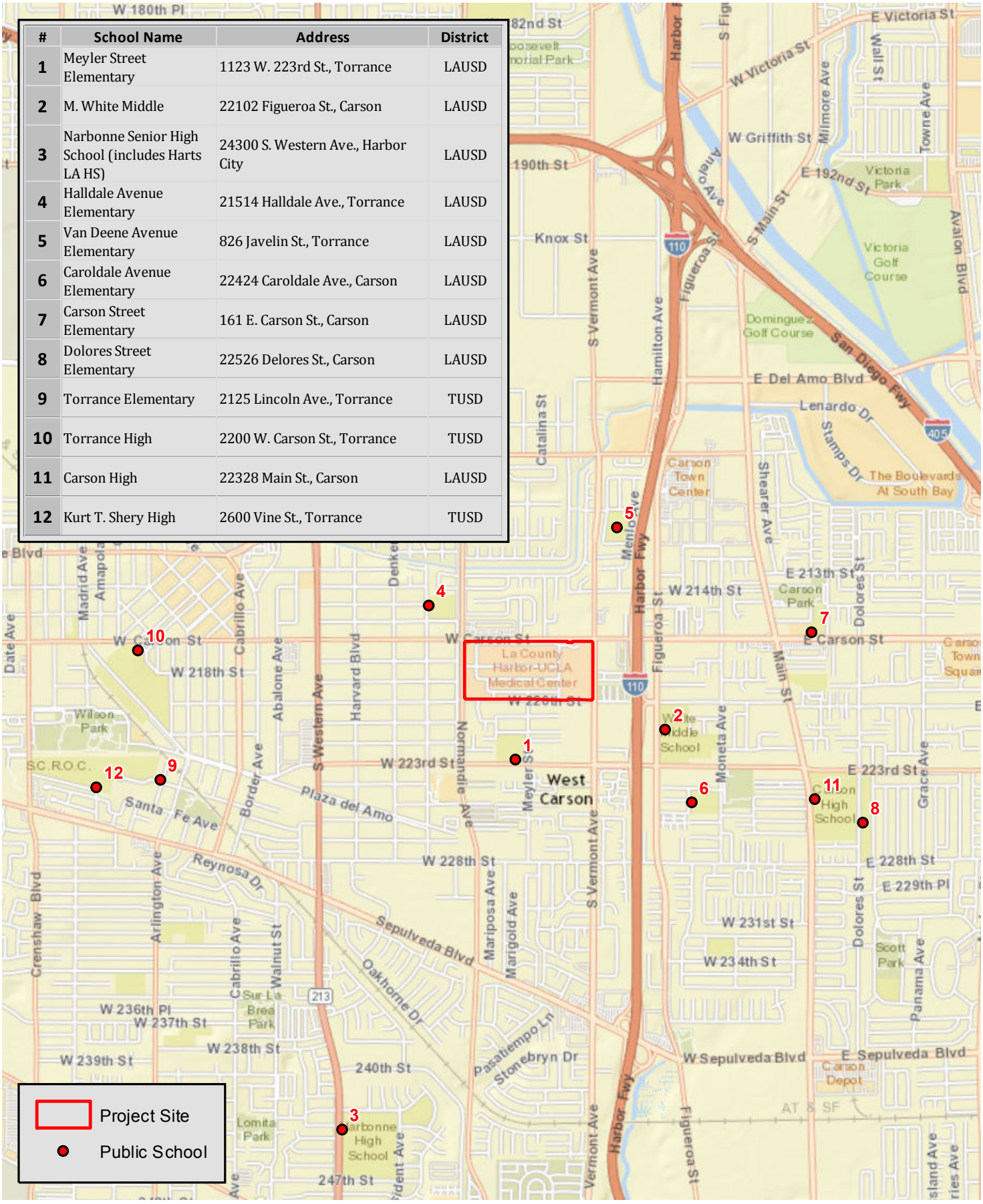
8 *Ibid.*

9 *Ibid.*

10 *Ibid. The enrollments and capacities of Narbonne SH and HArts Academy are considered together in this analysis.*

11 *Ibid. LAUSD considers a school to be overcrowded or over capacity if enrollment is either within 30 seats or less of capacity or over the capacity.*

12 *Ibid.*



#	School Name	Address	District
1	Meyler Street Elementary	1123 W. 223rd St., Torrance	LAUSD
2	M. White Middle	22102 Figueroa St., Carson	LAUSD
3	Narbonne Senior High School (includes Harts LA HS)	24300 S. Western Ave., Harbor City	LAUSD
4	Halldale Avenue Elementary	21514 Halldale Ave., Torrance	LAUSD
5	Van Deene Avenue Elementary	826 Javelin St., Torrance	LAUSD
6	Caroldale Avenue Elementary	22424 Caroldale Ave., Carson	LAUSD
7	Carson Street Elementary	161 E. Carson St., Carson	LAUSD
8	Dolores Street Elementary	22526 Delores St., Carson	LAUSD
9	Torrance Elementary	2125 Lincoln Ave., Torrance	TUSD
10	Torrance High	2200 W. Carson St., Torrance	TUSD
11	Carson High	22328 Main St., Carson	LAUSD
12	Kurt T. Shery High	2600 Vine St., Torrance	TUSD

PCR

Public Schools Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, March 2016.

FIGURE

4.K.4-1

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Table 4.K.4-1

Public Schools in the Project Vicinity

School Name	Address	District	Grades	Distance (miles)	2013-2014[a] Enrollment	2013-2014[a] Capacity	2013-2014[a] Over Capacity[c]	~ 2019[b] Enrollment	~ 2019[b] Capacity	~ 2019[b] Over Capacity[c]
LAUSD Schools Serving the Project Site[a]										
Meyler Street Elementary	1123 W. 223rd St., Torrance	LAUSD	K-5	0.5	818	846	Yes	909	733	Yes
M. White Middle	22102 Figueroa St., Carson	LAUSD	6-8	0.8	1,428	1,743	No	1.270	1,543	No
Narbonne Senior High School (includes HArts Academy)	24300 S. Western Ave., Harbor City	LAUSD	9-12	3.0	3,207	3,443	No	3,177	2,910	Yes
Other Public Schools in the Project Vicinity										
Halldale Avenue Elementary	21514 Halldale Ave., Torrance	LAUSD	K-5	0.3						
Van Deene Avenue Elementary	826 Javelin St., Torrance	LAUSD	K-5	0.9						
Caroldale Avenue Elementary	22424 Caroldale Ave., Carson	LAUSD	K-5	1.3						
Carson Street Elementary	161 E. Carson St., Carson	LAUSD	K-5	1.3			N/A[d]			
Dolores Street Elementary	22526 Delores St., Carson	LAUSD	K-5	1.8						
Torrance Elementary	2125 Lincoln Ave., Torrance	TUSD	K-5	2.0						
Torrance High	2200 W. Carson St., Torrance	TUSD	9-12	1.5						
Carson High	22328 Main St., Carson	LAUSD	9-12	1.7						
Kurt T. Shery High	2600 Vine St., Torrance	TUSD	9-12	2.9						

[a] *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

[b] *Ibid. LAUSD only makes five year projections of future enrollment and capacity. Hence, LAUSD projections do not exist of enrollments and capacities at the anticipated Project buildout year of 2030.*

[c] *LAUSD considers a school to be "Overcapacity" if enrollment is either within 30 seats or less of the capacity or over the capacity.*

[d] *Enrollment and capacity information for these schools was not provided by LAUSD because the Project Site is not located within the service areas of these schools.*

Source: PCR Services Corporation, March 2016.

(3) Torrance Unified School District

The Torrance Unified School District (TUSD) provides K-12 educational facilities and services to the portions of the community west the Project site (e.g., the City of Torrance), and while TUSD is not responsible for providing school services to the Project Site, HUCLA employees, patients and visitors that may live in the City of Torrance are provided school services by TUSD. Total enrollment in the TUSD during the 2013-2014 school year was 24,324 students.[13] As indicated in Figure 4.K.4-1 and Table 4.K.4-1, three TUSD schools are located within a three-mile radius of the Project Site, including Torrance Elementary, Torrance High School, and Kurt T. Shery High School.

b Regulatory Setting

(1) Federal

There are no federal schools regulations pertinent to the Project.

(2) State

(a) Senate Bill 50

Senate Bill 50 (SB 50, codified in California Government Code Section 65995 et seq., was enacted in 1988 to address how schools are financed and how development projects may be assessed for associated school impacts.[14] SB 50 sets forth the "exclusive methods of considering and mitigating impacts on school facilities" resulting from any state or local planning and/or development projects, regardless of whether its character is legislative, adjudicative, or both (Govt. Code §65996[a]).[15] Section 65995 provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 … are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in governmental organization … on the provision of adequate school facilities" Govt. Code §65995[h]).[16] The reference in Section 65995(h) to fees "imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995" is a reference to per-square-foot school fees than can be imposed by school districts on new residential, commercial and industrial construction.[17] Education Code Section 17620 provides the basic authority for school districts to levy fees against construction for purposes of funding construction or reconstruction of school facilities, subject to limits set forth in Government Code Section 65995.[18]

As stated in Section 65995 (d), facilities that are owned and occupied by one or more agencies of federal, state, or local governments are exempt from these fees. Therefore, the fee does not apply to the proposed

[13] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, Table 5.14-1. Certified March 24, 2015.*

[14] *Ibid, p.5.4-23. Certified March 24, 2015.*

[15] *Ibid.*

[16] *Ibid.*

[17] *Ibid.*

[18] *Ibid.*

Project. However, it could apply to any new residential, commercial, or industrial development in the Project vicinity, as noted in subsection e, Cumulative Impacts.

(b) Assembly Bill 16

In 2002, AB 16 created the Critically Overcrowded School Facilities Program (Education Code, Article 11, Critically Overcrowded School Facilities, Sections 17078.10-17078.30), which supplements the new construction provisions within the School Facilities Program (SFP). The SFP provides State funding assistance for two major types of facility construction projects: new construction and modernization. The Critically Overcrowded School Facilities program allows school districts with critically overcrowded school facilities, as determined by the California Department of Education (CDE), to apply for new construction projects in advance of meeting all SFP new construction program requirements. Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply.

(3) Local

(a) County of Los Angeles General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the following applicable polices from the Public Services and Facilities Element. This goal and these policies are more applicable to the local school districts, and to County and local school district coordination, than they are to development projects such as the proposed HUCLA Campus Master Plan Project, but are nevertheless identified for purposes of public disclosure.

Goal PS/F 7: A County with adequate educational facilities.

- **Policy PS/F 7.1:** Encourage the joint-use of school sites for community activities and other appropriate uses.
- **Policy PS/F 7.2:** Proactively work with school facilities and education providers to coordinate land use and facilities planning.
- **Policy PS/F 7.3:** Encourage adequate facilities for early care and education.

(b) LAUSD School Facilities Fees Under SB 50

The latest (January 2015) LAUSD School Facilities Fees authorized under SB 50 are $3.36 per square foot for new residential construction, $0.54 per square foot for new commercial/industrial construction, and $0.07 per square foot for new parking structures.[19] Facilities that are owned and occupied by one or more agencies of federal, state, or local governments are exempt from these fees. Therefore, the fee does not apply to the Proposed Project.

3. ENVIRONMENTAL IMPACTS

a. Methodology

[19] *Sonja White, Analyst, Los Angeles Unified School District, Developer Fee Program Office, April 13, 2015.*

As the Project Site is located within the service areas of three LAUSD schools, this analysis evaluates the impacts of the proposed Project on these three LAUSD schools.

The methodology for this analysis included: (1) corresponding with LAUSD to request current information regarding the LAUSD schools that would serve the Project, the existing and projected year 2030 (the buildout year of the proposed Project) enrollments and capacities at those schools, including whether those schools are and/or are projected to be over capacity; (2) estimating the increase in students (if any) to be generated by the Project's employee, patient and visitor populations; (3) evaluating the impacts of these students on the capacities of the three LAUSD schools to serve the Project; and (4) based on this information, determining whether new or expanded schools would be required to serve the Project, and if so, whether the construction of these schools would result in substantial adverse physical effects.

Because the Project Site is located within three miles or less of six other LAUSD schools and three TUSD schools, the analysis also evaluates potential Project impacts on those schools (although at a lesser level of detail given that the Project Site is not located within the service areas of those schools).

As discussed previously, in addition to the correspondence from the LAUSD (which is included in Appendix G-4 of this Draft EIR), this section is based on information from the Los County General Plan Update (2035) and associated EIR (2015), and other County plans and environmental documents.

b. Thresholds of Significance

The potential for school impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. This question is as follows:

(XV) Public Services. Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Schools?

Based on this factor, the Project would have a potentially significant impact on schools if it would result in the following:

SCHOOLS-1: Would the Project require the addition of new or physically altered school facilities to maintain acceptable service ratios or other performance objectives, the construction of which would result in a substantial adverse physical impact?

c. Project Characteristics or Design Features

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus (Campus). The existing Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower that meets current

seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, to include new hospital, medical office, medical research, service commercial, and parking uses, a net increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 annual visits or 714 daily visits[20]), respectively. Project construction would occur in phases through the year 2030. See Chapter 2.0, Project Description, of this Draft EIR for further information.

The Project would implement the following Project Design Feature (PDF) designed to mitigate Project impacts on public schools:

d. Project Impacts

Threshold SCHOOLS-1: Would the Project require the addition of new or physically altered school facilities to maintain acceptable service ratios or other performance standards, the construction of which would result in a substantial adverse physical impact?

Impact Statement SCHOOLS-1: *Project construction and operation would not be expected to create a demand for schools that would require new or physically altered public schools, the construction of which would result in a substantial adverse physical impact. Therefore, the impact would be less than significant.*

(1) Construction

Project construction activities would not physically affect existing public schools as no public schools are located on or directly adjacent to the Project Site, and the nearest public school (Halldale Avenue Elementary) is 0.5 miles away. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction (see Section 4.L., *Transportation and Traffic*, of this Draft EIR for further discussion).

Project construction would require construction workers at the HUCLA Campus intermittently through the year 2030 as discrete phases of the Project are constructed. The exact number of construction workers during each construction phase is not known at this time. However, given the general accessibility of the Project Site and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards.

[20] *Daily visits were estimated based on the following formula which assumes that patients visits occur during workdays: 52 weeks per year times 5 days a week = 260 weekdays. So, 185,745 patients ÷ 260 days = ~715 patients a day. This provides a conservative estimate because it assumes that patient visits are restricted to weekdays, largely because most of the on-site clinics and other non-hospital on-site medical uses would only be open during weekdays.*

Finally, the New Hospital and of some of the new medical clinic and R&D uses under the Project would include teaching components, the construction of which could result in environmental effects (e.g., visual impacts, dust and other air emissions, noise, and traffic during the construction period). However, these environmental effects have been evaluated as part of the construction impacts of the Project in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Traffic*, of this Draft EIR, and no additional substantial environmental effects would occur.

Based on the above, Project construction would not require new or physically altered public schools, and the impact would be less than significant.

(2) Operation

As indicated previously in Subsection 2.a, Environmental Setting, the Project Site is located within the boundaries of LAUSD and is served by (e.g., is located within the service areas of) Meyler Street Elementary, M. White Middle School, and Narbonne Senior High School (including HArts Academy). As indicated previously in Subsection 3.c, *Project Characteristics and Design Features*, the Project would result in an increase of 1,178,071 square feet of non-residential floor area (e.g., hospital, medical office, medical research, service commercial, and parking structure uses), an increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors.

Table 4.K.4-2, *Project Student Generation*, provides an estimate of the number of students that would be generated by the proposed Project. As indicated, the Project would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students.

Assuming that all Project students would attend Meyler Street Elementary, M. White Middle School, and Narbonne Senior High School (including HArts Academy), adequate capacity would be available at M. White Middle School to serve these students as indicated in Table 4.K.4-1, but these students would exacerbate the overcapacity conditions projected by LAUSD at Meyler Street Elementary and Narbonne Senior High School. However, multiple factors would help mitigate any such potential overages. First, while the Project Site is located within the service areas of Meyler Street Elementary and Narbonne Senior High School, the families of Project employees would not reside on-site, but rather would reside within the local community and/or greater Los Angeles area. Therefore, rather than being restricted to these three schools, it is highly likely that Project student attendance would be split among the 11 elementary and high schools in the local area listed in Table 4.K.4-1 and possibly beyond. Second, even if some of the Project grade K-5 and 9-12 students were to attend Meyler Street Elementary and Narbonne Senior High School, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved.

Due to the lack of residential uses proposed in the Project, it is likely that the Project's indirectly generated students will be less than the amount calculated above. Because the calculated students represent a conservative generation based on the land uses, it is highly unlikely that the Project would generate enough students to necessitate the need to construct new or physically altered school facilities. Therefore, Project operational impacts on schools would be less than significant.

Table 4.K.4-2

Project Student Generation

Grade Level	Land Use	Net Increase in Development (sf)	Generate Rate Students per 1,000 sf)[a]	Students
K-5	Administrative Office	107,200	0.0278	2.98
	Day Care Center	0	--	--
	Central Utilities	16,486	0.0214	0.35
	Hospital	553,845	0.0221	12.24
	Library	0	--	--
	Medical Office	153,196	0.0278	4.26
	Biomedical R&D	380,246	0.0242	9.20
	Warehouse/Storage	(45,402)	0.0214	(0.97)
	Retail	35,000	0.0178	0.62
			Total K-5	**29**
6-8	Administrative Office	107,200	0.0139	1.49
	Day Care Center	0	--	--
	Central Utilities	16,486	0.0108	0.18
	Hospital	553,845	0.0111	6.15
	Library	0	--	--
	Medical Office	153,196	0.0139	2.13
	Biomedical R&D	380,246	0.0121	4.60
	Warehouse/Storage	(45,402)	0.0108	(0.49)
	Retail	35,000	0.0089	0.31
			Total 6-8	**14**
9-12	Administrative Office	107,200	0.0173	1.85
	Day Care Center	0	--	--
	Central Utilities	16,486	0.0133	0.22
	Hospital	553,845	0.0138	7.64
	Library	0	--	--
	Medical Office	153,196	0.0173	2.65
	Biomedical R&D	380,246	0.0151	5.74
	Warehouse/Storage	(45,402)	0.0133	(0.60)
	Retail	35,000	0.0111	0.39
			Total 9-12	**18**
			Total K-12	**61**

[a] *LAUSD Commercial/Industrial Development School Fee Justification Study, p.19, September 27, 2010.*

Source: PCR Services Corporation, March 2016.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within the vicinity of the proposed Project. **Table 4.K.4-3**, *Related Projects for Schools*, identifies these Projects. As indicated, these related projects

would include 2,835 dwelling units (du), 300 hotel rooms, and approximately 1.95 million square feet of non-residential floor area.

Table 4.K.4-4, *Cumulative Student Generation*, provides an estimate of the number of students to be generated by the related projects along with the proposed Project. As indicated, related projects along with the proposed Project would generate an estimated 541 grade K-5 students, 164 grade 6-8 students, and 302 grade 9-12 students.

The development of the related projects, along with the proposed Project, would increase the demand for public schools in the local area from LAUSD and TUSD, and could potentially contribute to the future need for new or expanded school facilities in the Project vicinity. However, pursuant to SB 50 (Section 65995[h] of the California Government Code), the related projects and the proposed Project would be required to pay the LAUSD School Facilities Fees authorized under SB 50 within the LAUSD, and the school facilities fees authorized by SB 50 within the TUSD for those related projects served by the TUSD, which, per Section 65995[h], would represent "full and complete mitigation" for impacts to schools.[21] Also, LAUSD is currently engaged in a multi-year capital improvement program to construct 131 new schools to accommodate projected growth.[22] Furthermore, the Project and the related Projects would pay property and other taxes and fees, a portion of which would go to the LAUSD and TUSD for school facilities and services.

As indicated above, the related projects and the proposed Project could potentially contribute to the future need for new or expanded school facilities in the Project vicinity. While the construction of any such schools could potentially result in substantial adverse physical impacts, it would be speculative to predict where and when a new school would be needed as LAUSD does not currently have plans for a new school in the area.[23] Therefore, it would be speculative to predict the environmental effects resulting from any such improvements, and per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required. Based on the above, cumulative schools impacts would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant Project-level schools impacts. The Project's contribution to cumulative impacts would not be cumulatively considerable.

[21] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH. No. 2011081042, p.5.4-23. Certified March 24, 2015.*

[22] *County of Los Angeles, Environmental Impact Report for the LAC+USC Medical Center Campus Master Plan Project,, SCH #2014051061, p.3.12-18. Certified November 18, 2014.*

[23] *Rena Perez, Director, Master Planning & Demographics, LAUSD, correspondence dated January 29, 2016 and included in Appendix G-4 of this Draft EIR.*

Table 4.K.4-3

Related Projects for Schools

Id	Jurisdiction	Project location	Land use	Size
1	County	24500 Normandie Ave	Apartments	112 du
			Retail	3.9 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
5	Carson	440 Sepulveda Blvd	Apartments	11 du
6	Carson	628 Lincoln St	Single Family	3 du
7	Carson	616 E Carson	Apartments	152 du
			Retail	13 ksf
8	Carson	19220 S Main St	Commercial	65 ksf
9	Carson	402 E Sepulveda Blvd	Apartments	65 du
			Retail	3 ksf
10	Carson	21521 S Avalon Blvd	Apartments	357 du
			Retail	32 ksf
11	Carson	23401 S Avalon Blvd	Retail	6.3 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
13	Carson	20920 Chico St	Medical	11.34 ksf
14	Carson	22303 Avalon	Automated Car Wash	4.673 ksf
			Office Space	0.48 ksf
15	Carson	Carson Marketplace	Regional Retail	1,370 ksf
			Neighborhood Retail	130 ksf
			Residential	1,550 du
			Hotel	300 rooms
			Restaurants	81.125 ksf
			Commercial Recreational	214 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments	352 du
			Retail	17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments	44 du
			Retail	3.7 ksf
20	Torrance	1752 Border Ave	Warehouse	10 ksf
			Automobile Care Center	3 ksf
21	Torrance	570 Alaska Ave	Warehouse	31.015 ksf
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center	2.525 ksf
23	Torrance	465 Crenshaw Blvd	Transit Center	17.8 ksf
24	Torrance	23625 Arlington Ave	Apartments	14 du
25	Torrance	20405 Gramercy Place	Light Industrial	17 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse	30 ksf
			Manufacturing	13 ksf
		Total	**Residential**	**2,835 du**
			Hotel Rooms	**300 rooms**
			Non-Residential	**1,951.6 ksf**

Source: PCR Services Corporation, 2016. Based on the Related Projects Table from the Fehr and Peers Traffic Study, 2016.

Table 4.K.4-4

Cumulative Student Generation

Grade Level	Land Use	Related Projects: Development (sf)	Related Projects: Generate Rate Students per 1,000 sf)[a]	Related Projects: Students	With Proposed Project: Students
K-5	Residential	2,835 du	0.1649	467.49	467.49
	Non-Residential	1,951.6 ksf	0.0228	44.50	73.50
			Total K-5	**512**	**541**
6-8	Residential	2,835 du	0.0450	127.58	127.58
	Non-Residential	1,951.6 ksf	0.0114	22.25	36.25
			Total 6-8	**150**	**164**
9-12	Residential	2,835 du	0.0903	256.00	256.00
	Non-Residential	1,951.6 ksf	0.0142	27.71	45.71
			Total 9-12	**284**	**302**
			Total K-12	**946**	**1,007**

[a] *Student generation rate for residential units based on multi-family residential unit rate from LAUSD School Facilities Needs Analysis, p.5, September 2012. Student generation rate for non-residential based on the average of office and retail/service student generation rates from LAUSD Commercial/Industrial Development School Fee Justification Study, p.19, September 27, 2010.*

Source: PCR Services Corporation, March 2016.

4. ENVIRONMENTAL IMPACT ANALYSIS
K. PUBLIC SERVICES
5 LIBRARIES

1. INTRODUCTION

This section analyzes the Project's potential impacts on public libraries in the Project vicinity, including those operated by the Los Angeles County Public Library (LACPL) and the Cities of Los Angeles and Torrance. The near-by city of Carson does not operate any libraries within a three-mile radius of the Project Site, and thus impacts on city of Carson libraries are not evaluated. The analysis identifies the potential impacts of the proposed Project on library service ratios, and determines whether the Project would generate the need for new or physically altered library facilities. This section is based, in part, on information provided by the LACPL (included in **Appendix J-5**, *Library Correspondence*, of this Draft EIR). This section also incorporates information from Los County General Plan Update (2035) and associated Environmental Impact Report (EIR, 2015), the County Code, and other County plans and environmental documents.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

The Harbor-UCLA Medical Center Campus is located at 1000 W. Carson Street in the unincorporated West Carson community of Los Angeles County, within a relatively short distance of several incorporated cities including Los Angeles, Torrance, and Carson. LACPL has the responsibility for providing public library facilities and services to the Project Site and greater West Carson community. In fiscal year 2011-2012, LACPL had 86 libraries; 7.5 million book volumes; circulated 16.5 million items to 3.1 million cardholders; answered over eight million reference questions; provided 18,000 programs to 500,000 children, teenagers, and adults; and assisted the public with three million internet sessions on the library's public access computers.[1]

The closest LACPL library to the Project Site is the Carson Branch Library located at 151 E. Carson Street in the City of Carson, approximately 0.8 miles east of the Project Site. The Carson Branch Library is a 33,112-square-foot facility with 118,133 volumes, 23 staff, and a 19.4-square-mile service area bordered by: 190th Street, 192nd Street, University Drive, Wilmington Avenue, and E. Del Amo Boulevard in the north; W. Lomita Boulevard in the south; the 710 Freeway, S. Santa Fe Avenue, the 405 Freeway, Intermodal Way, Middle Road, and W. Lomita Boulevard in the east; and S. Normandie Avenue in the west.[2] This library has been programmed to serve a resident population of up to 79,838, and during 2014-2015 served an estimated resident population of 73,648.[3] According to the LACPL, interior refurbishments are under discussion for

[1] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035) SCH No. 201108104, p. 5.14-29. Certified March 24, 2015.*

[2] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[3] *Ibid.*

this facility, but these improvements would not significantly impacts the service capacity of the library and LACPL does not currently have plans for new library facilities in the West Carson community.

Other public libraries within a three-mile radius of the Project Site include: the Southwest Branch Library operated by the City of Torrance and located approximately 2.4 miles to the southwest; the Harbor Gateway Branch Library operated by the City of Los Angeles and located approximately 2.6 miles to the southwest; and the AF Parlow Library of Health Sciences operated by the Los Angeles County Department of Health Services (LACDHS) and located on the Harbor-UCLA Medical Center Campus (though access to the AF Parlow Library's collection is limited to Harbor-UCLA staff, faculty, and students).

The four libraries discussed above are listed in **Table 4.K.5-1**, *Public Libraries in the Project Vicinity*, and their locations are identified in **Figure 4.K.5-1***, Public Libraries Map*.

Table 4.K.5-1

Public Libraries in the Project Vicinity

Library	Address	Jurisdiction	Distance (miles)
Carson Branch Library	151 E. Carson St., Carson	LA County (LACPLA)	0.8
Southwest Branch Library	23115 Arlington Ave., Torrance	City of Torrance	2.4
Harbor Gateway Branch Library	24000 Western Ave., Harbor City	City of LA	2.6
AF Parlow Library of Health Sciences	1000 W. Carson St., Torrance	LA County (LACDHS)	On-site

Source: PCR Services Corporation, March 2016.

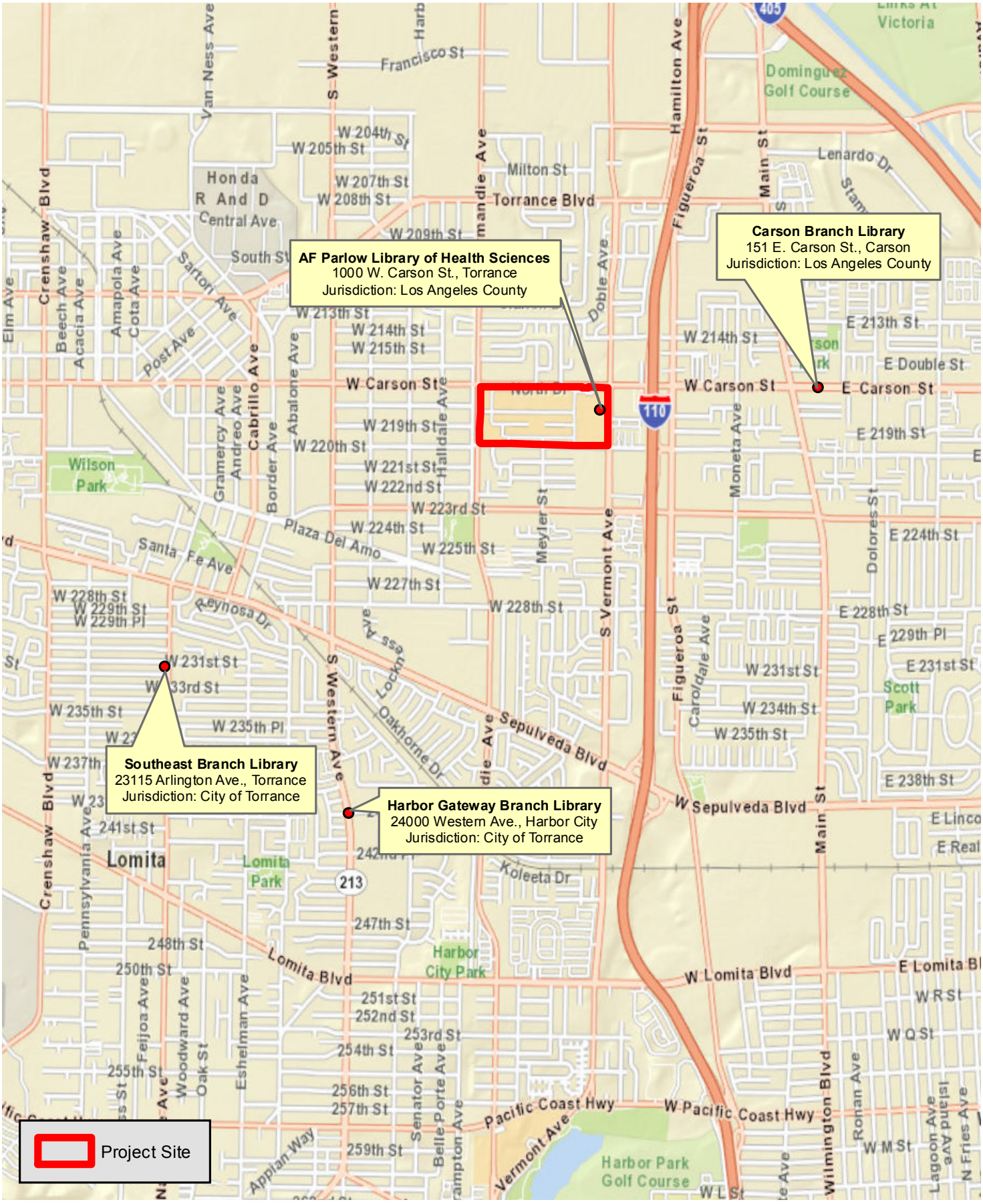
The LACPL determines the library service needs of an area by applying its current service level guidelines to the total resident population of an area.[4] These guidelines are a minimum of 0.50 gross square feet of library facility space per capita and 2.75 volumes (books and other library materials) per capita.[5] The Carson Branch Library currently has 2.4 sf of library facility space per capita and 1.48 volumes per capita, thus providing more facility space but fewer volumes than set forth in the guidelines.[6]

The Project Site is currently developed with 1,279,300 sf of existing hospital, medical office, clinic, and medical research and development uses, and currently has an estimated 5,464 employees, 545,079 annual patient visits, and an unknown number of visitors. It is likely that these employees, patients and visitors generate some demand for local public library facilities and services from the Carson Branch, Southwest Branch, and Harbor Gateway Branch Libraries. Also, as previously discussed, the Project Site contains the AF

[4] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[5] *Ibid.*

[6] *Ibid.*



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0 0.5 1 Miles

Public Libraries Map

Harbor-UCLA Medical Center Master Plan

Source: ESRI Street Map, 2009; PCR Services Corporation, February 2016.

FIGURE

4.K.5-1

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Parlow Library of Health Sciences, which serves doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the Medical Center Campus.[7]

b. Regulatory Setting

(1) Federal

There are no federal library regulations applicable to the Project.

(2) State

There are no state library regulations applicable to the Project.

(3) Local

(a) County of Los Angeles General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the following library-related goal and polices from the Public Services and Facilities Element. This goal and these policies are more applicable to the County than to development projects, but are identified here for purposes of public disclosure.

Goal PS/F 8: A comprehensive public library system.

- **Policy PS/F 8.1:** Ensure a desired level of library service through coordinate land use and facilities planning.
- **Policy PS/F 8.2:** Support library mitigation fees that adequately address the impacts of new development.

(b) County of Los Angeles Library Facilities Mitigation Fee Ordinance

The County applies a library facilities mitigation fee to new residential developments in unincorporated areas of the County.[8] This fee, which is codified in Section 22.72.030 of the County's Zoning Code (Library Facilities Mitigation Fee Ordinance), is based on the estimated cost of providing the projected library facility needs within each of the LAPL's seven library planning areas, and is intended to mitigate the significant adverse impacts of increased residential development on the library system.[9] According to the Ordinance, the fee shall be determined by the County Librarian on an annual basis, shall be no more and no less than that required to cover the cost of providing library facilities and services for the development served, and shall be uniform within each library planning area.[10] All fees collected are deposited into a special library capital facilities fund (one for each library planning area) and expended solely for the purposes for which the

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7 *Harbor-UCLA Medical Center website: http://harborucla.org/library/page2.php?mytext=users/faq.htm# checkout. Accessed March 2, 2016.*

8 *County of Los Angeles, Los Angeles County General Plan Update (2035), p.234. Adopted October 6, 2015.*

9 *Ibid.*

10 *Ibid.*

fees were collected.[11] The Ordinance is applicable to residential projects only.[12] Therefore, the fee does not apply to the proposed Project.[13] However, it would apply to any new residential development induced by the Project within unincorporated areas of the County.

(c) LAPL Library Service Level Guidelines

The LACPL determines the library service needs of an area by applying its current service level guidelines to the total resident population of an area.[14] These guidelines are a minimum of 0.50 gross square feet of library facility space per capita and 2.75 volumes (books and other library materials) per capita.[15]

3. ENVIRONMENTAL IMPACTS

a. Methodology

As the Project Site is located within the unincorporated West Carson community, and as the LACPL is responsible for providing public libraries facilities and services to the Project Site, this analysis evaluates the impacts of the proposed Project on LACPL library facilities and services within the West Carson community.

The methodology for this analysis included: (1) corresponding with LACPL to request current information regarding the LACPL libraries that would serve the Project, the existing service ratios at those facilities, and the LACPL performance standards and guidelines applicable to the Project; (2) estimating the increase in the employee, patient and visitor populations to be generated by the Project; (3) evaluating the impacts of these populations on the service ratios at the LACPL facilities to serve the Project; and (4) based on this information, determining whether new or expanded LACPL library facilities would be required to serve the Project, and if yes, whether the construction of these facilities would result in substantial adverse physical effects. Because the Project Site is located within three miles or less of several libraries operated by the Cities of Los Angeles and Torrance, the analysis also evaluates potential Project impacts on those facilities (although at a lesser level of detail given that the Project Site is not located within the service areas of those facilities, and those facilities are located further away from the Project Site than the County libraries and thus can be expected to experience less visits from the Project).

As discussed previously, in addition to the correspondence from the LACPL (which is included in Appendix J-5 of this Draft EIR), this section is based on information from the Los County General Plan Update (2035) and associated EIR (2015), the County Code, and other County plans and environmental documents.

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[11] *County of Los Angeles, Environmental Impact Report for the Los Angeles County General Plan Update (2035), SCH No. 201108104, p.5.14-30. Certified March 24, 2015.*

[12] *Ibid.*

[13] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[14] *Yolanda De Ramus, Chief Deputy Director, LACPL, correspondence dated February 12, 2016 and included in Appendix J-5 of this Draft EIR.*

[15] *Ibid.*

b. Thresholds of Significance

The potential for library impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State CEQA Guidelines. This question is as follows:

(XV) Public Services. Would the project:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Other public facilities?

Based on this factor, the Project would have a potentially significant impact on libraries if it would result in the following:

LIBRARIES-1: Would the Project require the provision of new or physically altered library facilities to maintain acceptable service ratios, the construction of which would result in a substantial adverse physical impact?

c. Project Characteristics or Design Features

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus. The existing Campus contains approximately 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a net increase of 1,178,071 square feet of building floor area, to include new hospital, medical office, medical research, service commercial, and parking uses, a net increase in Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors. Project construction would occur in phases through the year 2030. See Chapter 2.0, *Project Description*, of this Draft EIR for further information.

The following Project Design Feature (PDF) is proposed to reduce Project impacts on public libraries:

PDF-LIBRARIES-1: The AF Parlow Library of Health Sciences, an existing LACDHS-operated library on the Project Site available for use by doctors, medical students, fellows, faculty, nurses, and allied health professionals affiliated with the medical center, will be retained and relocated to other building space on the HUCLA Campus.

d. Project Impacts

Threshold LIBRARIES-1: Would the Project require the addition of new or physically altered library facilities to maintain acceptable service ratios, the construction of which would result in a substantial adverse physical impact?

Impact Statement LIBRARIES-1: *Project construction and operation would not be expected to create a demand for libraries that would require new or physically altered public libraries, the construction of which would result in a substantial adverse physical impact. Therefore, the impact would be less than significant.*

(1) Construction

Project construction activities would not physically affect existing public libraries as no such facilities are located on or directly adjacent to the Project Site. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public libraries would be maintained during Project construction (see Section 4.L., *Transportation and Traffic*, of this Draft EIR for further discussion).

Project construction would require construction workers at the Harbor-UCLA Medical Center Campus intermittently through the year 2030 as discrete phases of the Project are constructed. The exact number of construction workers during each construction phase is not known at this time. However, given the general accessibility of the Project Site and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local public libraries such that new such facilities would be required and substantial physical deterioration of such facilities would occur. Furthermore, construction workers would have limited opportunities during the work day to use local libraries, and any demand for libraries that would occur would be limited and temporary, lasting only as long as the given construction phase.

Finally, retention and relocation of the existing on-site AF Parlow Library of Health Sciences, as required by PDF LIBRARIES-1, would require construction activities which could result in environmental effects (e.g., visual impacts, dust and other air emissions, noise, and traffic during the construction period). However, these environmental effects have been evaluated as part of the construction impacts of the Project in Sections 4.A., *Aesthetics*, 4.B., *Air Quality*, 4.I., *Noise*, and 4.L., *Transportation and Traffic*, of this Draft EIR, and no additional substantial environmental effects would occur.

Based on the above, Project construction would not require new or physically altered public library facilities, and the impact would be less than significant.

(2) Operation

As indicated previously in Subsection 3.c, *Project Characteristics and Design Features*, the proposed Project includes new hospital, medical office, medical research, and some minor commercial uses. No residential uses are proposed. The Project would result in a net increase of 1,178,071 square feet of non-residential building floor area, increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 visits), respectively, and an unknown increase in Campus visitors.

Because the Project would not include a residential component,it would not directly impact the existing service ratios (e.g., per capita facility space and per capita volumes) at LACPL's Carson Branch Library or other libraries in the area which are based on the resident population.

The increase in Campus patients, employees and visitors would generate some indirect demand for libraries facilities and services from the LACPL-operated Carson Branch Library, and to a lesser extent from the City of Torrance-operated Southwest Branch Library and City of Los Angeles-operated Harbor Gateway Branch Library. However, this increase in demand would not be expected to be substantial or result in the need for new or physically altered library facilities for several reasons. First, while the Project's estimated 2,030 new Project employees would create some demand for library facilities, a portion of these new employees would be expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. Second, as required by Project Design Features PDF-LIBRARIES-1, the exiting on-site AF Parlow Library of Health Sciences would be retained under the Project, which would continue to meet the Hospital-related demand for library facilities. Third, any usage by Project employees, patients and visitors of existing public library facilities would likely be split among the four public libraries referenced above, thus avoiding the concentration of usage at any one library. Lastly, non-residential development, such as the proposed Project, generates less demand for public libraries than residential development because it does not generate school-aged children or non-working adults that generate a substantial amount of daily library demand.

The additional on-site employees under the proposed Project could potentially induce additional residential development in the local area to help house these employees which could indirectly increase the demand for public library facilities. However, the Project Site is located in the Metropolitan Los Angeles area which has substantial existing housing opportunities, so the potential for the Project to induce substantial new residential development is low. Furthermore, any new residential development induced by the Project would be required to pay applicable library impact fees (e.g., the County's Library Facilities Mitigation Fee, etc.) which would mitigate any associated increase in demand for public libraries. Therefore, any new residential development induced by the Project would not be expected to result in a substantial change in the existing service ratios of the public libraries in the area.

Based on the above, Project operation would not require new or physically altered public library facilities, and the impact would be less than significant.

e. Cumulative Impacts

Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR provides a list of 26 related projects that are planned or are under construction within the vicinity of the proposed Project. **Table 4.K.3-2**, *Related Projects for Libraries*, identifies these Projects. As indicated, these related projects would include 2,835 dwelling units (du), 300 hotel rooms, and approximately 1.95 million sf of non-residential floor area.

The development of the related projects, along with the proposed Project, would increase the demand for public library facilities from LACPL and to a lesser extent from the Cities of Los Angeles and Torrance. However, the developers of new residential units are required to pay fees to cover the cost of the provision of public library facilities (e.g., the County Library Facilities Mitigation Fee, etc.), so that the residential portion of the related projects would mitigate their demand for public libraries.

In addition, non-residential development, such as the proposed Project and the non-residential floor area of the related projects, would generate less demand for public libraries than residential development because they do not generate school-aged children or non-working adults that generate a substantial amount of daily library demand. Also, because LACPL measures library demand (e.g., library space per capita and volumes per capita) based on the resident population served, attributing library demand to non-residential uses would be in a sense be double counting because the demand associated with non-residential development is already incorporated into LACPL's residential population-based per capita service ratios.

Furthermore, as indicated in the analysis in Subsection d, *Project Impacts*, above, the Project would not be expected to generate a demand for library facilities that would require new or expanded library facilities, such that it would not be expected to contribute substantially to cumulative demand for public libraries.

Lastly, while the cumulative demand for public libraries could potentially contribute to the future need for a new library in the West Carson community, and while the construction of any such library could potentially result in substantial adverse physical impacts, it would be speculative to predict where and when a library would be needed as LACPL does not currently have plans for a new library in the area. Therefore, it would be speculative to predict the environmental effects resulting from any such improvements, and per State *CEQA Guidelines* Section 15145 regarding speculation, no further analysis is required.

Based on the above, cumulative library impacts would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Project would have less than significant libraries impacts with adherence to applicable library requirements and implementation of the Project Design Feature referenced in this section.

Table 4.K.5-2

Related Projects for Libraries

Id	Jurisdiction	Project location	Land use	Size
1	County	24500 Normandie Ave	Apartments	112 du
			Retail	3.9 ksf
2	County	1028 W 223rd St	Condos	19 du
3	County	22700 Meyer St	Condos	60 du
4	County	19208 S Vermont Ave	Condos	20 du
5	Carson	440 Sepulveda Blvd	Apartments	11 du
6	Carson	628 Lincoln St	Single Family	3 du
7	Carson	616 E Carson	Apartments	152 du
			Retail	13 ksf
8	Carson	19220 S Main St	Commercial	65 ksf
9	Carson	402 E Sepulveda Blvd	Apartments	65 du
			Retail	3 ksf
10	Carson	21521 S Avalon Blvd	Apartments	357 du
			Retail	32 ksf
11	Carson	23401 S Avalon Blvd	Retail	6.3 ksf
12	Carson	21791 Moneta Ave	Apartments	13 du
13	Carson	20920 Chico St	Medical	11.34 ksf
14	Carson	22303 Avalon	Automated Car Wash	4.673 ksf
			Office Space	0.48 ksf
15	Carson	Carson Marketplace	Regional Retail	1,370 ksf
			Neighborhood Retail	130 ksf
			Residential	1,550 du
			Hotel	300 rooms
			Restaurants	81.125 ksf
			Commercial Recreational	214 ksf
16	Los Angeles	1311 W Sepulveda Blvd	Apartments	352 du
			Retail	17.904 ksf
17	Los Angeles	21176 S Western Ave	Retail	0.836 ksf
18	Los Angeles	20805-22341 S. Normandie Ave	Single Family	63 du
19	Torrance	1640 Cabrillo Ave	Apartments	44 du
			Retail	3.7 ksf
20	Torrance	1752 Border Ave	Warehouse	10 ksf
			Automobile Care Center	3 ksf
21	Torrance	570 Alaska Ave	Warehouse	31.015 ksf
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center	2.525 ksf
23	Torrance	465 Crenshaw Blvd	Transit Center	17.8 ksf
24	Torrance	23625 Arlington Ave	Apartments	14 du
25	Torrance	20405 Gramercy Place	Light Industrial	17 ksf
26	Torrance	1750 214th St/1600 Abalone St	Warehouse	30 ksf
			Manufacturing	13 ksf
		Total	**Residential**	**2,835 du**
			Hotel Rooms	**300 rooms**
			Non-Residential	**1,951.6 ksf**

Source: PCR Services Corporation, 2016. Based on the Related Projects Table from the Fehr and Peers Traffic Study, 2016.

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4. ENVIRONMENTAL IMPACT ANALYSIS
L. TRANSPORTATION AND TRAFFIC

1. INTRODUCTION

This section describes potential impacts associated with construction and operational transportation and traffic. The section provides an analysis of construction traffic; intersection capacity; the regional transportation system; public transit and alternative transportation; vehicular access and circulation; and parking supply. The evaluation of intersection capacity examines the impact of the Project relative to existing and future conditions. This section is based on the *Traffic Impact Analysis* (Traffic Study*)* prepared by Fehr & Peers, Inc. dated February 2016. The Traffic Study, which provides more detailed information, data, and analyses, is included as Appendix I of this Draft EIR. The Traffic Study was prepared following extensive coordination with staff from Los Angeles County, Caltrans, City of Los Angeles, City of Carson and City of Torrance. Further, the Traffic Study for this County project was prepared pursuant to a Memorandum of Understanding (MOU) with the County of Los Angeles Department of Public Works (DPW) Traffic and Lighting Division (TLD), which is appended to the Traffic Study provided in Appendix I of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Study Area Street System

The Project Site is located at 1000 West Carson Street in the unincorporated community of West Carson, California. The study area includes intersections located in or bordering Los Angeles County, City of Los Angeles, City of Carson and City of Torrance. Carson Street, Vermont Avenue, Normandie Avenue and 220th Street currently provide access to the site via 11 driveways. In addition, a parking lot for staff is located on the southeast corner of Vermont Avenue & 220th Street, with access provided by four driveways on 220th Street. The study area for this analysis is bounded by Torrance Boulevard on the north, 223rd Street on the south, Figueroa Street on the east, and Western Avenue on the west. **Figure 4.L-1**, *Study Area Intersections*, depicts the Project's Traffic Study area and the intersections analyzed for potential Project impacts. As described in further detail below, the study area is well served by a network of freeways and streets.[1] Freeways are under the jurisdiction of the California Department of Transportation (Caltrans).

(a) Freeways

Primary regional access to the site is provided by Carson Street, I-110, I-405 and State Route 91. Following is a brief description of the freeways that serve the site.

San Diego Freeway (I-405) – The San Diego Freeway runs east/west approximately two miles north of the Project Site and southeast/northwest approximately two miles east of the Project Site. Access from the

[1] *More detailed information regarding the major arterials in the study area and lane configurations is presented in the Traffic Impact Analysis, which is included as Appendix I of this Draft EIR.*

Project Site to the San Diego Freeway is provided by interchanges at Western Avenue, Normandie Avenue, Vermont Avenue (westbound vehicles only), Carson Street, and Wilmington Avenue.

Harbor Freeway (I-110) – The Harbor Freeway runs north/south approximately ¼ mile east of the Project Site. Access from the Project Site to the Harbor Freeway is provided by via interchanges at Carson Street and 223rd Street for southbound vehicles and at 220th Street for northbound vehicles.

Gardena Freeway/Artesia Freeway (State Route 91) – State Route 91 (SR 91) runs east/west approximately three miles north of the Project Site. East of the Harbor Freeway, SR 91 is known as the Gardena Freeway. West of the Harbor Freeway, SR 91 is known as the Artesia Freeway. Access from the Project Site to SR 91 is provided by the 110 Freeway and Vermont Avenue.

The following three types of analyses were conducted on Caltrans facilities: 1) freeway mainline segments, 2) Caltrans intersections, and 3) off-ramp queuing. More specifically, the following facilities were analyzed: two freeway mainline segments on I-110, three segments on I-405 and one segment on SR-91 to determine density and LOS; one intersection (Western Ave. (State Route 213) & Carson Street); and six freeway off-ramps to estimate queues.

With regard to the freeway mainline segments, level of service (LOS) is a measure used to describe traffic flow conditions or the freedom to maneuver within traffic stream. The LOS ranges from nearly free-flow traffic at LOS A to breakdown and oversaturation at LOS F. The definitions of the LOS levels are shown in **Table 4.L-1**, *Highway Capacity Manual Level of Service Definitions for Freeway Segments*. The six freeway segments and respective LOS are summarized in **Table 4.L-2**, *Existing Conditions Freeway Segment Levels of Service*. As shown in Table 4.L-2, the I-110 at 228th Street and the I-110 at El Segundo operates at a LOS ranging from C to E during the AM and PM peak hours. The I-405 Freeway at I-710, I-405 south of I-110, and I-405 north of Western Ave/Van Ness Ave operates at a LOS ranging from LOS C to LOS F, with LOS F occurring during the AM peak hour at the I-405 at I-710 segment. The SR-91 at Avalon Boulevard interchange operates at a LOS ranging from LOS C to D.

With regard to intersections with the freeways, LOS provides a qualitative measure to describe the flow of traffic through the intersection. The LOS ranges from LOS A, which is excellent to LOS F, which is failure of the intersection. **Table 4.L-3**, *Highway Capacity Manual Level of Service Definitions for Intersections*, shows the LOS for signalized intersections. The one study intersection at Western Ave. (State Route 213) & Carson Street (Intersection ID 3) and its respective LOS is summarized in **Table 4.L-4**, *Existing Conditions Caltrans' Intersection Level of Service Impact Analysis*. As shown in Table 4.L-4, Signalized Intersection 3 - Western Ave. (State Route 213) & Carson Street operates at LOS E during the morning and afternoon peak hours.

With regard to freeway ramps, Caltrans' primary concern at off-ramps is that queued vehicles may extend past the back of the ramp onto the mainline. The six off-ramps analyzed include: I-110 SB ramps at Carson Street; 220th Street/I-210 NB ramps at Figueroa Street; 1-110 SB ramps at 223rd Street; I-405 SB ramps at Carson Street; I-405 NB ramps at Carson Street; and I-405 NB ramps at Wilmington Avenue. Table 17 in Traffic Study includes the peak hour off-ramp intersection 95th percentile queues for the analyzed ramps. As shown therein, the AM and PM peak hour queues at all ramp locations do not exceed the ramp length under existing conditions.



1 Study Intersection

PCR

N

0 0.4 Miles

Study Area Intersections

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.L-1

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Table 4.L-1

Highway Capacity Manual Level of Service Definitions for Freeway Segments

Level of Service	Description	Density[a]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 and ≤ 18
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 and ≤ 26
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 and ≤ 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 and ≤ 45
F	Represents a breakdown in flow and oversaturated conditions.	> 45

[a] *Density is defined in vehicles per mile per lane and describes the proximity to other vehicles and is related to the freedom to maneuver within the traffic stream (2010 Highway Capacity Manual, Transportation Research Board, 2010).*

Source: 2010 Highway Capacity Manual (Transportation Research Board, 2010) and Caltrans.

(b) Roadways

The Project Site is served by a grid of streets that are oriented toward the north-south and east-west directions. The major arterials providing regional and sub-regional access to the Project vicinity include Vermont Avenue, Normandie Avenue, and Carson Street. Within the City of Los Angeles, the Mobility Plan 2035, which was adopted in August 2015 and is a comprehensive update of the Transportation Element, provides a classification system for roadways within the City boundaries.

Roadway descriptions are also described per the County's General Plan and the City of Carson General Plan, as applicable. The following is a brief description of the major roadways in the study area including the classifications under per the applicable planning documents referenced above:

Table 4.L-2

Existing Conditions Freeway Segment Levels of Service

ID	Freeway Segment	Peak Hour	Direction	Existing Conditions	
				Density [a]	LOS
FS-1	I-110 at 228th Street	A.M.	NB	37.0	E
			SB	22.9	C
		P.M.	NB	23.1	C
			SB	33.7	D
FS-2	I-110 at El Segundo Boulevard	A.M.	NB	27.0	D
			SB	36.9	E
		P.M.	NB	26.1	D
			SB	37.4	E
FS-3	I-405 at I-710	A.M.	NB	47.5	F
			SB	27.4	D
		P.M.	NB	28.5	D
			SB	43.8	E
FS-4	I-405 south of I-110/ Carson Scales	A.M.	NB	33.9	D
			SB	28.2	D
		P.M.	NB	26.0	C
			SB	37.9	E
FS-5	I-405 north of Western Ave/Van Ness Ave.	A.M.	NB	30.8	D
			SB	29.0	D
		P.M.	NB	27.5	D
			SB	31.8	D
FS-6	SR 91 at Avalon Blvd.	A.M.	EB	21.9	C
			WB	28.7	D
		P.M.	EB	26.1	D
			WB	19.9	C

[a] *Measured in passenger cars per mile per lane (pc/mi/ln) for freeways assuming a free-flow speed of 55 mph per Caltrans request.*

Source: Fehr & Peers, 2016.

(i) North/South Roadways

Vermont Avenue – Vermont Avenue is designated as a Major Highway in the Los Angeles County General Plan that runs north/south on the east side of the Project Site and provides two travel lanes and a bicycle lane in each direction. The street also has a center turn lane. Parallel parking is available on both sides of the street. The posted speed limit is 40 miles per hour (mph).

Table 4.L-3

Highway Capacity Manual Level of Service Definitions for Intersections

Level of Service	Description	Seconds of Delay Signalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80

Source: 2010 Highway Capacity Manual (Transportation Research Board, 2010) and Caltrans.

Table 4.L-4

Existing Conditions Caltrans' Intersection Level of Service Impact Analysis

ID	Intersection	Peak Hour	Existing Delay	Existing LOS
Signalized Intersections				
3.	Western Ave. (State Route 213) & Carson Street	A.M.	61.4	E
		P.M.	61.4	E

Delay is measured in average seconds per vehicle; LOS = Level of service

Source: Fehr & Peers, 2016.

Normandie Avenue – Normandie Avenue is designated as a Secondary Highway in the Los Angeles County General Plan that runs north/south on the west side of the Project Site and provides two travel lanes in each direction. This roadway is part of the City of Los Angeles Bicycle Lane Network in the City of Los Angeles Mobility Plan. Restricted and unrestricted parking is available on both sides of the street. The posted speed limit is 35 mph. Within the study area, Normandie Avenue forms the boundary between the City of Los Angeles and the unincorporated community of West Carson.

Western Avenue (State Route 213) – Western Avenue is designated as a Major Highway in the Los Angeles County General Plan that runs north/south to the west of the Project Site. The roadway provides two travel lanes in each direction and contains a raised median with intersection turn lanes on portions of the roadway. Western Avenue is part of the City of Los Angeles Mobility Plan's Bicycle Enhanced Network. Restricted and unrestricted parking is available on both sides of the street near the Project Site. The posted speed limit is 40 mph. Within the study area, Normandie Avenue forms the boundary between the City of Los Angeles and the City of Torrance.

Figueroa Street – Figueroa Street is designated as a Major Highway in the City of Carson General Plan that runs north/south to the east of the Project Site. The roadway provides two travel lanes in each direction and contains a raised median with intersection turn lanes on portions of the roadway. Restricted and unrestricted parking is available on both sides of the street near the Project Site. The posted speed limit is 40 mph.

Meyler Street – Meyler Street is a local street that runs north/south south of the Project Site. Unrestricted parking is available on both sides of the street near the Project Site.

Berendo Avenue – Berendo Street is a local street that runs north/south north of the Project Site. Restricted and unrestricted parking is available on both sides of the street near the Project Site.

Budlong Avenue – Budlong Avenue is a local street that runs north/south north of the Project Site. Restricted and unrestricted parking is available on both sides of the street near the Project Site.

(ii) East/West Roadways

Carson Street – Carson Street is designated as a Major Highway in the Los Angeles County General Plan that runs east/west on the north side of the Project Site and provides two travel lanes in each direction. The portions of the roadway within the City of Los Angeles are part of the City of Los Angeles Bicycle Lane Network. Restricted and unrestricted parking is available on either side of the street on portions of the roadway. The posted speed limit is 35 mph.

220th Street – 220th Street is a local street that runs east/west on the south side of the Project Site and provides four vehicle travel lanes, two in each direction. This roadway is part of the County of Los Angeles proposed Bicycle Network. Restricted and unrestricted parking is available on either side of the street on portions of the roadway near the Project Site. The posted speed limit is 30 mph.

223rd Street – 223rd Street is designated as a Secondary Highway in the Los Angeles County General Plan that runs east/west to the south of the Project Site and provides two travel lanes in each direction. This

roadway is part of the County of Los Angeles proposed Bicycle Network. The majority of parking is unrestricted on either side of the street. The posted speed limit is between 35 and 40 mph.

Torrance Boulevard – Torrance Boulevard is designated as a Secondary Highway in the Los Angeles County General Plan that runs east/west north of the Project Site and provides two travel lanes in each direction. Parking is available on most blocks within the study area for passenger vehicles. Commercial vehicles are not allowed to park on the roadway. The posted speed limit is 35 mph.

Sepulveda Boulevard – Sepulveda Boulevard is designated as a Major Highway in the Los Angeles County General Plan that runs east/west south of the Project Site and provides three travel lanes in each direction, with a raised median on portions of the roadway. Parking is not available on either side of the street. The posted speed limit is 40 mph.

(2) Existing Intersection Service Levels

Twenty-two study intersections, 21 signalized and one (1) unsignalized, were selected for the Project traffic analysis (See Figure 4.L-1 for intersection locations). Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum desirable level of service in urban areas. Levels of service definitions are provided in **Table 4.L-5**, *Level of Service Definitions for Signalized Intersections*.

Per the requirements of Los Angeles County, City of Torrance and City of Carson, Intersection Capacity Utilization (ICU) methodology was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding LOS for the 21 signalized study intersections wholly or partly in these jurisdictions. The ICU method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. "Capacity" represents the maximum volume of vehicles in the critical lanes that have a reasonable expectation of passing through an intersection in one hour under prevailing roadway and traffic conditions. The ICU were calculated by dividing critical traffic movement volumes at an intersection by the capacity per number of lanes for the movement.

The one unsignalized study intersection, Meyler Street & 220th Street, is located in unincorporated Los Angeles County. The County's Impact Analysis Report Guidelines do not specify a specific methodology or thresholds of significance when analyzing unsignalized intersections. Consistent with County practices, this intersections is evaluated as if it were signalized, using the ICU methodology. The County of Los Angeles thresholds of significance for a signalized intersection are also applied to this intersection (described below).

The City of Los Angeles requires the use of Critical Movement Analysis (CMA) methodology to evaluate the operations of intersections and this methodology was used to analyze the study locations in the City of Los Angeles. The CMA method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. The CALCADB software package developed by Los Angeles Department of Transportation (LADOT) was used to implement the CMA methodology at the eight study intersections wholly or partly under City of Los Angeles jurisdiction.

Table 4.L-5

Level of Service Definitions for Signalized Intersections

Level of Service	Intersection Capacity Utilization[a]	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

[a] *Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.*

Source: Fehr & Peers, 2016.

The City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system is a computer-based traffic signal control system that monitors traffic conditions and system performance to allow ATSAC-operations to manage signal timing to improve traffic flow conditions. All eight signalized study intersections under City of Los Angeles jurisdiction are currently operating under the City's ATSAC system. In accordance with established City of Los Angeles procedures, a 0.07 V/C reduction was applied at each intersection where ATSAC is implemented. Per direction from LADOT, the benefits of the Adaptive Traffic Control System (ATCS) in place at these intersections (normally estimated at 0.03 V/C) are not reflected in this analysis due to the limited area of the City's system.

Table 4.L-6, *Existing Intersection Levels of Service Analysis,* summarizes the existing LOS analysis results. As shown in the table, the following nine intersections are currently operating at poor levels of service, i.e., LOS E or F, during one or both of the analyzed peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Detailed LOS calculation worksheets are presented in Appendix C of the Traffic Study.

Table 4.L-6

Existing Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	Existing LOS
1	Normandie Ave.	Torrance Blvd.	City of Los Angeles	CMA	AM	0.902	E
					PM	0.904	E
			Los Angeles County	ICU	AM	0.935	E
					PM	0.936	E
2	Vermont Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.927	E
					PM	0.880	D
3	Western Ave.	Carson St.	City of Los Angeles	CMA	AM	0.877	D
					PM	0.948	E
			City of Torrance	ICU	AM	0.943	E
					PM	1.006	F
4	Normandie Ave.	Carson St.	City of Los Angeles	CMA	AM	0.763	C
					PM	0.837	D
			Los Angeles County	ICU	AM	0.904	E
					PM	0.930	E
5	Budlong Ave.	Carson St.	Los Angeles County	ICU	AM	0.570	A
					PM	0.539	A
6	Berendo Ave.	Carson St.	Los Angeles County	ICU	AM	0.575	A
					PM	0.569	A
7	Medical Ctr Dr.	Carson St.	Los Angeles County	ICU	AM	0.628	B
					PM	0.611	B
8	Vermont Ave.	Carson St.	Los Angeles County	ICU	AM	0.905	E
					PM	0.917	E
9	I-110 SB Ramps	Carson St.	Los Angeles County	ICU	AM	0.814	D

Table 4.L-6

Existing (2014) Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	Existing LOS
					PM	0.849	D
10	Figueroa St.	Carson St.	City of Carson	ICU	AM	0.661	B
					PM	0.762	C
11	Western Ave.	220th St.	City of Los Angeles	CMA	AM	0.554	A
					PM	0.698	B
			City of Torrance	ICU	AM	0.685	B
					PM	0.819	D
12	Normandie Ave.	220th St.	City of Los Angeles	CMA	AM	0.409	A
					PM	0.293	A
			Los Angeles County	ICU	AM	0.549	A
					PM	0.441	A
13	Meyler St.	220th St.	Los Angeles County	ICU	AM	0.460	A
					PM	0.446	A
14	Vermont Ave.	220th St.	Los Angeles County	ICU	AM	0.645	B
					PM	0.696	B
15	Figueroa St.	220th St./I-110 NB Ramps	City of Carson	ICU	AM	0.913	E
					PM	0.886	D
16	Western Ave.	223rd St.	City of Los Angeles	CMA	AM	0.822	D
					PM	0.851	D
			City of Torrance	ICU	AM	0.893	D
					PM	0.919	E
17	Normandie Ave.	223rd St.	City of Los Angeles	CMA	AM	0.623	B
					PM	0.701	C
			Los Angeles County	ICU	AM	0.807	D
					PM	0.822	D
18	Meyler St.	223rd St.	Los Angeles County	ICU	AM	0.649	B
					PM	0.578	A
19	Vermont Ave.	223rd St.	Los Angeles County	ICU	AM	0.917	E
					PM	0.880	D
20	I-110 SB Ramps	223rd St.	Los Angeles County	ICU	AM	0.755	C
					PM	0.843	D
21	Figueroa St.	223rd St.	City of Carson	ICU	AM	0.827	D
					PM	0.718	C
22	Western Ave.	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E
					PM	0.990	E
			City of Torrance	ICU	AM	0.957	E
					PM	1.011	F

A All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.

Source: Fehr & Peers, 2016

(3) CMP Monitoring Stations

The following six (6) Congestion Management Program (CMP) arterial monitoring intersections are located nearest to the Project study area:

- Western Avenue & Carson Street (City of Torrance)
- Western Avenue & 190th Street (City of Torrance)
- Western Avenue & Sepulveda Boulevard (City of Torrance)
- Pacific Coast Highway & Western Avenue (City of Los Angeles)
- Pacific Coast Highway & Figueroa Street (City of Los Angeles)
- Artesia Boulevard & Vermont Avenue (City of Gardena)

The CMP Program is discussed further below.

(4) Public Transit and Alternative Transportation Facilities

(a) Public Transit Service

The Project area is served by bus lines operated by Los Angeles County Metropolitan Transportation Authority (Metro), Torrance Transit, Carson Circuit and Gardena Municipal Bus. **Figure 4.L-2**, *Existing Transit Lines*, illustrates the existing transit service in the study area. The following is a summary of the transit services in the Project vicinity:

Metro Line 205 – Line 205 is a north/south line that runs from the Willowbrook/Rosa Parks Station to San Pedro. The line has 30- to 35-minute headways during AM/PM peak hours and runs on Vermont Avenue within the study area, with stops every few blocks. Project site access is provided via stops at the intersections of Vermont Avenue & Carson Street and Vermont Avenue & 220th Street.

Metro Line 950X – Line 950X is a north/south line that runs from downtown Los Angeles to San Pedro via the Harbor Freeway and provides limited service. The line has 12- to 30-minute headways during AM/PM peak periods and runs on the Harbor Freeway within the study area. Project site access is provided via a stop at Carson Street.

Metro Line 550 – Line 550 is a north/south line that runs from the University of Southern California to San Pedro. The line has 30- to 35-minute headways during AM/PM peak hours and runs on Vermont Avenue within the study area, with stops at Torrance Boulevard and Carson Street. Project site access is provided via a stop at the intersection of Vermont Avenue & Carson Street.

Carson Circuit Line F – Line F travels on a loop route that runs primarily along 223rd Street, Figueroa Street, 213th Street and Martin Street. The line has 40-minute headways during AM and PM peak periods and runs on 223rd Street and Figueroa Street within the study area, with stops at Figueroa Street & 223rd Street, Figueroa Street & 220th Street, Figueroa Street & Carson Street, Carson Town Center, and Figueroa Street & Torrance Boulevard.

Carson North/South Shuttle Line S – Line S is a north/south line that runs from Wilmington to the Harbor Gateway Transit Center and provides morning and afternoon peak period service only. The line has 50-minute headways and runs on Figueroa Street within the study area, with stops at Figueroa Street & 223rd Street, Figueroa Street & 220th Street, Figueroa Street & Carson Street, Carson Town Center, and Figueroa Street & Torrance Boulevard.

Torrance Transit Line 1 – Line 1 runs from Del Amo Fashion Center to the Harbor Gateway Center. The line runs east/west along Torrance Boulevard, north/south along Normandie Avenue and Vermont Avenue and east/west along Carson Street within the study area, with stops at every few blocks. The Project Site is served by two stops along Carson Street with 40- to 45-minute headways during the AM and PM peak periods.

Torrance Transit Line 3 – Line 3 is an east/west line that runs from the Redondo Beach Pier to downtown Long Beach. The line runs along Carson Street within the study area with 20- to 25-minute headways during the AM and PM peak periods and stops at every few of blocks.

Torrance Transit Line Rapid 3 – Line Rapid 3 is an east/west line that runs from the South Bay Galleria to downtown Long Beach and travels much of the same route as Line 3 adding frequent service to the study area between 6:30 and 8:30 AM and between 2:30 and 6:00 PM. The line runs along Carson Street within the study area and provides service with headways between 10 and 20 minutes during the AM and PM peak periods. Stops are provided at Carson Street & Western Avenue, Carson Street & Normandie Avenue, and Carson Street & Vermont Avenue within the study area.

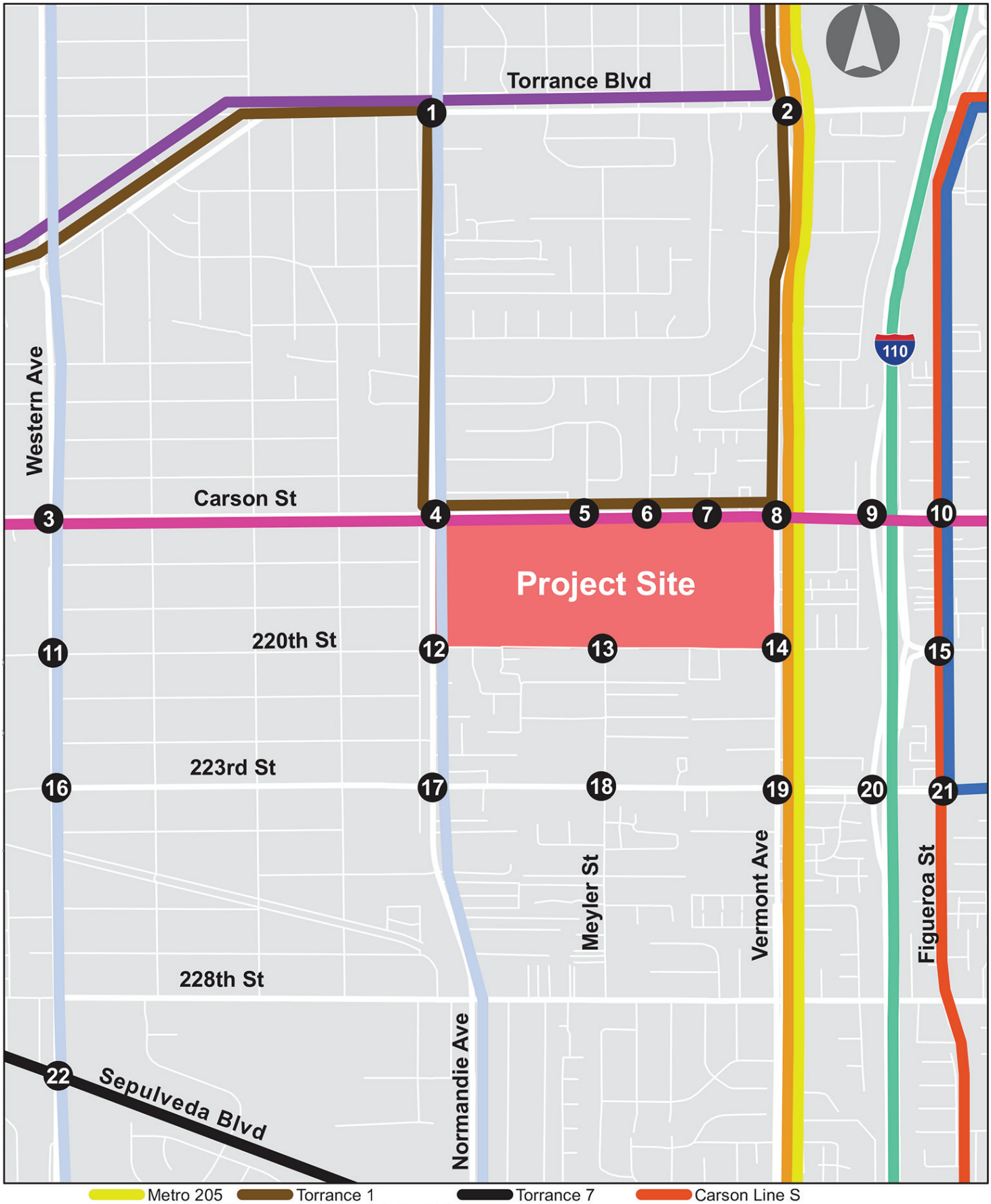
Torrance Transit Line 4 – Line 4 is a north/south express line that runs from the intersection of Hawthorne Boulevard and the Pacific Coast Highway to downtown Los Angeles. The line travels east/west on Torrance Boulevard and north/south on Vermont Boulevard within the study area with stops located at Torrance Boulevard & Western Avenue, Torrance Boulevard & Normandie Avenue, and Torrance Boulevard & Vermont Avenue. The line operates between 5:30 and 8:50 AM and between 3:30 and 7:00 PM with 40-minute headways.

Torrance Transit Line 7 – Line 7 is an east/west line that runs from the intersection of Catalina Street & Torrance Boulevard to the intersection of Sepulveda Boulevard & Avalon Boulevard. The line runs along Sepulveda Boulevard within the study area with 60-minute AM and PM peak period headways and provides a stop at Western Avenue & Sepulveda Boulevard.

Gardena Municipal Bus Lines 2 – Line 2 is a north/south line that runs from the Metro Green Line Vermont Station to the intersection of the Pacific Coast Highway & Normandie Avenue. The line runs along Western Avenue and Normandie Avenue within the study area and provides stops every few blocks. The line provides service with headways of 15 minutes during AM and PM peak periods.

(b) Bicycle and Pedestrian Facilities

Currently, there is limited dedicated bicycle infrastructure in the study area. East of the Project Site, bicycle lanes (Class II facilities) extend north/south on Vermont Avenue from 223rd Street through the northern edge of the study area. An east/west Class II facility exists on Carson Street between Normandie Avenue and



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Existing Transit Lines

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.L-2

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Western Avenue. The City of Los Angeles Mobility Plan includes a proposed protected bicycle lane on Western Avenue within the study area. The Los Angeles County Bicycle Master Plan includes a proposed Class II bicycle lane on 223rd Street between Normandie Avenue and the Harbor Freeway and a Class III bicycle route on 220th Street between Normandie Avenue and Vermont Avenue. The City of Carson Master Plan of Bikeways includes proposed buffered bicycle lanes on Figueroa Street south of 223rd Street and bicycle lanes north of 223rd Street within the study area. The plan also calls for buffered bike lanes on 223rd Street, sharrows[2] on Carson Street and bicycle lanes on 220th Street in the City of Carson portion of the study area. Existing and planned bicycle facilities are illustrated in **Figure 4.L-3**, *Existing and Planned Bicycle Facilities*. Pedestrian traffic typically enters the Medical Center Campus from one of the parking structures, parking lots or from the nearby transit stops. The Medical Center Campus is located in an established neighborhood with a moderate population density. All of the streets immediately bordering the Medical Center Campus and nearly all of the other streets in the vicinity include sidewalks, facilitating pedestrian movement. Marked crosswalks are present at most intersections in the study area. Pedestrian walk phases are either automatically provided at the intersections or are actuated by pedestrian push-buttons.

(5) Existing Project Site Vehicular Circulation

Vehicular access to the Harbor-UCLA Medical Center Campus, as illustrated below in **Figure 4.L-4**, *Existing Site Circulation*, is provided by a primary driveway on Carson Street, near the Existing Hospital and a second driveway west of the primary driveway; two driveways on Vermont Avenue; five driveways along 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveways are signalized. Internal circulation on-site follows the original grid layout established on the property, with four east-west roadways and numerous short north-south connector roadways. Most interior intersections of two roadways or drive aisles are stop-sign controlled. To aid wayfinding, most of the internal roadways are named and display street name signs at intersections. In addition, most buildings or modular structures have a building number (consisting of a letter and a number) or a building name, or both, visible to drivers. However, few directory boards are located within the Medical Center Campus, and wayfinding for motorists as well as pedestrians can be confusing. Contributing to this confusion is the lack of distinctions between Medical Center Campus entrances and parking areas for Harbor-UCLA staff and those for the general public.

(6) Parking Facilities

Existing parking facilities consist primarily of on-site surface parking lots and one multi-level parking structure located at the southeast corner of the Medical Center Campus, as well as three off-site surface parking lots. On-site parking facilities at the Medical Campus are illustrated in Figure 2-5 in Chapter 2.0, *Project Description*, of this Draft. The larger parking lots are generally distributed along the Medical Center Campus perimeter, with smaller lots throughout the Medical Center Campus interior; parking is allowed on one or both sides of internal roadways, though incidental on-street parking also occurs in areas not officially designated as parking areas, as discussed below.

The on-site parking supply totals 2,905 spaces, which exceeds the County's parking code requirement of 2,709 spaces. Specifically, as discussed in further detail below under Regulatory Framework Summary, Los Angeles County Code, Section 22.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and

[2] *Sharrows are chevrons combined with bicycle stencils placed in the center of a travel lane. They indicate that bicycles and motor vehicles share the lane. These are often times accompanied by signage such as "bicyclists can use full lane".*

Group Homes for Children, requires 2 spaces per bed, 1 space per 250 square feet for outpatient facilities, and 1 space per 400 square feet for research use. This supply includes 2,168 standard spaces and 124 American with Disabilities Act (ADA) spaces in designated surface parking lots and the new parking structure in the southeastern corner of the Harbor-UCLA Medical Center Campus, and 596 standard spaces and 17 ADA spaces along the internal streets. An additional 281 spaces (278 standard spaces and three ADA spaces) are provided in off-site parking facilities, and street parking is permitted along all or portions of the four public streets surrounding the Medical Center Campus. However, parking is not uniformly utilized, with parking for the Existing Hospital Tower and other facilities near the eastern end of the Medical Center Campus and along the northern perimeter experiencing severe localized shortfalls, while in other locations, designated parking for specific facilities is underutilized. A considerable number of makeshift parking spaces have been created along internal roadways to accommodate localized demand, though many of these areas are not designated for on-street parking. Moreover, most of the interior roadways do not provide sidewalks or curbs and pedestrians must share the roadways with vehicle traffic, adversely affecting access, including disabled access, to facilities throughout the Harbor-UCLA Medical Center Campus.

b. Regulatory Framework Summary

(1) Federal

No federal traffic/transportation regulations apply to the Project.

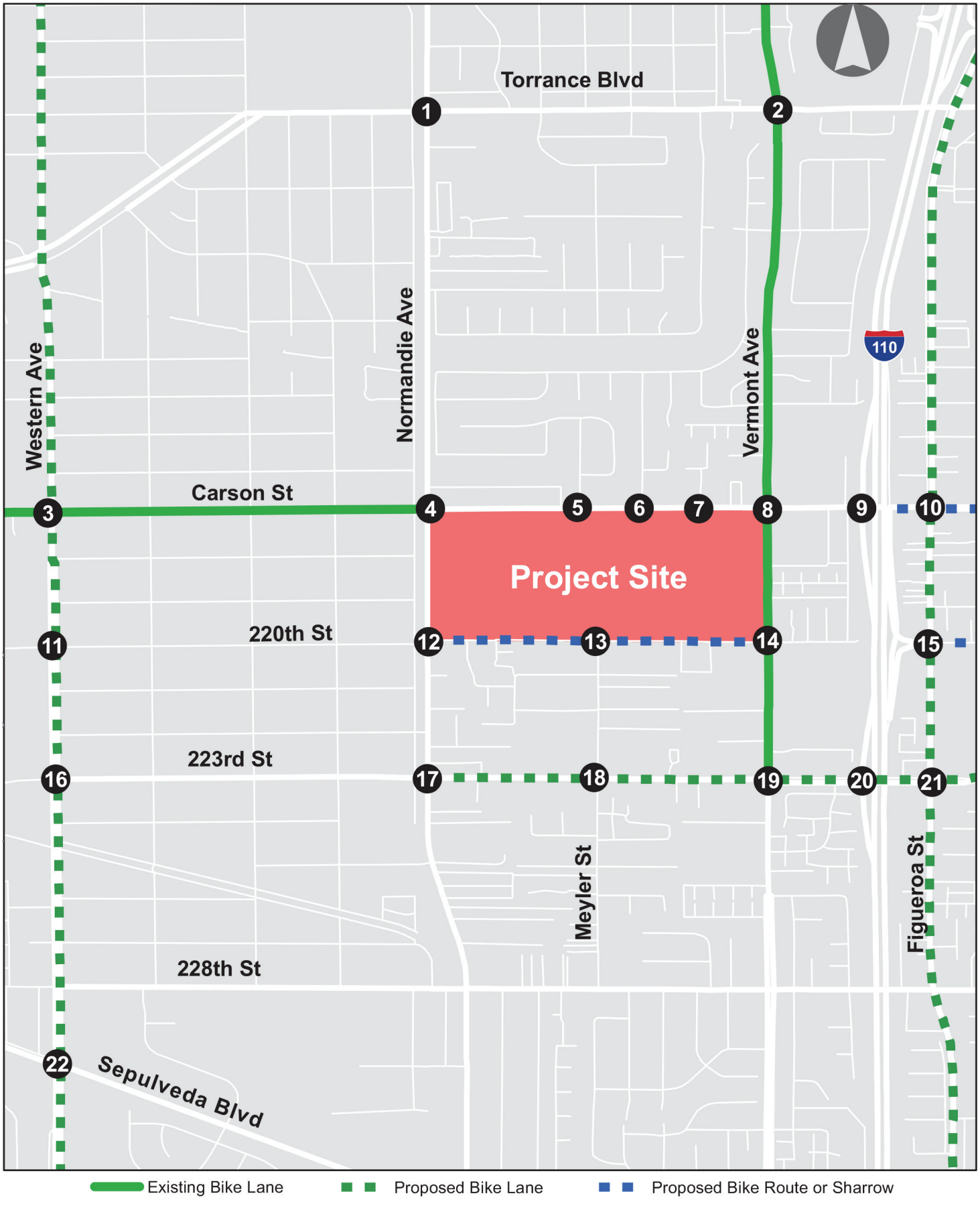
(2) State

(a) Statewide Transportation Improvement Program

Caltrans administers transportation programming, which is the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. Caltrans commits expected revenues over a multi-year period to transportation projects. The Statewide Transportation Improvement Program (STIP) is a multiyear capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other sources.

(b) Congestion Management Program

The Congestion Management Program (CMP) is a state-mandated program enacted by the State legislature to address the increasing concern that urban congestion is affecting the economic vitality of the state and diminishing the quality of life in some communities. The 2010 CMP is the eighth CMP adopted for Los Angeles County since the requirement became effective with the passage of Proposition 111 in 1990. The hallmark of the CMP program is that it is intended to address the impact of local growth on the regional transportation system. Statutory requirements of the CMP include monitoring LOS on the CMP Highway and Roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program and helping local jurisdictions meet their responsibilities under the CMP. Metro, the local CMP agency, has established a countywide approach to implement the statutory requirements of the CMP in their governing 2010 CMP for Los Angeles County. Please see discussion below.



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0 0.4 Miles

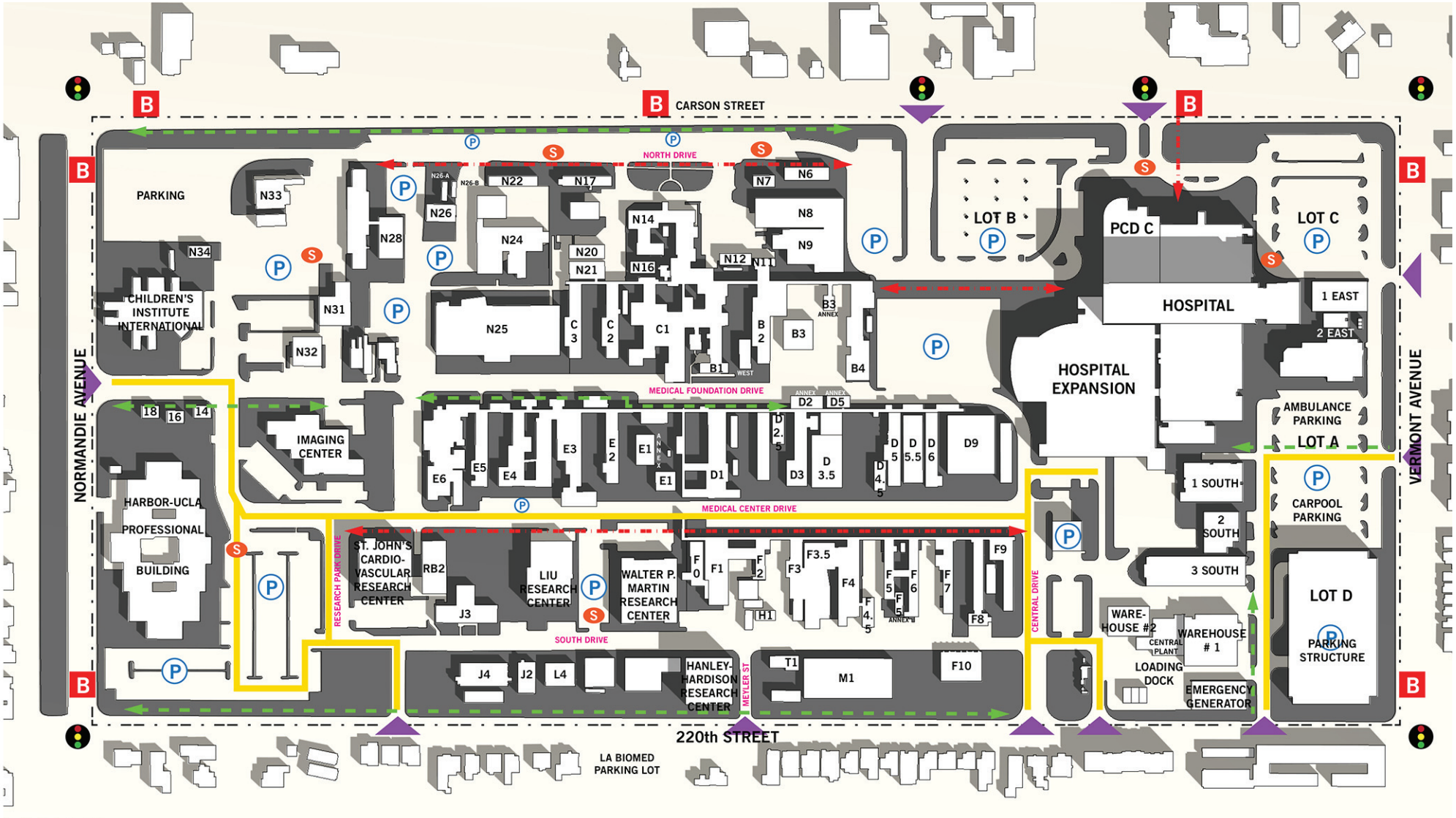
Existing and Planned Bicycle Facilities

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.L-3



LEGEND

- PARKING
- SHUTTLE BUS STOPS
- STOP LIGHTS
- FIRE DEPT. FIRE LANE ACCESS 26'0" ACCESS ROAD
- BUS STOP
- PRIMARY PEDESTRIAN ROUTE
- SECONDARY PEDESTRIAN ROUTE
- CAMPUS ENTRY
- PROPERTY LINE

0 400 Feet

PCR

Existing Site Circulation

Harbor-UCLA Medical Center Master Plan

Source: Perkins+Will, 2012.

FIGURE

4.L-4

(c) Senate Bill No. 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under CEQA for several categories of development projects including the development of infill projects in transit priority areas. The bill adds to the CEQA Statute, California Public Resources Code Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, Section 21099. Pursuant to Section 21099(d)(1) "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment."[3] The provisions of SB 743 apply to projects located on a "lot within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by, an improved public right-of-way from, parcels that are developed with qualified urban uses….and it is located within one-half mile of a major transit stop."[4] The Project would meet the criteria set forth in SB 743 because it (1) is located within a transit priority area less than one-half mile from the Harbor Freeway/Carson Station TOD (connection to Metro Silver Line) and (2) comprises an employment center within an established urban area. Under SB 743, the Project would be exempt from findings of significance related to parking effects. However, for the purpose of this EIR, parking effects are evaluated for informational and disclosure purposes.

(3) Regional

(a) Southern California Association of Governments' Regional Transportation Plan

The Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP) is a federal- and State-mandated transportation plan that envisions the future multimodal transportation system for the region and provides the basic framework for coordinated, long-term investment in the regional transportation system over the RTP planning horizon of 2035. In compliance with State and federal requirements, SCAG prepares the RTIP to implement projects and programs listed in the RTP. Updated every other year, the RTP lists all transportation projects proposed for the region over a six-year period. Transportation projects proposed in the region are required to be consistent with the RTP and included within the RTIP to be eligible for State or federal funding.

The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) was adopted by SCAG on April 7, 2016. The 2016 RTP/SCS identifies mobility as an important component of a much larger picture with added emphasis on sustainability and integrated planning. In addition, the RTP/SCS includes goals and policies that pertain to mobility, accessibility, safety, productivity of the transportation system, protection of the environment and energy efficiency, and land use and growth patterns that complement the State and region's transportation investments. An integral component of the RTP/SCS is a strong commitment to reduce emissions from transportation sources in order to comply with Senate Bill 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the Clean Air Act. For further discussion of air quality and greenhouse gas emissions, see Section 4.B, *Air Quality*, and Section 4.E, *Greenhouse Gas Emissions*, respectively, of this Draft EIR.

[3] *Section 21009(2)(B) clarifies that "For the purposes of this subdivision, aesthetic impacts do not include impacts on historical or cultural resources."*

[4] *Per definitions included in Section 21099(a).*

(b) Los Angeles County Congestion Management Program

The CMP is a State-mandated program enacted by the State legislature to address the increasing concern that urban congestion is affecting the economic vitality of the State and diminishing the quality of life in some communities. The 2010 CMP is the eighth CMP adopted for Los Angeles County since the requirement became effective with the passage of Proposition 111 in 1990. The hallmark of the CMP program is that it is intended to address the impact of local growth on the regional transportation system. Statutory requirements of the CMP include monitoring LOS on the CMP highway and roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program, and helping local jurisdictions meet their responsibilities under the CMP.

Los Angeles County Metropolitan Transportation Authority (Metro), the local CMP agency, has established a countywide approach to implement the statutory requirements of the CMP in its governing 2010 CMP for Los Angeles County. The CMP identifies a system of highways and roadways with minimum levels of service performance measurements designated at LOS E (unless exceeded in base year conditions) for highway segments and key roadway intersections on this system. If LOS standards deteriorate, then local jurisdictions must prepare a deficiency plan to be in conformance with the countywide plan.

The CMP requires that, when an EIR is prepared for a project, traffic and public transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use those facilities. Mixed-use developments that meet minimum density requirements and that are located within a one-quarter mile radius of a fixed rail station are exempt from CMP analysis. The CMP guidelines state that areas selected for analysis should be those that include the following locations:

- All CMP arterial monitoring intersections, including monitored on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the morning or afternoon weekday peak hours of adjacent street traffic; and
- Mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the morning or afternoon weekday peak hours.

If a project adds more traffic than the minimum threshold amount to an intersection, then that intersection has to be analyzed for deficiencies. The analysis must investigate measures which will mitigate the significant CMP system impacts; develop cost estimates, including the fair share costs to mitigate impacts of the proposed project; and indicate the responsible agency. In Los Angeles County, an impact is considered significant if the project related increase in the V/C ratio equals or exceeds the thresholds noted below under Thresholds of Significance.

(4) Local

(a) County of Los Angeles

(i) Los Angeles County General Plan 2035

The Mobility Element, included as Chapter 7 of the Los Angeles County General Plan 2035, provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. The Element assesses the challenges and constraints of the County transportation system and offers policy guidance to reach the County's long-term mobility goals. The Element includes two sub-elements, the Highway Plan and the Bicycle Master Plan. These plans establish policies for the roadway

and bikeway systems in the unincorporated areas, which are coordinated with the networks in the 88 cities in the County. The General Plan also established a program to prepare community pedestrian plans, with guidelines and standards to promote walkability and connectivity throughout the unincorporated areas.

(ii) West Carson Transit Oriented District (TOD) Specific Plan

The Los Angeles County Department of Regional Planning is currently preparing the West Carson Transit Oriented District (TOD) Specific Plan. The Plan aims to improve access to transit, housing, and jobs, while creating a healthier, safer environment for walking and biking. The final document will be based on collaborative efforts with residents, other County agencies, adjacent cities, and other stakeholders, and will contain standards for zoning and land use as well as a mobility strategy, an economic development strategy, a capital improvement plan, and urban design guidelines for the West Carson TOD area, which includes the Harbor-UCLA Medical Center Campus.

(iii) Parking Requirements

Section 22.52.1120 of the County Code applies to parking for hospitals, convalescent hospitals, adult residential facilities and group homes for children. According to Section 22.52.1120:

a. *Every hospital shall have two automobile parking spaces, plus adequate access thereto, for each patient bed. The parking may be within 500 feet of the exterior boundary of the lot or parcel containing the main use. At least 25 percent of the required parking shall be reserved and marked for the use of employees only.*

b. *Outpatient clinics, laboratories, pharmacies and other similar uses shall have one parking space for each 250 square feet of floor area when established in conjunction with a hospital.*

c. *Every convalescent hospital shall have an amount of automobile parking spaces not less than the number of residents permitted by any license or permit which allows the maintenance of such facility. If employee dwelling units are provided on the premises there shall be, in addition to the automobile parking spaces required for the principal use, the number of automobile parking spaces required by this Part 11 for residential uses.*

d. *Every adult residential facility and group home for children shall have one automobile parking space for each staff member on the largest shift and one parking space for each vehicle used directly in conducting such use.*

With regard to bicycle parking, Section 22.52.1225 of the County Code applies to the provision of bicycle parking and related facilities. According to Section 22.52.1225, the minimum number of short-term and long-term bicycle parking spaces for a particular use shall be provided in accordance with the requirements for each particular type of land use. For a combination of uses on a single lot, the number of required bicycle parking spaces shall be equal to the combined total of the required bicycle parking spaces for each of the individual uses. For purposes of this calculation, when floor area is used, all calculations for the specific use shall be based on gross floor area, including the gross floor area of any proposed addition to the involved structure or site. The following requirements provided in Section 22.52.1225 apply to existing and proposed uses on the Medical Center Campus.

- Institutional uses, including hospitals, convalescent hospitals, adult residential facilities, and group homes for children: Short-term - One space per each 20,000 square feet of gross floor area (two space minimum); Long-term - One space per each 10,000 square feet of gross floor area (two space minimum)

(b) City of Los Angeles

(i) Mobility Plan 2035

The City of Los Angeles Mobility Plan 2035, which was approved by Los Angeles City Council on August 11, 2015, is a comprehensive update of the City's Transportation Element and incorporates "complete streets" principles. Government Code Sections 65302(b)(2)(A) and (B) require a circulation element (i.e., Mobility Plan) to provide for a balanced, multimodal transportation network that meets the needs of all users of street, roads, and highways. "All users" by definition in the statute is "bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors." This requirement was established as part of Assembly Bill 1358, which is referred to as the California Complete Streets Act, as well as Caltrans Deputy Directive DD-64-R1, Complete Streets: Integrating the Transportation System.

The Mobility Plan 2035 addresses the expanded definition of streets that has fundamentally changed the relationship of people with streets. The Plan also responds to changing demographics in the City, including people wanting safe and accessible active transportation options and alternatives to the automobile as well as an aging population needing to rely on alternatives to the automobile. The Mobility Plan also addresses the role of transportation in the City's economic vitality. The Plan serves to meet the goal in the Regional Transportation Plan to decrease the vehicle miles traveled (VMT) per capita by five percent every five years, to 20 percent by 2035 and to meet a nine percent per capita greenhouse gas reduction by 2020 and a 16 percent per capita reduction by 2035.

The Mobility Plan 2035 identifies Transit Enhanced Network (TEN), a Neighborhood Enhanced Network (NEN) to support pedestrian activity, and an expanded Bicycle Enhanced Network (BEN). Among other provisions the Mobility Plan 2035 includes roadway designations pursuant to updated policies and current transportation needs in the City.

Mobility Plan 2035 includes goals that define the City's five main priorities: 1) Safety First; 2) World Class Infrastructure; 3) Access for All Angelenos; 4) Collaboration, Communication and Informed Choices; and 5) Clean Environmental & Healthy Communities.

The 2010 Bicycle Plan, which is part of the Mobility Plan 2035, guides the development of a citywide bicycle transportation system. The Bicycle Plan recognizes the growing needs of the cycling public and seeks to further reduce the barriers to greater utilization of bicycles for both personal transportation and for recreation. Particular emphasis is placed on bicycling as a commute option. The overall intent is to expand bicycle usage through further development of bicycle riding facilities and improvement of existing facilities along with appropriate support programs. The Bicycle Plan establishes standards for development of these facilities, as well as criteria for prioritization of development of designated routes.

With a stated policy to reduce automobile trips and greenhouse gas emissions by making 5 percent of all daily trips and 3 percent of commute trips bicycle trips by 2020, the 2010 Bicycle Plan establishes a Backbone Network and Neighborhood Network linking Regional Centers to promote bicycle usage.

(c) City of Carson

(i) Carson General Plan Transportation and Infrastructure Element

The purpose of the City of Carson General Plan Transportation and Infrastructure Element is to document the methods and results of the analysis of the existing and projected future circulation conditions in the City of Carson. As part of the General Plan, this document outlines Transportation and Infrastructure System policies and describes the future circulation system needed to support the Land Use Element. In addition, this Element addresses public utilities and infrastructure.

(d) City of Torrance

(i) Torrance General Plan Circulation and Infrastructure Element

The Torrance General Plan Circulation and Infrastructure Element plans for the efficient and effective movement of people and goods between destinations within Torrance and throughout the region. A well-planned circulation system is a high priority, given that Torrance plays a unique role in the geography of the South Bay Region. Creative solutions, technology, right-of-way acquisition, and cooperation with adjacent cities are keys to addressing circulation issues and managing growth. While the Circulation and Infrastructure Element recognizes that automobiles will remain the leading mode of transportation for most Torrance residents and visitors, the objectives and policies included in this Element also stress the importance of accommodating and encouraging alternatives to automobile travel. The provision of facilities for pedestrians and bicycles and a comprehensive transit system will ensure that non-automobile transportation is a convenient alternative. In addition to planning for the City's long-term mobility needs, this Element also addresses the circulation of energy, water, sewage, storm drainage, and communications.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of potential transportation and parking impacts considers potential project effects related to construction, intersection service levels, roadway segments, the regional transportation system (i.e., CMP analysis), Caltrans facilities (freeway mainline segments, Caltrans intersections, and off-ramp queuing), public transit and other alternative transportation modes, vehicular access and circulation, and parking supply.

(1) Construction Traffic Impacts

The analysis of construction traffic includes a determination of the number of construction-related trips (i.e., construction worker trips and construction truck trips) that would occur as a result of the Project, the contributions of those trips to the local traffic system, and an analysis of the potential conflicts between construction activity and on-going activity in the Project vicinity. The potential impact of construction traffic, including haul trucks, would be a lessening of the capacities of access streets and haul routes due to slower movements and larger turning radii of trucks.

(2) Operational Traffic Impacts

(a) Intersection Service Levels

The methodology for evaluating operational intersection traffic impacts involves several steps, including the identification of existing traffic conditions at all Project study intersections and the determination of existing conditions with the Project traffic, Interim Year baseline conditions without and with Project traffic, and future cumulative Full Buildout operating year baseline conditions without and with Project traffic at the 22 study intersections.

Weekday morning and evening peak hour traffic counts were conducted at the 22 analyzed intersections in October 2014, May 2015, November 2015 and December 2015. Existing peak hour weekday traffic volumes are illustrated in Figure 5 of the Traffic Study.

(i) Trip Generation

Vehicle trip generation for the Project was estimated using a combination of: standard rates developed by the ITE and published in *Trip Generation, 9th Edition* and trip generation reduction rates for similar sites. For the Hospital's inpatient facilities (ITE Code 610), the analysis used the number of beds to estimate trip generation. The proposed new hospital tower would provide more spacious facilities consistent with current best practices, meaning that the new facility will require more floor area per bed.

As this site is located adjacent to transit, mixed uses, and falls within the Los Angeles County West Carson Transit Oriented District Specific Plan, its trip generation pattern is likely to deviate from the data collection sites where rates from ITE were drawn. Internal trip credits, defined as a reduction that can be applied to the trip generation estimates due to trips made within the site between land uses, are also applied at a rate of 20% of the daily and peak hour trips to all land uses on the site. Many of the buildings and activities on the Harbor-UCLA Medical Center Campus are related to one another, and this will continue as the site continues to add complementary uses. The internal trip credits were estimated based on the recommended factors provided in *Trip Generation, 9th Edition*; review of traffic studies for projects located in the region; and consultation with county staff as part of the MOU process.

A 7% transit credit and a 2% walk credit were applied to the all land uses on the site. These credits account for trips to and from the Project Site using modes other than automobiles. These include trips on transit, bicycle, walk, etc. The site is located within walking distance to the several Metro and municipal bus lines including two express lines, and is in close proximity to a wide diversity of land uses within reasonable walking distance.

(ii) Trip Distribution

The geographic distribution of the traffic generated by the proposed Project depends on several factors. These factors include the type and density of the proposed land uses, the geographic distribution from which patients and staff are drawn, and the location of the Project in relation to the surrounding street system. The general distribution pattern used in this traffic study was developed in consultation with county staff and is illustrated in Figure 6 of the Traffic Study. Aggregated data on existing staff home zip codes and patient home zip codes was used to determine existing origins for trips coming to and leaving from the Project.

(iii) Traffic Assignment

The traffic expected to be generated by the proposed Project was assigned to the street network using the distribution pattern described in Figure 6 of the Traffic Study. Project traffic was assigned based on the vehicle access and circulation diagram from the Harbor-UCLA Master Plan, as seen in **Figure 4.L-5**, *Proposed Vehicular Access and Circulation*. Figure 8 in the Traffic Study illustrates the assignment of Project traffic for the Interim Development scenario at each of the 22 intersections analyzed in this study, and Figure 9 of the Traffic Study illustrates the assignment of Full Buildout Project traffic.

(iv) Future Cumulative Analysis (Interim Year and Full Buildout Year Conditions)

Future Street Network Changes

The existing traffic signal at the intersection of Western Avenue and Carson Street will be modified to include a protected/permitted left turn phase at the east and west approaches. The existing signal is being installed by the City of Los Angeles in consultation with Caltrans and the City of Torrance using funding from the Highway Safety Improvement Program (HSIP). As part of the proposed project, the southern leg of the intersection of Carson Street & Medical Center Drive, which serves as an entrance point to Harbor-UCLA Medical Center, would be closed and a new entrance will be opened on Carson Street between Budlong Avenue and Normandie Avenue.

Interim Year and Full Buildout Year Base Traffic Generation

In order to evaluate the potential impact of the Project in the future on the surrounding street system, it was necessary to develop estimates of future traffic conditions both with and without the Project. Future traffic volumes without the Project were first estimated, representing the Interim base conditions and the Cumulative base conditions. The trips generated by the Project are then estimated and separately assigned to the surrounding street system.

The Interim and Cumulative base traffic projections reflect growth in traffic from two primary sources: background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area, and traffic generated by the related projects in, or in the vicinity of, the study area. These factors are described below.

Ultimately, the Project's added increment is compared to the significance thresholds to determine whether the Project-generated traffic would result in a significant impact in the Future (Year 2023 and 2030) scenarios.

Areawide Traffic Growth

As part of the MOU process with County staff, an areawide traffic growth of 0.73% per year was agreed upon for the study area. Future increases in the background traffic volumes due to regional growth and development are expected to continue at this rate, at least through 2030. For the Interim analysis period, existing baseline traffic volumes were adjusted upward by a factor of 6.8% to reflect areawide regional growth up to 2023. With the projected completion date of 2030 for the Medical Center, the existing baseline traffic volumes were adjusted upward by a factor of 12.3% to reflect areawide regional growth up to the Cumulative period. The methodology prescribed by Los Angeles County does not include adding areawide traffic growth to existing volumes.

Cumulative Projects Traffic Generation

As indicated above, the second major source of traffic growth in the study area is from specific cumulative development projects, also called related projects, expected to be built in the vicinity of the Project Site prior to the proposed buildout. Data describing cumulative projects in the area was developed using information obtained from Los Angeles County Department of Regional Planning, LADOT, City of Carson Department of Planning and City of Torrance Department of Planning. A total of 26 related projects were identified in the surrounding area and are listed in Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR. The locations of the related projects are illustrated in Figure 3-1, *Related Projects Map*.

Trip generation estimates for related projects within the City of Los Angeles were obtained from the LADOT. All other trip generation estimates were determined using standard rates developed by the ITE and published in *Trip Generation, 9th Edition*, or from data in the traffic studies prepared for the projects. Table 6 in the Traffic Study presents the resulting trip generation estimates for these related projects. These projections are conservative in that they do not in every case account for either the existing uses to be removed or the possible use of non-motorized travel modes (transit, walking, etc.). The cumulative projects are expected to generate approximately 85,391 daily trips, including 3,684 trips during the morning peak hour and 7,316 trips during the evening peak hour.

Cumulative Projects Trip Distribution and Traffic Assignment

The geographic distribution of the traffic generated by the cumulative projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees and potential patrons of the proposed developments are drawn, and the location of the employment and commercial centers to which residents of residential projects would be drawn, and the location of the projects in relation to the surrounding street system. If available, trip distribution from a related project's traffic study was used in this analysis. When trip distribution was not available for a related project, it was estimated based on the factors described above. The trip generation estimates were assigned to the local street system using the trip distribution pattern described above. Figure 13 of the Traffic Study shows the traffic generated from the cumulative projects at the study intersections.

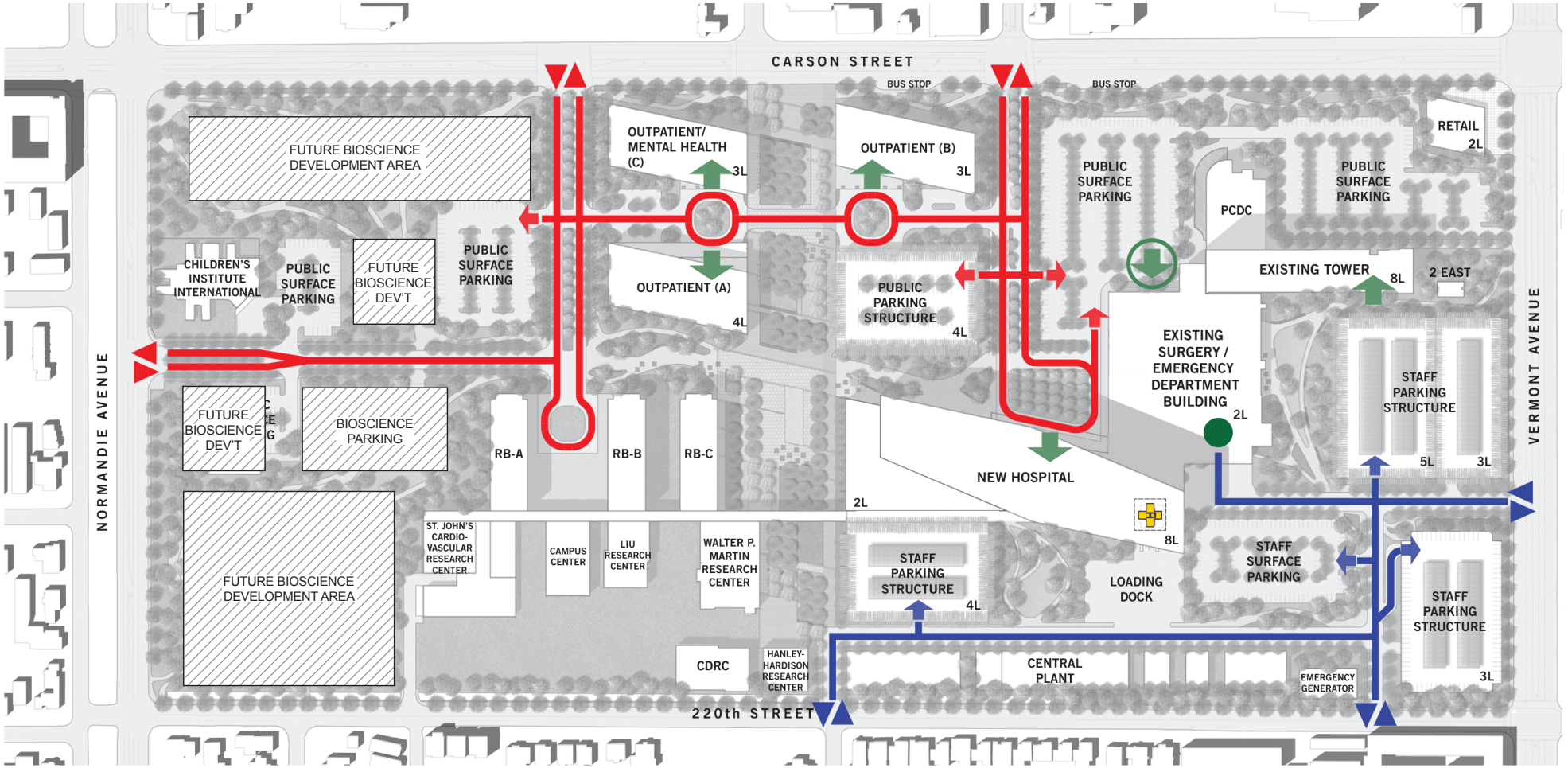
(3) Regional Transportation System

(a) Congestion Management Program Analysis

In accordance with the 2010 CMP, the impacts at all CMP arterial monitoring stations to which the Project would add 50 or more trips during either the morning or afternoon weekday peak hours, or 150 or more trips to a mainline freeway monitoring station, required to be examined. The CMP analysis evaluates six (6) arterial monitoring stations and six (6) freeway mainline monitoring stations in the study area.

(b) Caltrans Facilities Analysis

Impacts to Caltrans' State Highway facilities were evaluated according to the guidelines found in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans, 2002) (Caltrans TIS Guide). The analysis of the Caltrans facilities was based on the Caltrans comment letters on the Project dated November 20, 2014 and July 20, 2015, submitted in response to the Notice of Preparation for the Draft EIR (see Appendix A of this Draft EIR for a copy of the comment letter), as well as subsequent conversations with Caltrans staff.



VEHICULAR CIRCULATION PLAN

LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

PCR

N

Proposed Vehicular Access and Circulation

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE 4.L-5

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The following three types of analyses were conducted on Caltrans facilities: 1) freeway mainline segments, 2) Caltrans intersections, and 3) off-ramp queuing. Two freeway mainline segments on I-110, three segments on I-405 and one segment on SR-91 to determine density and LOS. Because PeMS data was not available for some nearby segments, existing traffic volume data was obtained from the 2013 Caltrans Traffic Census Program, the most recent year when data was available for all relevant segments (http://traffic-counts.dot.ca.gov/), and increased by 0.73%/year to represent future conditions. Project-generated trips were assigned to the regional freeway system as described above. The freeway level of service methodology described in the Highway Capacity Manual was used to determine the vehicle density on each analyzed segment (passenger cars per mile per lane) by direction and the corresponding level of service. The level of service definitions used for freeway mainline segments are shown in Table 4.L-1.

One intersection (Western Avenue [State Route 213] at Carson Street) was analyzed using HCM 2010 methodology to identify average vehicle delay and LOS. For this signalized intersection, the traffic signal timing plan provided by LADOT was also used in this analysis. Caltrans, LADOT and the City of Torrance have jointly agreed to modify the signal in the near term at this location by implementing protected left-turn phasing on the eastbound and westbound approaches. The Caltrans analysis uses the same intersection volumes that are used for the intersection analysis described above.

With regard to ramps, six freeway off-ramps were analyzed for ramp queue lengths. The Synchro traffic analysis software was used to implement the HCM methodology to calculate the 85th percentile queues at and compare them with the available vehicle storage on these ramps. Traffic signal-related information such as phasing and timing plans (minimum green, maximum green, gap, etc.) were obtained for each location and the morning and evening peak hour traffic volumes from this study were used. Additional detail such as turn pocket lengths and ramp lengths was coded based on scaled distances from on-line aerial photographs. Caltrans' primary concern of off-ramps is that queued vehicles do not extend past the back of the ramp onto the mainline. The queuing analysis looks at two separate components of ramp capacity: 1) the length of each approach lane to the intersection and 2) the remaining length of the ramp, behind any approach lane delineation lines, to the core point where the ramp diverges from the freeway mainline. The queue may exceed the striped length of a given approach lane, but as long as there is sufficient additional queuing capacity on the ramp, it will not spill over onto the mainline.

(4) Public Transit and Alternative Transportation

Section D.8.4 of the Los Angeles County CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle ridership (AVR) factor of 1.4 in order to estimate the number of person trips to and from the Project Site and then provides guidelines regarding the percentage of person trips assigned to public transit depending on the type of use (commercial versus residential) and the proximity to transit services. Since the Project Site is located within ¼ mile of a designated CMP transit corridor, the CMP guidelines provide that approximately 7% of total person trips generated might use public transit to travel to and from the site. With regard to non-motorized transportation, the Project is also evaluated in terms of whether its implementation would conflict with various plans, policies, or regulations supportive of alternative transportation including the provision of pedestrian- and bicycle-friendly facilities and improvements.

(5) Access and Circulation

Vehicular access to/from and within the Project Site is evaluated to ensure that conflicts would not arise and that on-site circulation would be adequate. Regarding vehicular access for the proposed new driveway on Carson Street, Synchro traffic analysis software was used to implement the HCM methodology to calculate the 95th percentile queues and compare them with the available vehicle storage for westbound left turns into the Medical Center Campus. Traffic signal-related information such as phasing and timing plans (minimum green, maximum green, etc.) were developed for each scenario in Synchro and informed by volumes for each scenario and existing signal timing information for other intersections on Carson Street in this area. In addition, access for pedestrians and bicyclists are evaluated. The Project's access and circulation scheme was evaluated to determine whether the Project would substantially increase the potential for conflicts between vehicles and pedestrians and cyclists.

(6) Parking Supply

Parking supply impacts are evaluated by comparing the projected parking demands of the various land uses to be developed under the Master Plan Project at buildout with the proposed parking supply on the Medical Center Campus. At a minimum, parking supply would meet parking requirements of the County Code; however, adverse parking-related impacts could still occur if demands exceed available supply. The provision of parking supply on the Medical Campus is evaluated in light of the anticipated maximum parking demands of the Project rather than the number of spaces required by the Code.

b. Thresholds of Significance

The potential for transportation and traffic impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines*. These questions are as follows:

(XVI) Transportation and Traffic. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

With respect to Threshold (c), result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks, please refer to Section 4.F, *Hazards and Hazardous Materials*, of this Draft EIR for further discussion of aircraft-related hazards associated with operation of the proposed helistop on the Project Site.

In consideration of the above CEQA Guidelines, the thresholds to determine if the Project would have a potentially significant impact on traffic, transportation, and parking are described below. A number of thresholds presented below address question a) above, regarding conflicting with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, but are tailored to reflect the specific numerical thresholds for level of service for a specific facility (e.g., intersection) in a given jurisdiction. Thus, the thresholds presented below may not reflect the specific language of the questions above, but are intended to establish specific limits by which to gauge the impact of the Project-related traffic at affected facilities, taking into account the location and agency responsible for each facility.

(1) Construction Traffic and Parking

Construction-related traffic is typically expected to cause adverse but not significant impacts because, while sometimes inconvenient, construction-related traffic effects are temporary. Nevertheless, the determination of significance is made on a case by case basis, considering the temporary traffic impacts, temporary loss of access, temporary loss of bus stops or rerouting of bus lines, and temporary loss of on-street parking. Based on these considerations, Project construction would have a significant impact on traffic and circulation if the following were to occur:

TRAF-1 Would construction of the Project (1) cause substantial delays and disruption of existing traffic flow; (2) require temporary relocation of existing bus stops to more than one-quarter mile from their existing stops; (3) result in impacts based on the operational thresholds at intersections during peak periods; or (4) result in the substantial loss of on-street parking such that the parking needs of the Project area would not be met?

(2) Intersection Service Levels

As discussed above, the study area intersections are located under the jurisdictions of the County of Los Angeles, City of Los Angeles, City of Torrance or City of Carson.

For intersections in the Los Angeles County and City of Los Angeles, in accordance with Los Angeles County criteria defined in their Traffic Impact Analysis Report Guidelines and per LADOT guidelines, an intersection would be significantly impacted if it experienced an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of Project traffic. Intersections operating at LOS A or B after the addition of the Project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

Intersection Conditions with Project Traffic		Relative Baseline Increase
LOS	Final V/C Ratio	in V/C Ratio
C	0.701 to 0.800	Equal to or greater than 0.04
D	0.801 to 0.900	Equal to or greater than 0.02
E, F	0.901 or more	Equal to or greater than 0.01

Source: Fehr & Peers, 2016.

The City of Carson has created threshold criteria to determine whether the addition of Project-generated trips results in a significant impact at a study intersection, and thus requires mitigation. The thresholds of significance have to satisfy the following two criteria:

- The addition of project-generated trips causes an intersection V/C ratio increase of 0.020 or more; and
- Under future plus project conditions, the intersection is projected to operate at LOS E or F (represented by a V/C ratio of 0.901 or greater).

The City of Torrance uses the following thresholds of significance to assess project impacts based on the ICU analysis methodology:

- The project causes a change from LOS D or better to LOS E or F; or
- The project causes a change from LOS E to LOS F; or
- The project increases traffic at the intersection by 2% of capacity (ICU increase ≥ 0.020), causing or worsening LOS E or F (ICU > 0.901).

Based on the above, the following is the threshold for signalized intersections:

TRAF-2 Would the Project increase V/C ratios or delay above LOS standards set forth under County, LADOT, City of Carson, or City of Torrance guidelines, as applicable?

(3) Regional Transportation System

Based on the CMP, a project would normally have a significant impact on CMP arterial monitoring stations or freeway mainline monitoring stations if:

TRAF-3 Would the Project result in a change at a CMP facility in V/C of 0.02 or greater and cause LOS F conditions, or if it would result in a change in V/C of 0.02 or greater at a CMP facility that is already at LOS F?

With regard to the Caltrans facilities, a project would result in a significant impact on Caltrans facilities if:

TRAF-4 Would the Project result in traffic where the analyzed freeway mainline segment or intersection were found to operate at LOS F with the addition of Project-related traffic and the increase is equal to or greater than 50 trips?

or

TRAF-5 Would the Project result in traffic where the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period?

(4) Public Transit and Alternative Transportation

The County and the CMP do not specify a threshold of significance for a project's impact on transit system capacity. The determination of significance for public transit is made on a case by case basis, considering the projected number of additional transit passengers expected with implementation of the Project and available transit capacity. For purposes of this analysis, the Project would have a significant impact if:

TRAF-6 Would the Project add substantial new ridership to the transit lines operating in excess of their capacity or if the Project would conflict with adopted policies, plans, or programs supporting alternative transportation?

(5) Access and Circulation

Impacts of a project regarding accessibility on evaluated on a case by case basis, based on the amount of pedestrian activity at project access points; design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists; the type of facility the project driveway(s) crosses and the level of utilization; the physical conditions of the surrounding area, such as curves, slopes, walls, landscaping or other barriers, that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts. Based on the above, a project would have a significant impact if:

TRAF-7 Would the Project increase roadway hazards resulting from a conflict of movement between vehicles and pedestrians or bicycles because of driveway design, the location of parking facilities, or other Project characteristics affecting visibility and turning movements?

(6) Parking Supply

The County does not specify a threshold of significance for a project's impact parking supply. The determination of significance for parking supply is made on a case by case basis, considering the projected number of additional parking spaces required by the County Code and the proposed parking supply on the Medical Campus. It should be noted that, as noted above under Regulatory Framework Summary, pursuant to Senate Bill 743, parking-related effects of infill projects like the Master Plan Project are not considered significant environmental impacts on the environment. However, for purposes of this analysis, which is provided for informational and disclosure purposes, the Project would have a significant impact on parking if it would result in the following:

TRAF-8 Would the Project provide less parking than the projected demand?

c. Project Characteristics and Design Features

(1) Project Characteristics

(a) Construction Traffic Generation

The construction of the Master Plan Project would occur in several phases through the year 2030, though in order to present a conservative analysis, some phases of construction are assumed to overlap. Based on the current estimated construction schedule, the Project would require a total of 122,602 laborers during the approximately 14-year implementation of the Master Plan Project. It is anticipated, based on current estimates, that the various phases would have the following average daily construction labor requirements: Phase M (190 workers); Phase C (220 workers); Phase 1 (92 workers); Phase 2 (295 workers); Phase 3 (59 workers); Phase 4 (1,360 workers); Phase 5 (253 workers); and Phase 6 (141 workers). Furthermore, based on the various phases of work, the Project would average the following laborers per day during each month of Project implementation:

- 212 laborers per day for the first 54 months
- 664 laborers per day for the following 27 months
- 1,646 laborers per day for the following 54 months
- 253 laborers per day for the final 32 months

As discussed in Chapter 2.0, Project Description, of this Draft EIR, it is anticipated that all worker vehicle parking, materials and equipment storage, and other construction staging would occur entirely within the 72-acre Medical Center Campus. As such, at its peak phase of construction (Phase 4) anticipated between 2023 and 2027, which is conservatively assumed to overlap with Phase 6 improvements related to construction of Bioscience Tech Park uses, the Project could generate up to an additional 7,006 daily construction worker vehicle trips to and from the Project Site under worst-case conditions. In addition, the import and export of soil materials and material and equipment deliveries would add an additional 427 truck trips per day during the same peak construction period on-site (i.e., during the Phase 4 and Phase 6 construction overlap), for a total of up to 7,433 daily construction-related vehicle trips under worst-case conditions.

(b) Operational Trip Generation

Table 4.L-7a, *Project Trip Generation – Interim Development (2023)*, estimates the trip generation for the Interim Development (2023) scenario and **Table 4.L-7b**, *Project Trip Generation – Full Buildout (2030)*, estimates the trip generation for Full Buildout (2030). In the Interim Development (2023) scenario, the Project is estimated to generate a net increase of 1,640 daily trips, including 200 trips (166 inbound/34 outbound) during the AM peak hour and 197 trips (33 inbound/164 outbound) during the PM peak hour. At Full Buildout (2030), the Project is estimated to generate a net increase of 6,598 daily trips, including 637 trips (523 inbound/114 outbound) during the AM peak hour and 732 trips (169 inbound/563 outbound) during the PM peak hour.

Table 4.L-7a

Project Trip Generation – Interim Development (2023)

	Land Use	ITE Land Use Code	Size [a]		Trip Generation Rates [b] Daily Rate	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Estimated Trip Generation Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Existing	**EXISTING USE**																	
	Administrative Office	710	23.435	ksf	[c]	[c]	88%	12%	[c]	17%	83%	436	53	7	60	18	87	105
	Central Utilities/Industrial [d]	120	112.719	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	169	50	7	57	9	68	77
	Hospital/Inpatient	610	373	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,827	354	138	492	175	355	530
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	327.304	ksf	36.13	2.39	79%	21%	3.57	28%	72%	11,825	618	164	782	327	841	1,168
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	LA BioMed	760	94.754	ksf	[e]	[e]	83%	17%	[e]	15%	85%	961	103	21	124	19	107	126
	Project Site Subtotal											**19,644**	**1,206**	**347**	**1,553**	**630**	**1,554**	**2,184**
	Internal Capture [f]											*-3,737*	*-221*	*-65*	*-286*	*-122*	*-290*	*-412*
	Transit Credit [g]											*-1,375*	*-84*	*-25*	*-109*	*-44*	*-109*	*-153*
	Walk/Bike Credit [h]											*-393*	*-24*	*-7*	*-31*	*-13*	*-31*	*-44*
	Total Existing Trips											**14,139**	**877**	**250**	**1,127**	**451**	**1,124**	**1,575**
Proposed	**PROPOSED PROJECT**																	
	Administrative Office	710	52.635	ksf	[c]	[c]	88%	12%	[c]	17%	83%	806	101	14	115	23	114	137
	Central Utilities/Industrial [d]	120	129.205	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	194	58	8	66	10	78	88
	Hospital/Inpatient	610	379	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,904	360	140	500	177	361	538
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	338.700	ksf	36.13	2.39	79%	21%	3.57	28%	72%	12,237	639	170	809	338	871	1,209
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	BioSciences	760	125.000	ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,209	131	27	158	24	135	159
	LA BioMed	760	112.500	ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,108	120	24	144	21	124	145
	Project Site Subtotal											21,885	1,436	393	1,829	677	1,779	2,456
	Internal Capture [f]											-4,155	-263	*-74*	-337	-131	*-331*	-462
	Transit Credit [g]											*-1,532*	*-101*	*-27*	*-128*	*-47*	*-125*	*-172*
	Walk/Bike Credit [h]											*-438*	*-29*	*-8*	-37	*-14*	*-35*	-49
	Total Proposed Trips											**15,760**	**1,043**	**284**	**1,327**	**485**	**1,288**	**1,773**

Table 4.L-7a (Continued)

Project Trip Generation – Interim Development (2023)

	Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b]							Estimated Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	Rate	% In	% Out	Rate	% In	% Out	Trips	In	Out	Total	In	Out	Total
Net Change	**Total Net Trips**										**1,620**	**166**	**34**	**200**	**33**	**164**	**197**

a Size in thousand square feet (ksf) unless otherwise noted.
b Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition, 2012.
c ITE administrative office trip generation equations used rather than linear trip generation rate:
*Daily: Ln(T) = 0.76 * Ln(A) + 3.68, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.8 * Ln(A) + 1.57, where T = trips, A = area in ksf*
*PM Peak Hour: T = 1.12 * Ln(A) + 78.45, where T = trips, A = area in ksf*
d Peak hour direction distribution not provided by ITE for code 120. Directional distribution taken from ITE code 110, General Light Industrial.
e ITE research and development trip generation equations used rather than linear trip generation rate:
*Daily: Ln(T) = 0.83 * Ln(A) + 3.09, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.87 * Ln(A) + 0.86, where T = trips, A = area in ksf*
*PM Peak Hour: Ln(T) = 0.83 * Ln(A) + 1.06, where T = trips, A = area in ksf*
f Internal capture represents the percentage of trips between land uses that occur within the site. Internal capture was used for all land uses within the site with the exception of LA BioMed. This percentage (20%) is informed by MXD 2.0 Mixed Use Trip Generation Methodology, which incorporated the findings of NCHRP Project 8-51 as described in "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010. Internal capture is taken for all land uses except LA Biomed.
g Transit credit of 7% informed by MXD 2.0 Mixed Use Trip Generation Methodology
h Walk/Bike credit of 2% informed by MXD 2.0 Mixed Use Trip Generation Methodology.

Source: Fehr & Peers, 2016

Table 4.L-7b

Project Trip Generation – Full Buildout (2030)

	Land Use	ITE Land Use Code	Size [a]		Trip Generation Rates [b] Daily Rate	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Estimated Trip Generation Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Existing	**EXISTING USE**																	
	Administrative Office	710	23.435	ksf	[c]	[c]	88%	12%	[c]	17%	83%	436	53	7	60	18	87	105
	Central Utilities/Industrial [d]	120	112.719	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	169	50	7	57	9	68	77
	Hospital/Inpatient	610	373	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,827	354	138	492	175	355	530
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	327.304	ksf	36.13	2.39	79%	21%	3.57	28%	72%	11,825	618	164	782	327	841	1,168
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	LA BioMed	760	94.754	ksf	[e]	[e]	83%	17%	[e]	15%	85%	961	103	21	124	19	107	126
	Project Site Subtotal											**19,644**	**1,206**	**347**	**1,553**	**630**	**1,554**	**2,184**
	Internal Capture [f]											*-3,737*	*-221*	*-65*	*-286*	*-122*	*-290*	*-412*
	Transit Credit [g]											*-1,375*	*-84*	*-25*	*-109*	*-44*	*-109*	*-153*
	Walk/Bike Credit [h]											*-393*	*-24*	*-7*	*-31*	*-13*	*-31*	*-44*
	Total Existing Trips											**14,139**	**877**	**250**	**1,127**	**451**	**1,124**	**1,575**
Proposed	**PROPOSED PROJECT**																	
	Administrative Office	710	52.635	ksf	[c]	[c]	88%	12%	[c]	17%	83%	1,608	209	28	237	38	187	225
	Central Utilities/Industrial [d]	120	129.205	ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	194	58	8	66	10	78	88
	Hospital/Inpatient	610	379	Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,904	360	140	500	177	361	538
	Library	590	22.500	ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	338.700	ksf	36.13	2.39	79%	21%	3.57	28%	72%	14,907	779	207	986	412	1,061	1,473
	Warehouse/Storage	150	45.402	ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	Retail	820	35.000	ksf	42.7	0.96	62%	38%	3.71	48%	52%	1,495	21	13	34	62	68	130
	BioSciences	760	125.000	ksf	[e]	[e]	83%	17%	[e]	15%	85%	2,149	239	49	288	42	240	282
	LA BioMed	760	112.500	ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,969	218	45	263	39	220	259
	Project Site Subtotal											**28,654**	**1,911**	**500**	**2,411**	**862**	**2,311**	**3,173**
	Internal Capture [f]											-5,337	-339	*-91*	-430	-165	*-418*	-583
	Transit Credit [g]											*-2,006*	*-134*	*-35*	*-169*	*-60*	*-161*	*-221*
	Walk/Bike Credit [h]											*-573*	*-38*	*-10*	-48	*-17*	*-45*	-62
	Total Proposed Trips											**20,738**	**1,400**	**364**	**1,764**	**620**	**1,687**	**2,307**

Table 4.L-7b (Continued)

Project Trip Generation – Full Buildout (2030)

	Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b] Daily Rate	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Estimated Trip Generation Daily Trips	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Net Change	**Total Net Trips**										**6,598**	**523**	**114**	**637**	**169**	**563**	**732**

[a] *Size in thousand square feet (ksf) unless otherwise noted.*
[b] *Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition, 2012.*
[c] *ITE administrative office trip generation equations used rather than linear trip generation rate:*
*Daily: Ln(T) = 0.76 * Ln(A) + 3.68, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.8 * Ln(A) + 1.57, where T = trips, A = area in ksf*
*PM Peak Hour: T = 1.12 * Ln(A) + 78.45, where T = trips, A = area in ksf*
[d] *Peak hour direction distribution not provided by ITE for code 120. Directional distribution taken from ITE code 110, General Light Industrial.*
[e] *ITE research and development trip generation equations used rather than linear trip generation rate:*
*Daily: Ln(T) = 0.83 * Ln(A) + 3.09, where T = trips, A = area in ksf*
*AM Peak Hour: Ln(T) = 0.87 * Ln(A) + 0.86, where T = trips, A = area in ksf*
*PM Peak Hour: Ln(T) = 0.83 * Ln(A) + 1.06, where T = trips, A = area in ksf*
[f] *Internal capture represents the percentage of trips between land uses that occur within the site. Internal capture was used for all land uses within the site with the exception of LA BioMed. This percentage (20%) is informed by MXD 2.0 Mixed Use Trip Generation Methodology, which incorporated the findings of NCHRP Project 8-51 as described in "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010. Internal capture is taken for all land uses except LA Biomed.*
[g] *Transit credit of 7% informed by MXD 2.0 Mixed Use Trip Generation Methodology*
[h] *Walk/Bike credit of 2% informed by MXD 2.0 Mixed Use Trip Generation Methodology.*

Source: Fehr & Peers, 2016

(2) Project Design Features

(a) Construction Traffic Management

The following Project Design Features are proposed to reduce temporary construction-related traffic and parking impacts:

PDF-TRAF-1: Construction Traffic Management Plan: A detailed Construction Traffic Management Plan including street closure information, detour plans, haul routes, and staging plans would be prepared by the construction contractor for each development phase or individual improvement, as appropriate, and submitted to the County for review and approval. This requirement would be included in the construction bid documents for each future development phase or individual improvement as part of the Master Plan Project. The Construction Traffic Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements as appropriate:

- Prohibition of construction worker parking on nearby residential streets.
- Prohibition of construction-related vehicles parking or staging on surrounding public streets.
- Temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.
- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.

PDF-TRAF-2: Pedestrian Safety: The construction contractor(s), as required by construction bid documents for each development phase or individual improvement, would plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. The contractor(s) would maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities would be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways would be provided where pedestrians are exposed to potential injury from falling objects. The contractor would keep sidewalks open during construction except when it is absolutely required to close or block the sidewalks for construction staging. Sidewalks shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

(b) Travel Demand Management

Also, the existing Harbor-UCLA Medical Center, like other large employment sites, maintains a program of employee travel behavior monitoring and incentives to reduce single-occupant vehicle commute trips. Collectively known as Travel Demand Management (TDM), these programs aim to reduce traffic congestion and the impacts associated with heavy traffic by providing incentives and other measures to encourage alternative travel arrangements between work and home. Among the measures now in place at the Medical Center Campus are:

- Transit information center
- Rideshare matching services
- Guaranteed ride home/Guaranteed return trip
- Commuter choice program
- Bi-monthly newsletters, flyers or announcements to employees
- New hire orientation and periodic events
- Compressed work week and flex time schedules
- Off-peak rideshare program
- Bicycle racks, lockers and showers
- Telecommuting
- Vanpool program
- Preferential parking for those who rideshare

Expanding the current menu of incentives and disincentives could reduce vehicle trips during the peak hours and thus reduce the severity of the impacts identified. The County-owned medical facility is somewhat different from many other land uses in that it operates on a 24-hour schedule and employees have shifts that begin and end throughout the day, including many that are outside of the typical peak periods when transit service is most extensive. Because the effectiveness of these measures cannot be guaranteed, however, TDM cannot ensure impacts would be below applicable thresholds. Among the additional TDM measures that could be considered for implementation as development of the Master Plan Project proceeds are:

- Parking pricing
- Transit pass subsidy
- On-site sales of transit passes and tokens
- Direct financial awards for ridesharing

d. Project Impacts

(1) Construction Impacts

Threshold TRAF-1: Would construction of the Project (1) cause substantial delays and disruption of existing traffic flow; (2) require temporary relocation of existing bus stops to more than one-quarter mile

from their existing stops; (3) result in impacts based on the operational thresholds at intersections during peak periods; or (4) result in the substantial loss of on-street parking such that the parking needs of the Project area would not be met?

Impact Statement TRAF-1: *With the implementation of PDF TRAF-1, Construction Traffic Management Plan, and PDF TRAF-2, Pedestrian Safety, potential construction impacts associated with hauling, deliveries and worker vehicles would be reduced. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance with the two Project Design Features would minimize the potential for the Project to result in substantial disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the Project area's commercial zones and residential neighborhoods. However, given the potential addition of construction-related vehicle trips during peak construction periods, transportation and parking impacts related to construction would be considered significant and unavoidable, though such impacts would only occur on a temporary basis while construction activities are occurring on-site.*

Construction of the Project is anticipated to occur intermittently in phases over an approximately 14-year time period. Construction activities would be governed by Chapter 12.12 of the County Code including Section 12.12.30 which generally limits construction to the hours of 6:30 A.M. to 8:00 P.M. on weekdays and Saturdays. Phases of construction would include grading, excavation, concrete pouring, building construction, architectural coating, and paving. Project construction would add haul trucks, equipment and delivery trucks and trips generated by the construction workers to the local roadway network.

As noted above under Project Characteristics, the construction of the Master Plan Project would occur in several phases through the year 2030, though in order to present a conservative analysis, some phases of construction are assumed to overlap. Based on the current estimated construction schedule, the Project would require a total of 122,602 laborers during the approximately 14-year implementation of the Master Plan Project. The Project, at its peak phase of construction (Phase 4) anticipated between 2023 and 2027, which is conservatively assumed to overlap with Phase 6 improvements related to construction of Bioscience Tech Park uses, could generate up to an additional 7,006 daily construction worker vehicle trips to and from the Project Site on a worst-case basis. In addition, the import and export of soil materials and material and equipment deliveries would add an additional 427 truck trips per day during the same peak construction period on-site (i.e., during the Phase 4 and Phase 6 construction overlap), for a total of up to 7,433 daily construction-related vehicle trips under worst-case conditions. It is likely, however, that many of the construction workers would arrive and depart the Project Site outside of the peak traffic periods given typical construction work hours. More specifically, the hours of construction typically require workers to be on-site before the weekday A.M. commuter peak period and allow them to leave before or after the P.M. commuter peak period (i.e., arrive at the site prior to 6:30 AM and depart before 4:00 PM or after 6:00 PM). Therefore, many, if not most, construction worker trips would occur outside of the typical weekday commuter peak periods. With the implementation of the Construction Management Plan, required by PDF TRAF-1, it is anticipated that a substantial portion of haul truck activity to and from the Project Site would occur outside of the peak traffic hours. However, haul truck activity was assumed to occur during the morning and afternoon peak periods for the purposes of providing a conservative analysis of potential construction traffic impacts. Haul trucks would travel on approved truck routes designated within the Project area, and would access the I-110 Harbor Freeway for regional access. Although it is possible that many of the Project-related worker vehicle and haul truck trips would occur outside of peak traffic periods

throughout construction phases, given the number of potential vehicle trips generated during peak construction periods, it is possible that construction-related traffic could result in significant impacts to both local intersections and Caltrans facilities in the Project area. While the construction-related traffic impacts of the Project have not been quantified in terms of LOS, it is conservatively concluded that construction activities would result in unavoidable significant traffic impacts, though such impacts would be temporary.

With regard to construction-related impacts to localized and on-site circulation, construction activities would be generally contained within the Project Site boundaries and therefore access points from surrounding roadways would not vary substantially from existing conditions. However, construction fences or temporary off-site utility work may encroach into the public right-of-way (e.g., sidewalk and roadways) adjacent to or near the Project Site. In such cases, temporary traffic controls would be provided to direct traffic around any closures as required in the Project's Construction Traffic Management Plan. Travel lanes would be maintained in each direction on both streets throughout the construction period, and emergency access would not be impeded. Similarly, as required by the Construction Traffic Management Plan, prohibition of construction-related vehicles on surrounding residential streets, as well as the provision of temporary pedestrian and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way, would improve traffic flow on public roadways and maximize pedestrian and bicycle safety. Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers would also be implemented as appropriate. In addition, as required by PDF-TRAF-2, pedestrian access near construction activities would be maintained in such a manner as to preclude safety hazards or access limitations to non-vehicular circulation on the Medical Center Campus. Therefore, impacts related to vehicular, pedestrian, and bicycle access and circulation in the Project vicinity during construction activities would be less than significant.

With regard to construction-related impacts on transit facilities and the existing parking supply, the curbside lanes on Carson Street, Vermont Avenue, 220th Street, and Normandie Avenue, all of which provide on-street parking in some areas, would not be used for activities such as equipment staging and concrete pumping. Given that the Project would not require the sustained closure of travel lanes or sidewalks along any of the surrounding roadways, and the Project also does not propose or otherwise require relocation of any existing public transit stops or other facilities, it is expected that construction of the various Project phases would not substantially affect public transit service. Likewise, as all construction worker vehicle parking and truck deliveries would occur within the Medical Center Campus, and since PDF TRAF-1 would prohibit parking by construction workers on surrounding residential streets, impacts related to construction parking would be considered less than significant.

In summary, the Project would implement a Construction Traffic Management Plan and Pedestrian Safety plan as described in PDF TRAF-1 and PDF TRAF-2, which would ensure the scheduling of construction-related traffic to avoid peak hours, require the use of temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, as well as require various safety precautions such as alternate routing and protection barriers. With the implementation of the Project Design Features, impacts to traffic flow, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant. However, construction impacts on study area intersections are conservatively concluded to be potentially significant and unavoidable.

(2) Intersection Service Levels

Threshold TRAF-2: Would the Project increase V/C ratios or delay above LOS standards set forth under County, LADOT, City of Carson, or City of Torrance guidelines, as applicable?

Impact Statement TRAF-2: *Implementation of the Master Plan Project would result in a net increase in traffic generation on the Project Site of 1,640 daily trips under Interim Year (2023) conditions and 6,598 daily trips at Full Buildout (2030). Project-related operational traffic impacts on study area intersections would be considered potentially significant under Existing With Project Conditions, Future Interim Year (2023) conditions, and Full Buildout (2030) conditions.*

(a) Existing With Project Conditions

Existing plus Project traffic volumes (using Interim Development Project volumes), presented in Figure 10 of the Traffic Study, were analyzed to determine the projected V/C ratios and LOS for each intersection. **Table 4.L-8**, *Existing (2014) Plus Interim Development Project Intersection Level of Service,* summarizes the Existing plus Project LOS using Interim Development Project trips. The following ten (10) intersections are projected to operate at LOS E or F during one or both peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Additionally, Existing plus Project traffic volumes (using Full Buildout Project trips), presented in Figure 11 of the Traffic Study, were analyzed to determine the projected V/C ratios and LOS for each intersection. **Table 4.L-9**, *Existing (2014) Plus Full Buildout Project Intersection Level of Service,* summarizes the Existing plus Project LOS using the Full Buildout Project trips. The following 10 intersections are projected to operate at LOS E or F during one or both peak hours:

Table 4.L-8

Existing (2014) Plus Interim Development Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.902	E	0.904	E	0.002	NO
					PM	0.904	E	0.906	E	0.002	NO
			Los Angeles County	ICU	AM	0.935	E	0.936	E	0.001	NO
					PM	0.936	E	0.938	E	0.002	NO
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.928	E	0.001	NO
					PM	0.880	D	0.881	D	0.001	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	0.877	D	0.878	D	0.001	NO
					PM	0.948	E	0.949	E	0.001	NO
			City of Torrance	ICU	AM	0.943	E	0.944	E	0.001	NO
					PM	1.006	F	1.008	F	0.002	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.769	C	0.006	NO
					PM	0.837	D	0.846	D	0.009	NO
			Los Angeles County	ICU	AM	0.904	E	0.910	E	0.006	NO
					PM	0.930	E	0.938	F	0.008	NO
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.624	B	0.054	NO
					PM	0.539	A	0.572	B	0.033	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.629	B	0.054	NO
					PM	0.569	A	0.629	B	0.060	NO
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.628	B	0.682	B	0.054	NO
					PM	0.611	B	0.576	B	-0.035	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.917	E	0.012	YES
					PM	0.917	E	0.945	F	0.028	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.844	D	0.030	YES
					PM	0.849	D	0.867	E	0.018	NO

Table 4.L-8 (Continued)

Existing (2014) Plus Interim Development Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.661	B	0.670	B	0.009	NO
					PM	0.762	C	0.767	D	0.005	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.554	A	0.559	A	0.005	NO
					PM	0.698	B	0.698	B	0.000	NO
			City of Torrance	ICU	AM	0.685	B	0.689	B	0.004	NO
					PM	0.819	D	0.819	D	0.000	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.409	A	0.425	A	0.016	NO
					PM	0.293	A	0.297	A	0.004	NO
			Los Angeles County	ICU	AM	0.549	A	0.564	A	0.015	NO
					PM	0.441	A	0.444	A	0.003	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.460	A	0.483	A	0.023	NO
					PM	0.446	A	0.455	A	0.009	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.645	B	0.660	B	0.015	NO
					PM	0.696	B	0.726	C	0.030	NO
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.922	E	0.009	NO
					PM	0.886	D	0.919	E	0.033	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.822	D	0.822	D	0.000	NO
					PM	0.851	D	0.853	D	0.002	NO
			City of Torrance	ICU	AM	0.893	D	0.893	D	0.000	NO
					PM	0.919	E	0.921	E	0.002	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.623	B	0.627	B	0.004	NO
					PM	0.701	C	0.705	C	0.004	NO
			Los Angeles County	ICU	AM	0.807	D	0.813	D	0.006	NO

Table 4.L-8 (Continued)

Existing (2014) Plus Interim Development Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
					PM	0.822	D	0.826	D	0.004	NO
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.649	B	0.658	B	0.009	NO
					PM	0.578	A	0.585	A	0.007	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.936	E	0.019	YES
					PM	0.880	D	0.886	E	0.006	NO
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.768	C	0.013	NO
					PM	0.843	D	0.852	D	0.009	NO
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.827	D	0.833	D	0.006	NO
					PM	0.718	C	0.722	C	0.004	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E	0.927	E	0.000	NO
					PM	0.990	E	0.991	E	0.001	NO
			City of Torrance	ICU	AM	0.957	E	0.957	E	0.000	NO
					PM	1.011	F	1.012	F	0.001	NO

[a] *All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.*

Source: Fehr & Peers, 2016

Table 4.L-9

Existing (2014) Plus Full Buildout Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.902	E	0.907	E	0.005	NO
					PM	0.904	E	0.913	E	0.009	NO
			Los Angeles County	ICU	AM	0.935	E	0.939	E	0.004	NO
					PM	0.936	E	0.944	E	0.008	NO
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.930	E	0.003	NO
					PM	0.880	D	0.886	D	0.006	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	0.877	D	0.882	D	0.005	NO
					PM	0.948	E	0.955	E	0.007	NO
			City of Torrance	ICU	AM	0.943	E	0.948	E	0.005	NO
					PM	1.006	F	1.012	F	0.006	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.785	C	0.022	NO
					PM	0.837	D	0.872	D	0.035	YES
			Los Angeles County	ICU	AM	0.904	E	0.925	E	0.021	YES
					PM	0.930	E	0.962	E	0.032	YES
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.636	B	0.066	NO
					PM	0.539	A	0.591	A	0.052	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.642	B	0.067	NO
					PM	0.569	A	0.708	C	0.139	YES
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.628	B	0.717	C	0.089	YES
					PM	0.611	B	0.620	B	0.009	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.946	E	0.041	YES
					PM	0.917	E	1.010	F	0.093	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.907	E	0.093	YES
					PM	0.849	D	0.916	E	0.067	YES

Table 4.L-9 (Continued)

Existing (2014) Plus Full Buildout Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.661	B	0.685	B	0.024	NO
					PM	0.762	C	0.779	C	0.017	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.554	A	0.570	A	0.016	NO
					PM	0.698	B	0.699	B	0.001	NO
			City of Torrance	ICU	AM	0.685	B	0.699	B	0.014	NO
					PM	0.819	D	0.820	D	0.001	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.409	A	0.458	A	0.049	NO
					PM	0.293	A	0.308	A	0.015	NO
			Los Angeles County	ICU	AM	0.549	A	0.596	A	0.047	NO
					PM	0.441	A	0.454	A	0.013	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.460	A	0.533	A	0.073	NO
					PM	0.446	A	0.486	A	0.040	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.645	B	0.708	C	0.063	YES
					PM	0.696	B	0.806	D	0.110	YES
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.942	E	0.029	YES
					PM	0.886	D	1.000	E	0.114	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.822	D	0.823	D	0.001	NO
					PM	0.851	D	0.856	D	0.005	NO
			City of Torrance	ICU	AM	0.893	D	0.894	D	0.001	NO
					PM	0.919	E	0.923	E	0.004	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.623	B	0.634	B	0.011	NO
					PM	0.701	C	0.715	C	0.014	NO
			Los Angeles County	ICU	AM	0.807	D	0.828	D	0.021	YES
					PM	0.822	D	0.834	D	0.012	NO

Table 4.L-9 (Continued)

Existing (2014) Plus Full Buildout Project Intersection Level of Service

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.649	B	0.675	B	0.026	NO
					PM	0.578	A	0.604	B	0.026	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.975	E	0.058	YES
					PM	0.880	D	0.933	E	0.053	YES
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.796	C	0.041	YES
					PM	0.843	D	0.873	D	0.030	YES
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.827	D	0.844	D	0.017	NO
					PM	0.718	C	0.729	C	0.011	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E	0.928	E	0.001	NO
					PM	0.990	E	0.993	E	0.003	NO
			City of Torrance	ICU	AM	0.957	E	0.957	E	0.000	NO
					PM	1.011	F	1.013	F	0.002	NO

[a] *All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.*

Source: Fehr & Peers, 2016

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

As shown in Table 4.L-8, after applying the aforementioned significant impact criteria, it was determined that the proposed Project would result in potentially significant impacts to the following four (4) study intersections under Existing (2014) plus Interim Development Project conditions:

8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
19. Vermont Avenue & 223rd Street

As shown in Table 4.L-9, when examining Existing (2014) plus Full Buildout Project conditions using the significant impact criteria, potentially significant impacts would result at the following nine (9) intersections:

4. Normandie Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
14. Vermont Avenue & 220th Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
17. Normandie Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

(b) Interim Year (2023) Without and With Project Conditions

Cumulative Project volumes were added to the existing traffic volumes to create the Interim Year (2023) volumes for Los Angeles County, illustrated in Figure 14 of the Traffic Study. For the incorporated cities of

Los Angeles, Torrance and Carson, existing traffic volumes were increased, based on the previously discussed rates, to 2023 and then added to cumulative projects volumes to create the Interim Year (2023) volumes, shown in Figure 15 of the Traffic Study.

(i) Unincorporated Los Angeles County Interim Year (2023) Traffic Conditions

Table 4.L-10, *Interim Year (2023) Plus Interim Development Project for Unincorporated Los Angeles County Intersection Level of Service Analysis*, summarizes the levels of service during the Interim Year (2023) conditions. Poor operating conditions (LOS E or F) are projected at six (6) of the 15 study intersections within Los Angeles County's jurisdiction under the With and Without Project scenarios during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street

The results of the Interim Year (2023) (without an area-wide growth factor) plus Interim Development Project peak hour traffic volumes are also presented in Table 4.L-10 for intersections within unincorporated Los Angeles County. Table 4.L-10 indicates that poor operating conditions (LOS E or F) are projected at eight (8) of the 15 study intersections within Los Angeles County's jurisdiction. The intersections projected to operate at poor levels of service (LOS E or F) in one or both peak hours include:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street20. I-110 Southbound Ramps & 223rd Street

Table 4.L-10

Interim Year (2023) Plus Interim Development Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base		Interim (2023) Base+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.962	E	0.963	E	0.028	YES
					PM	0.993	E	0.994	E	0.058	YES
2	Vermont Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.968	E	0.969	E	0.042	YES
					PM	0.895	D	0.896	D	0.016	NO
4	Normandie Ave.	Carson St.	Los Angeles County	ICU	AM	0.946	E	0.952	E	0.048	YES
					PM	1.007	F	1.016	F	0.086	YES
5	Budlong Ave.	Carson St.	Los Angeles County	ICU	AM	0.603	B	0.657	B	0.087	NO
					PM	0.608	B	0.639	B	0.100	NO
6	Berendo Ave.	Carson St.	Los Angeles County	ICU	AM	0.609	B	0.663	B	0.088	NO
					PM	0.636	B	0.696	B	0.127	NO
7	Medical Center Dr.	Carson St.	Los Angeles County	ICU	AM	0.661	B	0.715	C	0.087	YES
					PM	0.678	B	0.643	B	0.032	NO
8	Vermont Ave.	Carson St.	Los Angeles County	ICU	AM	0.939	E	0.953	E	0.048	YES
					PM	0.982	E	1.010	F	0.093	YES
9	I-110 SB Ramps	Carson St.	Los Angeles County	ICU	AM	0.848	D	0.878	D	0.064	YES
					PM	0.906	E	0.925	E	0.076	YES
12	Normandie Ave.	220th St.	Los Angeles County	ICU	AM	0.550	A	0.565	A	0.016	NO
					PM	0.448	A	0.451	A	0.010	NO
13	Meyler St.	220th St.	Los Angeles County	ICU	AM	0.460	A	0.483	A	0.023	NO
					PM	0.446	A	0.455	A	0.009	NO
14	Vermont Ave.	220th St.	Los Angeles County	ICU	AM	0.647	B	0.668	B	0.023	NO
					PM	0.703	C	0.733	C	0.037	NO
17	Normandie Ave.	223rd St.	Los Angeles County	ICU	AM	0.811	D	0.820	D	0.013	NO
					PM	0.830	D	0.834	D	0.012	NO
18	Meyler St.	223rd St.	Los Angeles County	ICU	AM	0.653	B	0.662	B	0.013	NO
					PM	0.582	A	0.589	A	0.011	NO

Table 4.L-10 (Continued)

Interim Year (2023) Plus Interim Development Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base V/C or Delay	Interim (2023) Base LOS	Interim (2023) Base+Project V/C or Delay	Interim (2023) Base+Project LOS	Project Increase In V/C	Significant Impacts
19	Vermont Ave.	223rd St.	Los Angeles County	ICU	AM	0.927	E	0.945	E	0.028	YES
					PM	0.899	D	0.905	E	0.025	YES
20	I-110 SB Ramps	223rd St.	Los Angeles County	ICU	AM	0.765	C	0.779	C	0.024	NO
					PM	0.864	D	0.873	D	0.030	YES

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(ii) Incorporated Cities Interim Year (2023) Traffic Conditions

Table 4.L-11, *Interim Year (2023) Plus Interim Development Project for Incorporated Cities Intersection Level of Service Analysis*, summarizes the levels of service during the Interim Year (2023) conditions within the cities of Los Angeles, Carson and Torrance. Poor operating conditions (LOS E or F) are projected in one or both of the peak hours at eight (8) of the 11 study intersections including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

The Interim peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections during the projected operating conditions with the addition of Project traffic. Table 4.L-11 summarizes the Interim and Interim plus 2023 Project LOS using the appropriate methodology as prescribed by the local city. As shown in Table 4.L-11, using the criteria for determination of significant impacts, the Project would create a significant traffic impacts at the following analyzed intersection under Interim plus 2023 Project conditions:

15. Figueroa Street and 220th Street/I-110 Northbound Ramps

(c) Full Buildout (2030) Without and With Project Conditions

Cumulative project volumes were added to the existing traffic volumes to create the cumulative (2030) volumes for Los Angeles County, illustrated in Figure 17 of the Traffic Study. Note that Interim Development Base volumes and Cumulative (2030) base volumes are the same under Los Angeles County's methodology because no areawide growth rate is used. For the incorporated Cities of Los Angeles, Torrance and Carson, which require an areawide growth rate, existing traffic volumes were grown based on the previously discussed rates for the Cumulative (2030) base scenario and then added to cumulative project volumes, shown in Figure 18 of the Traffic Study.

Table 4.L-11

Interim Year (2023) Plus Interim Development Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base		Interim (2023) Base+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Ave.	Torrance Blvd.	City of Los Angeles	CMA	AM	0.999	E	1.001	F	0.002	NO
					PM	1.036	F	1.038	F	0.002	NO
3	Western Ave.	Carson St.	City of Los Angeles	CMA	AM	1.022	F	1.022	F	0.000	NO
					PM	1.137	F	1.139	F	0.002	NO
			City of Torrance	ICU	AM	1.038	F	1.039	F	0.001	NO
					PM	1.138	F	1.139	F	0.001	NO
4	Normandie Ave.	Carson St.	City of Los Angeles	CMA	AM	0.863	D	0.870	D	0.007	NO
					PM	0.987	E	0.996	E	0.009	NO
10	Figueroa St.	Carson St.	City of Carson	ICU	AM	0.730	C	0.737	C	0.007	NO
					PM	0.919	E	0.924	E	0.005	NO
11	Western Ave.	220th St.	City of Los Angeles	CMA	AM	0.598	A	0.603	B	0.005	NO
					PM	0.751	C	0.751	C	0.000	NO
			City of Torrance	ICU	AM	0.727	C	0.732	C	0.005	NO
					PM	0.870	D	0.870	D	0.000	NO
12	Normandie Ave.	220th St.	City of Los Angeles	CMA	AM	0.443	A	0.459	A	0.016	NO
					PM	0.325	A	0.328	A	0.003	NO
15	Figueroa St.	220th St./I-110 NB Ramps	City of Carson	ICU	AM	0.979	E	0.987	E	0.008	NO
					PM	0.960	E	0.994	E	0.034	YES
16	Western Ave.	223rd St.	City of Los Angeles	CMA	AM	0.886	D	0.886	D	0.000	NO
					PM	0.922	E	0.924	E	0.002	NO
			City of Torrance	ICU	AM	0.950	E	0.950	E	0.000	NO
					PM	0.984	E	0.985	E	0.001	NO
17	Normandie Ave.	223rd St.	City of Los Angeles	CMA	AM	0.675	B	0.679	B	0.004	NO
					PM	0.761	C	0.765	C	0.004	NO
21	Figueroa St.	223rd St.	City of Carson	ICU	AM	0.900	D	0.904	E	0.004	NO
					PM	0.786	C	0.788	C	0.002	NO

Table 4.L-11 (Continued)

Interim Year (2023) Plus Interim Development Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Interim (2023) Base		Interim (2023) Base+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
22	Western Ave.	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.998	E	0.998	E	0.000	NO
					PM	1.063	F	1.064	F	0.001	NO
			City of Torrance	ICU	AM	1.017	F	1.017	F	0.000	NO
					PM	1.074	F	1.074	F	0.000	NO

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(i) Unincorporated Los Angeles County Cumulative Buildout (2030) Traffic Conditions

Table 4.L-12, *Cumulative (2030) Plus Project for Unincorporated Los Angeles County Intersection Level of Service Analysis*, summarize the levels of service during the Cumulative Buildout (2030) conditions. Poor operating conditions (LOS E or F) are projected at six (6) of the 15 study intersections wholly or partly within Los Angeles County's jurisdiction under the With and Without Project scenarios during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street

As shown in Table 4.L-12, when examining Cumulative Buildout (2030) Plus Project conditions (without an area-wide growth factor) using the significant impact criteria, potentially significant impacts would result at the following eleven (11) intersections in unincorporated Los Angeles County:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
6. Berendo Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
14. Vermont Avenue & 220th Street
17. Normandie Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

Mitigation Measures are prescribed below for potentially significant impacted intersections, where feasible, in unincorporated Los Angeles County, which address both Interim (2023) and Buildout (2030) traffic conditions.

Table 4.L-12

Cumulative (2030) Plus Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030		Cumulative 2030+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
1	Normandie Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.962	E	0.966	E	0.031	YES
					PM	0.993	E	1.000	E	0.064	YES
2	Vermont Ave.	Torrance Blvd.	Los Angeles County	ICU	AM	0.968	E	0.972	E	0.045	YES
					PM	0.895	D	0.900	D	0.020	YES
4	Normandie Ave.	Carson St.	Los Angeles County	ICU	AM	0.946	E	0.967	E	0.063	YES
					PM	1.007	F	1.038	F	0.108	YES
5	Budlong Ave.	Carson St.	Los Angeles County	ICU	AM	0.603	B	0.669	B	0.099	NO
					PM	0.608	B	0.634	B	0.095	NO
6	Berendo Ave.	Carson St.	Los Angeles County	ICU	AM	0.609	B	0.675	B	0.100	NO
					PM	0.636	B	0.747	C	0.178	YES
7	Medical Center Dr.	Carson St.	Los Angeles County	ICU	AM	0.661	B	0.751	C	0.123	YES
					PM	0.678	B	0.722	C	0.111	YES
8	Vermont Ave.	Carson St.	Los Angeles County	ICU	AM	0.939	E	0.982	E	0.077	YES
					PM	0.982	E	1.075	F	0.158	YES
9	I-110 SB Ramps	Carson St.	Los Angeles County	ICU	AM	0.848	D	0.941	E	0.127	YES
					PM	0.906	E	0.974	E	0.125	YES
12	Normandie Ave.	220th St.	Los Angeles County	ICU	AM	0.550	A	0.596	A	0.047	NO
					PM	0.448	A	0.461	A	0.020	NO
13	Meyler St.	220th St.	Los Angeles County	ICU	AM	0.460	A	0.533	A	0.073	NO
					PM	0.446	A	0.486	A	0.040	NO
14	Vermont Ave.	220th St.	Los Angeles County	ICU	AM	0.647	B	0.717	C	0.072	YES
					PM	0.703	C	0.813	D	0.117	YES
17	Normandie Ave.	223rd St.	Los Angeles County	ICU	AM	0.811	D	0.833	D	0.026	YES
					PM	0.830	D	0.844	D	0.022	YES
18	Meyler St.	223rd St.	Los Angeles County	ICU	AM	0.653	B	0.679	B	0.030	NO
					PM	0.582	A	0.608	B	0.030	NO

Table 4.L-12 (Continued)

Cumulative (2030) Plus Project for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030		Cumulative 2030+Project		Project Increase	Significant Impacts
						V/C or Delay	LOS	V/C or Delay	LOS	In V/C	
19	Vermont Ave.	223rd St.	Los Angeles County	ICU	AM	0.927	E	0.983	E	0.066	YES
					PM	0.899	D	0.956	E	0.076	YES
20	I-110 SB Ramps	223rd St.	Los Angeles County	ICU	AM	0.765	C	0.806	D	0.051	YES
					PM	0.864	D	0.895	D	0.052	YES

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(ii) Incorporated Cities Cumulative Buildout Year (2030) Traffic Conditions

Table 4.L-13, *Cumulative (2030) Plus Project for Incorporated Cities Intersection Level of Service Analysis*, summarize the levels of service during the Cumulative Buildout (2030) conditions. Poor operating conditions (LOS E or F) are projected at ten (10) of the 11 study intersections under the With and Without Project scenarios during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
11. Western Avenue & Carson Street
15. Figueroa Street & 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
17. Normandie Avenue & 223rd Street
21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

As shown in Table 4.L-13, when examining Cumulative Buildout (2030) Plus Project conditions (with an area-wide growth factor) using the significant impact criteria, potentially significant impacts would result at the following intersections:

4. Normandie Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps

Mitigation measures are prescribed below for potentially significant impacted intersections in the incorporated cities, which address both Interim (2023) and Buildout (2030) traffic conditions.

Table 4.L-13

Cumulative (2030) Plus Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030 V/C or Delay	Cumulative 2030 LOS	Cumulative 2030+Project V/C or Delay	Cumulative 2030+Project LOS	Project Increase In V/C	Significant Impacts
1	Normandie Ave.	Torrance Blvd.	City of Los Angeles	CMA	AM	1.054	F	1.059	F	0.005	NO
					PM	1.090	F	1.098	F	0.008	NO
3	Western Ave.	Carson St.	City of Los Angeles	CMA	AM	1.076	F	1.081	F	0.005	NO
					PM	1.196	F	1.204	F	0.008	NO
			City of Torrance	ICU	AM	1.085	F	1.089	F	0.004	NO
					PM	1.188	F	1.194	F	0.006	NO
4	Normandie Ave.	Carson St.	City of Los Angeles	CMA	AM	0.910	E	0.933	E	0.023	YES
					PM	1.037	F	1.073	F	0.036	YES
10	Figueroa St.	Carson St.	City of Carson	ICU	AM	0.762	C	0.786	C	0.024	NO
					PM	0.957	E	0.974	E	0.017	NO
11	Western Ave.	220th St.	City of Los Angeles	CMA	AM	0.633	B	0.649	B	0.016	NO
					PM	0.793	C	0.794	C	0.001	NO
			City of Torrance	ICU	AM	0.760	C	0.775	C	0.015	NO
					PM	0.909	E	0.910	E	0.001	NO
12	Normandie Ave.	220th St.	City of Los Angeles	CMA	AM	0.470	A	0.519	A	0.049	NO
					PM	0.345	A	0.359	A	0.014	NO
15	Figueroa St.	220th St./I-110 NB Ramps	City of Carson	ICU	AM	1.024	F	1.054	F	0.030	YES
					PM	1.006	F	1.121	F	0.115	YES
16	Western Ave.	223rd St.	City of Los Angeles	CMA	AM	0.935	E	0.936	E	0.001	NO
					PM	0.974	E	0.978	E	0.004	NO
			City of Torrance	ICU	AM	0.994	E	0.996	E	0.002	NO
					PM	1.029	F	1.034	F	0.005	NO
17	Normandie Ave.	223rd St.	City of Los Angeles	CMA	AM	0.713	C	0.724	C	0.011	NO
					PM	0.805	D	0.817	D	0.012	NO
21	Figueroa St.	223rd St.	City of Carson	ICU	AM	0.939	E	0.956	E	0.017	NO
					PM	0.820	D	0.831	D	0.011	NO

Table 4.L-13 (Continued)

Cumulative (2030) Plus Project for Incorporated Cities Intersection Level of Service Analysis

ID	N/S St. Name	E/W St. Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative 2030 V/C or Delay	Cumulative 2030 LOS	Cumulative 2030+Project V/C or Delay	Cumulative 2030+Project LOS	Project Increase In V/C	Significant Impacts
22	Western Ave.	Sepulveda Blvd	City of Los Angeles	CMA	AM	1.054	F	1.054	F	0.000	NO
					PM	1.122	F	1.124	F	0.002	NO
			City of Torrance	ICU	AM	1.067	F	1.067	F	0.000	NO
					PM	1.124	F	1.126	F	0.002	NO

[a] *All Intersections are signalized except for #13, Meyler St. and 220th St., which is all way-stop controlled.*

Source: Fehr & Peers, 2016

(d) Summary of Interim Year (2023) and Buildout (2030) Intersection Impacts

Table 4.L-14, *Potentially Significant Impacts at Unincorporated Los Angeles County Intersections*, depicts the impacts at all intersections within unincorporated Los Angeles County using the impact criteria from Los Angeles County. As shown therein, the Project would result in potentially significant impacts at eight (8) intersections under Interim (2023) Plus Project Conditions and ten (10) intersections under Cumulative (2030) Plus Project conditions. The Project would also result in potentially significant impacts at eight (8) of the same intersections plus one additional intersection under Existing Plus Project (Full Buildout) conditions, and three (3) of those same intersections under Existing Plus Project (Interim) conditions. In all, the Project would result in potentially significant impacts at eleven (11) unincorporated County intersections.

Table 4.L-15, *Potentially Significant Impacts at Incorporated City Intersections*, depicts the impacts at all intersections within the jurisdictions of incorporated cities (city of Los Angeles, city of Torrance, and city of Carson) using the impact criteria from the relevant city. As shown therein, the Project would result in impacts at only one (1) intersection in the City of Carson under Interim (2023) Plus Project conditions and impacts at two (2) intersections under Cumulative (2030) Plus Project conditions (including the intersection affected under Interim (2023) Plus Project conditions in the city of Carson and an additional intersection in the city of Los Angeles). The Project would also result in potentially significant impacts at the same two (2) intersections under Existing Plus Project (Full Buildout) conditions, and one (1) of those same intersections under Existing Plus Project (Interim) conditions. In all, the Project would result in potentially significant impacts at two (2) incorporated city intersections (one of which, Intersection No. 4 at Normandie Avenue and Carson Street, is also significantly impacted under Los Angeles County criteria as discussed above).

As such, the Project would result in potentially significant impacts to a total of twelve (12) intersections within both unincorporated Los Angeles County and incorporated cities.

Table 4.L-14

Potentially Significant Impacts at Unincorporated Los Angeles County Intersections

ID	Intersection	Period	Existing + Project (Interim)	Interim (2023) + Project	Existing + Project (Full Buildout)	Cumulative (2030) + Project
1	Normandie Avenue & Torrance Boulevard	AM	NO	**YES**	NO	**YES**
		PM	NO	**YES**	NO	**YES**
2	Vermont Avenue & Torrance Boulevard	AM	NO	**YES**	NO	**YES**
		PM	NO	NO	NO	**YES**
4	Normandie Avenue & Carson Street	AM	NO	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
5	Budlong Avenue & Carson Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
6	Berendo Avenue & Carson Street	AM	NO	NO	NO	NO
		PM	NO	NO	**YES**	**YES**
7	Medical Center Drive & Carson Street	AM	NO	**YES**	**YES**	**YES**
		PM	NO	NO	NO	**YES**
8	Vermont Avenue & Carson Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	**YES**	**YES**	**YES**	**YES**
9	I-110 SB Ramps & Carson Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
12	Normandie Avenue & 220th Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
13	Meyler Street & 220th Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
14	Vermont Avenue & 220th Street	AM	NO	NO	**YES**	**YES**
		PM	NO	NO	**YES**	**YES**
17	Normandie Avenue & 223rd Street	AM	NO	NO	**YES**	**NO**
		PM	NO	NO	NO	**NO**
18	Meyler Street & 223rd Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
19	Vermont Avenue & 223rd Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
20	I-110 SB Ramps & 223rd Street	AM	NO	NO	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**

Source: Fehr &Peers, 2016

Table 4.L-15

Potentially Significant Impacts at Incorporated City Intersections

ID	Intersection	Jurisdiction	Period	Existing + Project (Interim)	Interim (2023) + Project	Existing + Project (Full Buildout)	Cumulative (2030) + Project
1	Normandie Avenue & Torrance Boulevard	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
3	Western Avenue & Carson Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
4	Normandie Avenue & Carson Street	City of Los Angeles	AM	NO	NO	NO	**YES**
			PM	NO	NO	**YES**	**YES**
10	Figueroa Street & Carson Street	City of Carson	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
11	Western Avenue & 220th Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
12	Normandie Avenue & 220th Street	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
15	Figueroa Street & 220th Street/I-110 NB Ramps	City of Carson	AM	NO	NO	**YES**	**YES**
			PM	**YES**	**YES**	**YES**	**YES**
16	Western Avenue & 223rd Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
17	Normandie Avenue & 223rd Street	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
21	Figueroa Street & 223rd Street	City of Carson	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
22	Western Avenue & Sepulveda Blvd	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO

Source: Fehr &Peers, 2016

(3) CMP Transportation System

Threshold TRAF-3: Would the Project result in a change at a CMP facility in V/C of 0.02 or greater and cause LOS F conditions, or result in a change in V/C of 0.02 or greater at a CMP facility that is already at LOS F?

Impact Statement TRAF-3: *The Project would not meet the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant.*

(a) CMP Arterial Monitoring Stations

The CMP arterial monitoring stations nearest to the Project study area are:

- Western Avenue & Carson Street (City of Torrance)
- Western Avenue & 190th Street (City of Torrance)
- Western Avenue & Sepulveda Boulevard (City of Torrance)
- Pacific Coast Highway & Western Avenue (City of Los Angeles)
- Pacific Coast Highway & Figueroa Street (City of Los Angeles)
- Artesia Boulevard & Vermont Avenue (City of Gardena)

Based on the Project trip generation estimates and a review of the net Project-generated AM and PM peak hour traffic volumes (shown in Figures 8 and 9 of the Traffic Study), the Project would add 50 or more vehicle trips through one of the CMP arterial monitoring stations, Western Avenue & Carson Street. Fewer than 50 trips would be added to all other arterial monitoring stations during the AM or PM analysis periods. Therefore, no further analysis of is required for the CMP arterial intersections with the exception of Western Avenue & Carson Street. Per CMP Impact Analysis guidelines, intersection LOS calculations can be completed using either ICU or CMA methodology. Table 4.L-13 depicts the results of both CMA and ICU methodologies for Western Avenue & Carson Street in the Full Buildout plus Project scenario. Because the incremental change in V/C at this location would not increase by 2%, CMP arterial intersection impacts are considered to be less than significant for the Project. Because no impact would occur under the longest-term Cumulative (2030) plus Project scenario, it is concluded that no impact would occur under the Interim Development (2023) plus Project scenario or Existing plus Project scenarios.

(b) CMP Freeway Monitoring Stations

The nearest CMP mainline freeway monitoring locations nearest to the Project Site are:

- I-110 at Wilmington, south of "C" Street (Station 1045)
- I-110 at Manchester Boulevard (Station 1046)
- I-405 at Santa Fe Avenue (Station 1066)
- I-405 south of I-110 (Station 1067)
- I-405 north of Inglewood Avenue (Station 1068)
- SR 91 east of Alameda Street/Santa Fe Avenue (Station 1033)

Results are depicted in **Table 4.L-16**, *CMP AM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis*, and **Table 4.L-17**, *CMP AM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis* for the AM and PM peak hours, respectively, under Existing, Cumulative (2030) and Cumulative (2030) plus Project conditions. The Project would not add more than 150 trips at any station location, and the V/C would not increase by 2% or more. Therefore, CMP freeway impacts are considered to be less than significant.

Table 4.L-16

CMP AM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis

Freeway Segments	Direction	# of Lanes	Capacity [a]	Existing			Cumulative (2030) with Areawide Growth			Full Buildout Project Trips	Cumulative (2030) with Areawide Growth plus Project				
				Peak Hour Volume [b]	D/C Ratio	LOS [c]	Peak Hour Volume	D/C Ratio	LOS [c]		Peak Hour Volume	D/C Ratio	LOS [c]	Project-related D/C change	Significant Impact [d]
Harbor Freeway (I-110)															
Harbor Freeway (I-110)	NB	4	8,000	3,025	0.38	B	3,088	0.386	B	52	3,141	0.393	B	0.007	NO
at Wilmington, south of "C" Street - CMP Station 1045	SB	4	8,000	4,235	0.53	B	4,323	0.54	B	11	4,334	0.542	C	0.002	NO
Harbor Freeway (I-110)	NB	6	12,000	11,794	0.98	E	12,652	1.054	F(0)	12	12,664	1.055	F(0)	0.001	NO
at Manchester Bl - CMP Station 1046	SB	6	12,000	11,115	0.93	D	11,924	0.994	E	78	12,002	1	E	0.006	NO
San Diego Freeway (I-405)															
San Diego Freeway (I-405)	NB	5	10,000	12,549	1.26	F(1)	15,171	1.517	F(3)	52	15,223	1.522	F(3)	0.005	NO
Santa Fe Ave -CMP Station 1066	SB	5	10,000	9,384	0.94	E	11,345	1.135	F(0)	8	11,353	1.135	F(0)	0.000	NO
San Diego Freeway (I-405)	NB	5	10,000	11,227	1.12	F(0)	12,045	1.205	F(0)	0	12,045	1.205	F(0)	0.000	NO
s/o RTE 110; Carson Scales -CMP Station 1067	SB	5	10,000	9,682	0.97	E	10,387	1.039	F(0)	0	10,387	1.039	F(0)	0.000	NO
San Diego Freeway (I-405)	NB	5	10,000	11,476	1.15	F(0)	11,917	1.192	F(0)	15	11,932	1.193	F(0)	0.001	NO
n/o Inglewood Ave -CMP Station 1068	SB	5	10,000	8,551	0.86	D	8,880	0.888	D	78	8,958	0.896	D	0.008	NO
Artesia Freeway (SR 91)															
Artesia Freeway (SR 91)	EB	6	12,000	8,048	0.67	C	9,669	0.806	D	13	9,682	0.807	D	0.001	NO
e/o Alameda St/Santa Fe Ave -CMP Station 1033	WB	6	12,000	10,767	0.9	D	12,935	1.078	F(0)	80	13,014	1.085	F(0)	0.007	NO

[a] *Capacity assumes 2,000 vehicles/hour/lane based on analysis contained in 2010 Congestion Management Program, Metro, 2010.*
[b] *2015 Volume obtained from CMP 2009 Data, factored to 2015 conditions using CMP growth rate for the RSA that contains freeway census station.*
[c] *Freeway Segment LOS methodology taken from 2010 CMP, Metro, 2010.*
[d] *CMP defines significant freeway impact as change in D/C ratio of 0.02 or more when a freeway segment is at LOS F (D/C ratio > 1.00).*

Source: Fehr & Peers, 2016

Table 4.L-17

CMP PM Peak Hour Existing (2014) and Cumulative (2030) Freeway Analysis

Freeway Segments	Direction	# of Lanes	Capacity [a]	Existing			Cumulative (2030) with Areawide Growth			Full Buildout Project Trips	Cumulative (2030) with Areawide Growth plus Project				
				Peak Hour Volume [b]	D/C Ratio	LOS [c]	Peak Hour Volume	D/C Ratio	LOS [c]		Peak Hour Volume	D/C Ratio	LOS [c]	Project-related D/C change	Significant Impact [d]
Harbor Freeway (I-110)															
Harbor Freeway (I-110)	NB	4	8,000	3,090	0.39	B	3,587	0.448	B	17	3,604	0.451	B	0.003	NO
at Wilmington, south of "C" Street - CMP Station 1045	SB	4	8,000	4,223	0.53	B	4,799	0.600	C	56	4,855	0.607	C	0.007	NO
Harbor Freeway (I-110)	NB	6	12,000	11,781	0.98	E	12,827	1.069	F(0)	62	12,889	1.074	F(0)	0.005	NO
at Manchester Bl - CMP Station 1046	SB	6	12,000	11,954	1	E	13,036	1.086	F(0)	26	13,062	1.089	F(0)	0.003	NO
San Diego Freeway (I-405)															
San Diego Freeway (I-405)	NB	5	10,000	9,167	0.92	D	10,393	1.039	F(0)	16	10,409	1.041	F(0)	0.002	NO
Santa Fe Ave -CMP Station 1066	SB	5	10,000	11,021	1.1	F(0)	12,367	1.237	F(0)	41	12,408	1.241	F(0)	0.004	NO
San Diego Freeway (I-405)	NB	5	10,000	9,682	0.97	E	10,921	1.092	F(0)	0	10,921	1.092	F(0)	0.000	NO
s/o RTE 110; Carson Scales -CMP Station 1067	SB	5	10,000	11,639	1.16	F(0)	13,006	1.301	F(1)	0	13,006	1.301	F(1)	0.000	NO
San Diego Freeway (I-405)	NB	5	10,000	8,734	0.87	D	9,518	0.952	E	78	9,596	0.96	E	0.008	NO
n/o Inglewood Ave -CMP Station 1068	SB	5	10,000	10,562	1.06	F(0)	11,476	1.148	F(0)	24	11,500	1.15	F(0)	0.002	NO
Artesia Freeway (SR 91)															
Artesia Freeway (SR 91)	EB	6	12,000	16,532	1.38	F(2)	19,893	1.658	F(3)	65	19,958	1.663	F(3)	0.005	NO
e/o Alameda St/Santa Fe Ave -CMP Station 1033	WB	6	12,000	6,526	0.54	C	7,887	0.657	C	25	7,912	0.659	C	0.002	NO

[a] *Capacity assumes 2,000 vehicles/hour/lane based on analysis contained in 2010 Congestion Management Program, Metro, 2010.*
[b] *2015 Volume obtained from CMP 2009 Data, factored to 2015 conditions using CMP growth rate for the RSA that contains freeway census station.*
[c] *Freeway Segment LOS methodology taken from 2010 CMP, Metro, 2010.*
[d] *CMP defines significant freeway impact as change in D/C ratio of 0.02 or more when a freeway segment is at LOS F (D/C ratio > 1.00).*

Source: Fehr & Peers, 2016

(4) Caltrans Facilities

(a) Freeway Mainlines and Intersections

Threshold TRAF-4: Would the Project result in traffic that would extend onto the freeway mainline or intersection were found to operate at LOS F with the addition of Project-related traffic and the increase is equal to or greater than 50 trips?

Impact Statement TRAF-4: *The Project would increase traffic on the Caltrans facilities. With regard to freeway segments and intersections, while the County would make a fair-share contribution to offset increases in trips that would occur as a result of Project traffic, the Project could have a significant impact on Caltrans facilities. While the County would contribute a fair-share contribution for future improvements, this impact is considered potentially significant.*

(i) Freeway Mainlines

Morning and afternoon peak hour analysis of six selected freeway mainline segments in the Project vicinity was conducted in response to a request from Caltrans:

- I-110 at 228th Street
- I-110 at El Segundo Boulevard
- I-405 at I-710
- I-405 south of I-110
- I-405 north of Western Avenue
- SR-91 at Avalon Boulevard

As discussed above, the level of service definitions used for freeway mainline segments are shown above in Table 4.L-1. Caltrans' *Guide for the Preparation of Traffic Impact Studies* (December 2002) states that:

> "The level of service (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained."

The surrounding freeways (I-405, I-710, SR-91, and I-110) are operating at or near capacity during the peak period. When additional traffic trips are assigned to those freeways, existing LOS should be maintained.

Following consultation between County staff and Caltrans staff, it was agreed that for the purposes of this study for this Project, an impact would be considered adverse if the analyzed freeway segment were found to operate at LOS F with the addition of Project-related traffic and if the increase were equal to or greater than 50 trips.

Existing (2014) and Existing plus Project freeway segment analysis is presented in **Table 4.L-18**, *Existing (2014) Peak Hour Freeway Segment Analysis*, and Cumulative (2030) and Cumulative (2030) plus Project freeway segment analysis is presented in **Table 4.L-19**, *Cumulative (2030) Peak Hour Freeway Segment Analysis*. As shown, using this methodology, adverse impacts are identified on the following three freeway segments:

Existing (2014) plus Project at Full Buildout

- I-405 at I-710 – northbound in the AM peak hour (52 Project-added trips)

Cumulative (2030) plus Project at Full Buildout

- I-110 at 228th Street – northbound in the AM peak hour (52 Project-added trips)
- I-110 at El Segundo Boulevard – southbound in the AM peak hour (78 Project-added trips)
- I-405 at I-710 – northbound in the AM peak hour (52 Project-added trips)

To address these adverse impacts three potential measures were investigated:

- Reduce Project-generated traffic by reducing the building program or by implementing a more effective TDM program sufficient to reduce estimated trips by 1% to avoid two of the adverse impacts identified or 6% to avoid all three of the adverse impacts identified. The effectiveness of the ongoing programs varies from year to year, however, and it is not possible to guarantee that specific measures would be effective in perpetuity.

- Add mainline freeway capacity to address existing and cumulative conditions. This would be beyond the ability of any individual project to implement, due to the potential need to acquire right-of-way and the magnitude of the cost.

- Contribute to implementation of Caltrans' projects to address congestion in the study area, which would contribute to minimizing the impact associated with the proposed development. However, there are no specific improvements identified for implementation. Thus, no fair-share contribution can be calculated or made.

Because the potential measures described above were each found to be infeasible, the Project's incremental impacts on poor cumulative conditions on identified segments would be considered significant and unavoidable.

Table 4.L-18

Existing (2014) Peak Hour Freeway Segment Analysis

Name [a]	Peak Hour	Existing Northbound Density (pc/mi/ln)*	Existing Northbound LOS	Existing Southbound Density (pc/mi/ln)*	Existing Southbound LOS	Full Buildout Project Trips Northbound	Full Buildout Project Trips Southbound	Existing plus Project Northbound Density (pc/mi/ln)*	Existing plus Project Northbound LOS	Existing plus Project Southbound Density (pc/mi/ln)*	Existing plus Project Southbound LOS	Change in Density Northbound	Change in Density Southbound	Project Impact? [b] Northbound	Project Impact? [b] Southbound
I-110 at 228th Street	AM	37.0	E	22.9	C	52	11	37.5	E	22.9	C	0.5	0.0	NO	NO
	PM	23.1	C	33.7	D	17	56	23.2	C	34.1	D	0.1	0.4	NO	NO
I-110 at El Segundo Blvd	AM	27.0	D	36.9	E	12	78	27.0	D	37.5	E	0.0	0.6	NO	NO
	PM	26.1	D	37.4	E	62	26	26.4	D	37.6	E	0.3	0.2	NO	NO
I-405 JCT. RTE 710	AM	47.5	F	27.4	D	52	8	48.0	F	27.4	D	0.5	0.0	YES	NO
	PM	28.5	D	43.8	E	16	41	28.5	D	44.2	E	0.0	0.4	NO	NO
I-405 S/O JCT RTE 110, Carson Scales	AM	33.9	D	28.2	D	0	0	33.9	D	28.2	D	0.0	0.0	NO	NO
	PM	26.0	C	37.9	E	0	0	26.0	C	37.9	E	0.0	0.0	NO	NO
I-405 N/O Western Avenue; Van Ness Avenue	AM	30.8	D	29.0	D	15	78	30.8	D	29.3	D	0.0	0.3	NO	NO
	PM	27.5	D	31.8	D	78	24	27.9	D	31.9	D	0.4	0.1	NO	NO

Name [a]	Peak Hour	Existing Eastbound Density (pc/mi/ln)*	Existing Eastbound LOS	Existing Westbound Density (pc/mi/ln)*	Existing Westbound LOS	Full Buildout Project Trips Eastbound	Full Buildout Project Trips Westbound	Existing plus Project Eastbound Density (pc/mi/ln)*	Existing plus Project Eastbound LOS	Existing plus Project Westbound Density (pc/mi/ln)*	Existing plus Project Westbound LOS	Change in Density Eastbound	Change in Density Westbound	Project Impact? [b] Northbound	Project Impact? [b] Westbound
SR 91 at Avalon Boulevard Interchange	AM	21.9	C	28.7	D	13	80	21.9	C	29.1	D	0.0	0.4	NO	NO
	PM	26.1	D	19.9	C	65	25	26.4	D	20.0	C	0.3	0.1	NO	NO

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** pc/mi/ln denotes passenger cars per mile per lane*

[a] *Analyzed using Freeway methodology from Highway Capacity Manual, Transportation Research Board, 2010.*

[b] *After discussion with Caltrans staff, Impact Criteria was defined as mainline LOS F and more than 50 project trips.*

Source: Fehr & Peers, 2016

Table 4.L-19

Cumulative (2030) Peak Hour Freeway Segment Analysis,

Name [a]	Peak Hour	Cumulative with Areawide Growth				Full Buildout Project Trips		Cumulative with Areawide Growthplus Project				Change in Density		Project Impact? [b]	
		Northbound		Southbound				Northbound		Southbound					
		Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Northbound	Southbound	Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Northbound	Southbound	Northbound	Southbound
I-110 at 228th Street	AM	45.4	F	25.6	C	52	11	46.0	F	25.7	C	0.6	0.1	YES	NO
	PM	24.6	C	37.0	E	17	56	24.7	C	37.5	E	0.1	0.5	NO	NO
I-110 at El Segundo Blvd	AM	31.3	D	45.5	F	12	78	31.4	D	46.3	F	0.1	0.8	NO	YES
	PM	28.2	D	41.8	E	62	26	28.5	D	42.0	E	0.3	0.2	NO	NO
I-405 JCT. RTE 710	AM	63.0	F	31.8	D	52	8	63.9	F	31.9	D	0.9	0.1	YES	NO
	PM	30.9	D	50.0	F	16	41	31.0	D	50.4	F	0.1	0.4	NO	NO
I-405 S/O JCT RTE 110, Carson Scales	AM	40.9	E	32.6	D	0	0	40.9	E	32.6	D	0.0	0.0	NO	NO
	PM	26.0	C	42.2	E	0	0	26.0	C	42.2	E	0.0	0.0	NO	NO
I-405 N/O Western Avenue; Van Ness Avenue	AM	36.1	E	33.6	D	15	78	36.2	E	34.1	D	0.1	0.5	NO	NO
	PM	29.7	D	34.7	D	78	24	30.0	D	34.9	D	0.3	0.2	NO	NO

Name [a]	Peak Hour	Existing				Full Buildout Project Trips		Existing plus Project				Change in Density		Project Impact? [b]	
		Eastbound		Westbound				Eastbound		Westbound					
		Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Eastbound	Westbound	Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Eastbound	Westbound	Northbound	Westbound
SR 91 at Avalon Boulevard Interchange	AM	24.4	C	33.2	D	13	80	24.4	C	33.7	D	0.0	0.5	NO	NO
	PM	28.0	D	21.1	C	65	25	28.3	D	21.2	C	0.3	0.1	NO	NO

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** pc/mi/ln denotes passenger cars per mile per lane*

[a] *Analyzed using Freeway methodology from Highway Capacity Manual, Transportation Research Board, 2010.*

[b] *After discussion with Caltrans staff, Impact Criteria was defined as mainline LOS F and more than 50 project trips.*

Source: Fehr & Peers, 2016

(ii) Intersections

Analysis of the arterial intersection of Western Avenue (State Route 213) & Carson Street was conducted using the Highway Capacity Manual (HCM) methodology in response to a request from Caltrans. Caltrans, LADOT and the City of Torrance have jointly agreed to modify the signal in the near term at this location by implementing protected left-turn phasing on the eastbound and westbound approaches.

The discussion above regarding Caltrans' MOEs for freeway mainline segments also applies to arterial intersections. However, following consultation between county staff and Caltrans staff, it was agreed that for the purposes of this study of this Project, an impact would be considered adverse if the analyzed intersection were found to operate at LOS F with the addition of Project-related traffic and if the increase were equal to or greater than 50 trips. The results of this analysis under Existing conditions without and with the Project, Interim Year (2023) without and with the Project, and Cumulative Year (2030) without and with the Project are presented in **Table 4.L-20**, *Peak Hour Highway Capacity Manual Intersection Analysis – Western Avenue (State Route 213) & Carson Street*. Detailed level of service worksheets are provided in Appendix C of the Traffic Study. The intersection is operating at LOS E under Existing and Existing plus Project conditions. Under Interim Development (2023) and Cumulative (2030) conditions in both the AM and PM peak hours, the intersection is projected to decline to LOS F without or with the addition of Project traffic. Because the Project would add more than 50 trips in both the AM and PM peak hours during the Cumulative (2030) condition, the impact would be a potentially significant impact.

Table 4.L-20

Peak Hour Highway Capacity Manual Intersection Analysis – Western Avenue (State Route 213) & Carson Street

Scenario	Time Period	Without Project		Plus Project [b]		Project Trips	Project Delay	Adverse Impact [c]
		Delay	LOS	Delay	LOS			
Existing	AM	66.4	E	67.8	E	55	1.4	NO
	PM	65.8	E	69.9	E	73	4.1	NO
Interim (2023) with Areawide Growth [d]	AM	93.6	F	93.7	F	17	0.1	NO
	PM	116.4	F	117.5	F	20	1.1	NO
Cumulative (2030) with Areawide Growth [d]	AM	105.7	F	106.9	F	55	1.2	YES
	PM	133.6	F	138.2	F	73	4.6	YES

[a] *Analyzed using Freeway methodology from Highway Capacity Manual, Transportation Research Board, 2010.*
[b] *Project trips for Existing and Cumulative (2030) with areawide growth are for Full Buildout. Project Trips for Interim (2023) with areawide growth are for Interim Development.*
[c] *After discussion with Caltrans staff, Impact Criteria was defined as intersection operating at LOS F and more than 50 project trips.*
[d] *Includes protected left-turn phases for eastbound and westbound approaches.*

Source: Fehr & Peers, 2016

(b) Freeway Off-Ramps

Threshold TRAF-5: Would the Project result in traffic where the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period?

Impact Statement TRAF-5: *The Project would increase traffic on the Caltrans facilities. However, with regard to off-ramps, the Project would not contribute traffic such that off-ramp queues would extend beyond the length of the ramp itself onto the mainline of a freeway during peak arrival periods. Thus, impacts would be less than significant.*

A freeway ramp queuing analysis was conducted at six freeway ramp terminal intersections in the Project vicinity in response to a request from Caltrans:

- I-110 Northbound Off-Ramp at 220th Street/Figueroa Street (Exit 7)
- I-110 Southbound Off-Ramp at Carson Street (Exist 7B)
- I-110 Southbound Off-Ramp at 223rd Street (Exit 7B)
- I-405 Northbound Off-Ramp at Carson Street (Exit 34)
- I-405 Northbound Off-Ramp at Wilmington Avenue (Exit 33B)
- I-405 Southbound Off-Ramp at East Carson Street (Exit 34)

Following consultation between County staff and Caltrans staff, it was agreed that for the purposes of this study for this Project, an impact would be considered adverse if the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period. **Table 4.L-21**, *Peak Hour Off-Ramp Intersection 95th Percentile Queues***,** presents a summary of the ramp queuing analysis for Existing, Cumulative (2030) and Cumulative (2030) plus Project conditions. The queue does not exceed the ramp length in any of the scenarios; therefore, less than significant impacts would occur.

Table 4.L-21

Peak Hour Off-Ramp Intersection 95th Percentile Queues

Ramp	Cross Street	Ramp Length	Ramp Turn Lanes at Intersection			Existing (2014)				Cumulative (2030) with Areawide Growth				Cumulative (2030) with Areawide Growth plus Project				Queue Exceeds Storage?
						AM Queue		PM Queue		AM Queue		PM Queue		AM Queue		PM Queue		
			# of Lanes	Move	Length	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	
I-110 SB Ramps	Carson Street	980	2	Left	980	130	640 [a]	250	350	150	770 [a]	280	520 [a]	150	970 [a]	280	580 [a]	NO
				Right	380	640		350		770		520		970		580		
220th Street/ I-110 NB Ramps	Figueroa Street	1,150	2	Through/Left	1,150	570	570 [a]	710	710 [a]	640	640 [a]	790	790 [a]	680	680 [a]	810	810 [a]	NO
				Right	525	0		30		0		50		20		60		
I-110 SB Ramps	223rd Street	930	2	Through/Left	930	360	360	340	340	440	440 [a]	440	440	530	530 [a]	480	480 [a]	NO
				Through/Right	390	[b]		[b]		[b]		[b]		[b]		[b]		
I-405 SB Ramps	Carson Street	1,120	2	Left	1,120	40	50	40	40	50	60	40	50	50	60	40	50	NO
				Right	660	50		40		60		50		60		50		
I-405 NB Ramps	Carson Street	1,200	2	Through/Left	630	30	30	40	40	30	30	40	40	30	30	40	40	NO
				Right	1,200	0		0		0		0		0		0		
I-405 NB Ramps	Wilmington Avenue	1,350	3	Left	900	440	440	400	400	530	530	480	480	550	550	490	490	NO
				Left	1,350	[b]		[b]		[b]		[b]		[b]		[b]		
				Right	450	360		60		490		120		490		120		

[a]: *95th percentile volume exceeds capacity, queue may be longer.*
[b] *Queue same as in adjacent lane.*

Source: Fehr & Peers, 2016

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(5) Public Transit and Alternative Transportation

Threshold TRAF-6: Would the Project add substantial new ridership to the transit lines operating in excess of their capacity or conflict with adopted policies, plans, or programs supporting alternative transportation?

Impact Statement TRAF-6: *Transit ridership generated by the Project would not exceed the residual capacity of the public transit system under Future Interim (2023) and Buildout (2030) conditions. Therefore, impacts with respect to transit would be less than significant. With regard to other alternative transportation modes, the Project would be supportive of and would not conflict with applicable alternative transportation policies, plans, and programs. Thus, impacts would be less than significant.*

(a) Public Transit

Based on the trip generation for the Interim Development (2023) scenario shown in Table 4.L-7a, the Project is estimated to generate 1,822 daily net trips, 225 net AM peak hour tips, and 221 net PM peak hour trips before transit credits and bike/walk credits are applied. Applying the CMP guidelines by converting the vehicle trips to person trips by multiplying by a 1.4 AVR (225 net AM peak hour trips x 1.4 = 315 and 221 net PM peak hour trips x 1.4 = 310) and applying a 7% transit use (315 net AM peak hour person trips x 7% = 22 and 310 net PM peak hour person trips x 7% = 22), would result in approximately 22 new transit person trips during the weekday AM peak hour and 22 new transit person trips during the weekday PM peak hour in the Interim Development (2023) scenario.

Based on the trip generation for the Full Buildout (2030) scenario shown in Table 4.L-7b, the Project is expected to generate 7,409 daily net trips, 714 net AM peak hour tips, and 818 net PM peak hour trips before internal capture, transit credits and bike/walk credits are applied. Applying the CMP guidelines by converting the vehicle trips to person trips by multiplying by a 1.4 AVR (714 net AM peak hour trips x 1.4 = 1,000 and 818 net PM peak hour trips x 1.4 = 1,145) and applying a 7% transit use (1,000 net AM peak hour person trips x 7% = 70 and 1,145 net PM peak hour person trips x 7% = 80), would result in approximately 70 new transit person trips during the weekday AM peak hour and 80 new transit person trips during the weekday PM peak hour in the Full Buildout scenario.

Within ¼-mile of the Project Site, Metro operates one local line and two express lines; Carson Circuit operates two local lines; Torrance Transit operates two local lines and one rapid line; and Gardena Municipal Bus operates one local line. The Project location is also served by numerous established local and regional transit routes with peak period headways of between 10 and 40 minutes. The bus services have an approximate capacity of approximately 1,840 persons during the peak hours based on a seating capacity of 40 persons for a standard bus and 30 persons for a shuttle bus and a policy load factor of 1.0. The Project would utilize less than 5% of available transit capacity during the peak hours. As such, impacts to public transit service would be less than significant.

(b) Alternative Transportation

With regard to alternative transportation, more specifically non-motorized transportation, the Project would implement a wide range of pedestrian- and bicycle-oriented improvements throughout the Medical Center Campus intended to foster non-vehicular access and circulation within the Project Site, as well as provide access to off-site facilities. On-site pedestrian and bicycle-related facilities would include a central

garden/open space system connecting the Medical Center Campus in a north-south and east-west orientation, which also ties into the proposed "fitness trail" which weaves through the property in a circuitous pattern and links the various Project components. The Project would also provide bicycle parking on the Medical Center Campus in accordance with County Code requirements, and may also provide lockers and showers for employees in accordance with existing TDM measures in place at the facility, and may also implement further bicycle-friendly improvements to meet LEED certification requirements as part of future development. Nonetheless, the Project would continue to implement TDM measures on the Project Site as under current conditions, and may ultimately expand the range of strategies to reduce vehicle trips. As such, the Project would not conflict with plans, policies, or programs supportive of alternative transportation such as the SCAG RTP/SCS, Los Angeles County CMP, or Los Angeles County General Plan 2035, and impacts would be less than significant.

(6) Access and Circulation

Threshold TRAF-7: Would the Project substantially increase conflict of movement between vehicles and pedestrians or bicycles because of driveway design, the location of parking facilities, or other Project characteristics affecting visibility and turning movements?

Impact Statement TRAF-7: *Site access would be provided via seven driveways designed to County standards that would accommodate left and right ingress/egress turning movements. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. Impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant.*

The Master Plan Project design is intended to separate the access and the on-site circulation and parking for staff and the public, with Medical Center Campus entries and staff parking near the southeast area of the campus, and access and parking for the public from Carson Street, on the north (please see Figure 2-8 in Chapter 2.0, *Project Description*, of this Draft EIR). Access to the Medical Center Campus would be augmented with the addition of a signalized public entrance on Carson Street, near the northern portion of the proposed Bioscience Tech Park area, and one additional unsignalized staff entrance on Vermont Avenue. The new signalized public entrance on Carson Street may ultimately be located to the west of the location depicted in Figure 2-8, in order to allow adequate queue lengths and vehicles turning left into the Medical Center Campus from westbound Carson Street. A queueing analysis was conducted in the Traffic Study in order to assess the adequacy of the available storage space for westbound left-turns approaching the proposed new driveway on Carson Street west of Budlong Avenue. Figures 2 and 7 in the Traffic Study illustrate the location of the relocated driveway, which is currently proposed to be located approximately 300 feet west of the intersection of Carson Street and Budlong Avenue, directly opposite an existing retail driveway. Existing eastbound left-turn volumes from Carson Street onto Budlong Avenue are approximately 25 vehicles in the AM peak hour and 15 vehicles in the PM peak hour. The proposed westbound left-turn lane would occupy space now occupied by a center two-way left-turn lane and by the transitional taper to the existing eastbound left-turn lane onto Budlong Street, which would be shortened to accommodate projected westbound left vehicles at the Project driveway. For the analysis, a protected/permitted phase was assumed for westbound left vehicles at the driveway.

Table 17 in the Traffic Study presents a summary of the queuing analysis for Existing plus Project and Cumulative (2030) plus Project conditions at build-out for the AM and PM peak hours. The longest westbound queue is estimated to be six vehicles, requiring approximately 150 feet of storage. Providing a westbound left-turn lane of sufficient length would require shortening the eastbound left-turn lane onto Budlong Avenue, which appears feasible due to the modest left-turn volumes that it serves. As such, access to and from this driveway would be considered adequate and thus access impacts at this location would be less than significant. Detailed queue calculations are provided in Appendix D of the Project Traffic Study.

Sidewalk connections to the public transit system would continue to be provided, and on-site sidewalks would be added along the primary routes between the main parking areas and the New Hospital Tower and Outpatient buildings. Circular pick-up and drop-off loading zones would also be provided at the main entrances to each of the New Hospital Tower and Outpatient buildings. Loading and trash collection activities would continue to occur within the existing location on the south side of the Surgery and Emergency building, accessed via either Vermont Avenue or 220th Street.

The proposed circulation improvements at the Medical Center Campus, both vehicular and non-vehicular, would be designed, as noted above, to provide separation between pedestrians/bicyclist and motor vehicles in order to minimize potential conflicts and associated hazards. Given implementation of Master Plan design principles and proposed circulation plan components, it is anticipated that vehicular circulation, bicycle and pedestrian safety, and both vehicular and non-vehicular access and circulation on-site would not only maintained but substantially improved relative to existing conditions as no unified, comprehensive circulation system currently exists on the Medical Center Campus. Furthermore, all access points and on-site circulation improvements would be designed in accordance with County standards under the review of County staff. Therefore, impacts regarding access and circulation would be less than significant.

(7) Parking Supply

Threshold TRAF-8: Would the Project provide less parking than the projected demand?

Impact Statement TRAF-8: *The Project would provide vehicle parking sufficient to meet projected demand. Therefore, impacts related to parking would be less than significant.*

As noted above, the Medical Center Campus currently provides 2,905 total parking spaces, which exceeds the County's parking code requirement of 2,709 spaces. Parking for proposed future uses would be provided as needed throughout Master Plan Project implementation phases, which is planned to provide sufficient parking in excess of both County Code requirements and projected demands. Based on parking ratios for the various land uses proposed under the Medical Center Campus, including the proposed Bioscience Tech Park, the County Code requirement for on-site parking at Project buildout in year 2030 would be 2,772 spaces, while the projected demand for parking is estimated to be 3,424 parking spaces based on application of adjusted ITE parking generation rates shown on page 59 of the Harbor-UCLA Master Plan. According to information provided by County staff, the Project would provide a total of 3,240 parking spaces on the Medical Center Campus, not inclusive of parking to be provided for the Bioscience Tech Park uses, which would add another 1,000 spaces to on-site parking capacity. As such, total on-site parking to serve future land uses at the Medical Center Campus at buildout would be 4,240 spaces, which would be 816 spaces more than the total projected demand and 1,468 spaces more than required by the County Code.

With regard to bicycle parking, the County Code requires short-term bicycle parking at a rate of 1 space for every 10,000 gross square feet of building space and long-term bicycle parking at a rate of one space for every 20,000 gross square feet, which results in a requirement of 246 short-term spaces and 123 long-term spaces. It is anticipated that the Project, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code.

As discussed previously, the Project would meet the criteria set forth in SB 743 because it (1) is located within a transit priority area less than one-half mile from the Harbor Freeway/Carson Station TOD (connection to Metro Silver Line) and (2) comprises an employment center within an established urban area. Under SB 743, the Project would be exempt from findings of significance related to parking effects. However, for the purpose of this EIR, parking effects have been evaluated herein for informational and disclosure purposes. Overall, as the Project would provide parking for proposed uses in an amount greater than both County Code requirements and the projected parking demand, impacts related to parking supply would be less than significant.

e. Cumulative Impacts

(1) Construction

Impacts on traffic associated with construction (e.g., an intermittent reduction in street and intersection operating capacity) are typically considered short-term adverse impacts. As discussed above, the Project is conservatively concluded to result in a significant traffic impact during construction associated with construction worker vehicle and truck trips during peak construction periods, although implementation of both a Construction Traffic Management Plan and Pedestrian Safety Plan (PDF TRAF-1 and PDF TRAF-2) that would incorporate notification and safety procedures and controls would reduce impacts in this regard to a certain extent. Although details regarding the timing and location of future development projects in the Project area are currently unknown, it is possible that other construction activities in the Project vicinity could occur concurrently with Project-related construction activities given the approximately 14-year implementation schedule for the Master Plan Project, and thus the Project could contribute to cumulative traffic impacts. Nonetheless, each related Project would be required to comply with County or respective City requirements regarding haul routes and would implement mitigation measures and/or include Project Design Features, such as traffic controls and safety procedures, to reduce potential traffic impacts during construction. However, even though the Project Site is located within close proximity to the freeway and would implement Project Design Features, due to the Project's assumed significant construction traffic impact, the number of related projects in the vicinity and the uncertainty in terms of timing for each related Project and the potential overlap of development, it is determined that the Project could contribute to a cumulatively significant construction impact.

(2) Operation

The Traffic Study was developed to address Project impacts in the context of existing baseline conditions and future Interim Year (2023) and Full Buildout (2030) conditions. The latter two scenarios take into account traffic caused by the 26 related projects identified in Chapter 3.0, *General Description of Environmental Setting*, of this Draft EIR as well as a growth factor to account for other ambient growth occurring in the region. Therefore, the analysis of future traffic conditions in 2023 and 2030 provides the cumulative

analysis in that it considers traffic generated by future planned land uses. The above analyses of Project impacts have taken into account the cumulative impacts associated with future growth.

The Traffic Study analyzed seven scenarios: Existing (2014), Existing (2014) plus Interim Development Project, Existing (2014) plus Full Buildout Project, Interim (2023) without Project, Cumulative (2030) without Project, Interim (2023) plus Project, Cumulative (2030) plus Project. The LOS analysis for the Cumulative (2030) plus Project scenario determined that the proposed Project would significantly impact traffic at eight intersections. After the proposed mitigation, the proposed Project would create significant traffic impacts at one of the analyzed intersections. Thus, the Project would contribute to a significant cumulative impact at this location.

The regional transportation analysis, including public transit, is based on CMP procedures that have been developed to address countywide cumulative growth impacts on regional transportation facilities. The CMP Guidelines contain procedures for monitoring land use development levels and transit system performance by local jurisdictions and Metro and are used to inform planning of infrastructure improvements to meet future needs, including development of the CMP CIP, Metro's LRTP, and SCAG's RTP. As indicated in the discussion of Project impacts above, the Project would not have a significant impact on public transit and the incremental impacts on the regional public transit system would not be cumulatively considerable. Analyses of potential impacts on the regional transportation system conducted in accordance with CMP requirements determined that the Project would not have a significant impact on CMP monitoring intersections. Analyses of potential impacts on the regional transportation in accordance with Caltrans found a Project impact on Interstate 405 northbound in the AM peak hour, and cumulative impacts on Interstate 110 northbound and southbound in the AM peak hour. Options for addressing the impacts were identified that can fully mitigate Project-related impacts; however, given uncertainties regarding the timing of implementation of such improvements, impacts are conservatively concluded to be significant and unavoidable. Therefore, the Project would contribute to a significant cumulative impact in this regard.

No impacts were found at freeway off-ramps. Thus, given that the analysis of Project-related traffic impacts under future development scenarios accounts for ambient growth and growth associated with the 26 related projects, and Project-related impacts would be less than significant, the Project's contribution to cumulative effects would not be considerable.

With regard to pedestrian and bicycle access and facilities, vehicular access and circulation, and parking, the Project would not result in a significant impact. Each related project would be reviewed by the County or respective City to ensure compliance with that jurisdiction's requirements relative to the provision of safe access for vehicles, pedestrian and cyclists. Access to each site would be assessed during the County's or respective City's review process to ensure compliance with applicable requirements, which are established to minimize potential impacts. With regard to parking, the related projects would be subject to the applicable County or City parking requirements for vehicle and bicycle parking. Therefore, cumulative impacts on parking would be less than significant. Therefore, the Project would not contribute to a significant cumulative impact with regard to these issues.

4. MITIGATION MEASURES

a. Construction

(1) Temporary Construction Traffic and Parking (Threshold TRAF-1)

With the incorporation of Project Design Features PDF-TRAF-1, Construction Traffic Management Plan, and PDF TRAF-2, Pedestrian Safety, construction traffic impacts would be less than significant. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified.

b. Operation

(1) Intersection Service Levels (Threshold TRAF-2)

The traffic impact analysis determined that the proposed development would generate significant traffic impacts at twelve (12) of the 22 analyzed intersections under future plus Project conditions. The following mitigation measures are prescribed to address a number of these impacts, where improvements to address such impacts are considered feasible.

I-110 Southbound Ramps & Carson Street (Intersection #9) – The Project would result in a potentially significant impact at the intersection of Interstate 110 Southbound Ramps & Carson Street (Intersection #9) in the AM and PM peak hours in the Full Buildout scenario using its current lane configuration.

> **Mitigation Measure TRAF-1: I-110 Southbound Ramps & Carson Street (Intersection #9)** - The existing southbound approach on the Interstate I-110 off-ramp shall be restriped to convert the existing left-turn lane to a left-/right-turn lane.

This improvement would require coordination with and approval by Caltrans.

220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - The Project would result in a potentially significant impact at the intersection of 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) in the AM and PM peak hours in the Full Buildout scenario using its current lane configuration.

> **Mitigation Measure TRAF-2: 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15)** - An additional northbound through lane shall be striped and the existing through lane shall be restriped as a through/right-turn lane. The eastbound approach shall be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane.

As stated in the Transportation and Infrastructure Element of the Carson General Plan, Figueroa Street between 223rd Street and Carson Street is planned to be widened to three lanes in each direction. The proposed mitigation/improvement would require coordination with and approval by Caltrans and the City of Carson.

A mitigation involving modifying the existing raised median and restriping the northbound approach to accommodate a second left-turn lane was also considered. However, this mitigation was deemed to be inconsistent with the existing on-ramp configuration, which provides one general lane and one HOV lane.

I-110 Southbound Ramps & 223rd Street (Intersection #20) - The Project would result in a potentially significant impact at the intersection of Interstate 110 Southbound Ramps & 223rd Street (Intersection #20) in the AM and PM peak hours in the Full Buildout scenario using its current lane configuration.

> **Mitigation Measure TRAF-3: I-110 Southbound Ramps & 223rd Street (Intersection #20)** - The southbound approach would be restriped from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach shall be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking shall be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane.

This improvement would require coordination with and approval by Caltrans.

(2) CMP Transportation System (Threshold TRAF-3)

Impacts to regional CMP transportation systems would be less than significant. Thus, no mitigation measures are necessary.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections (Threshold TRAF-4)

Significant impacts have been identified with regard to freeway segments and intersections under Caltrans jurisdiction. As such, mitigation measures are recommended. Although the Project would increase traffic on the freeway mainline segments, in light of the nature of regional nature of the freeway system, improvements to Caltrans freeway facilities tend to be beyond the feasibility of any individual Project to implement. Thus, Caltrans allows development projects to pay a fair share or an equitable percentage contribution toward the estimated cost of an improvement.

The following mitigation measure is recommended to address the potentially significant impacts that were identified on the freeway mainline segments and the intersections that are under Caltrans' jurisdiction:

> **Mitigation Measure TRAF-4:** The developer shall contribute a fair share contribution to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments and that would pass through the affected Caltrans intersections.

The fair share is calculated as the Project's percentage of the total projected traffic growth on a freeway mainline segment over a 25-year period. The fair share is a contribution toward the improvement and maintenance of a shared facility that benefits the Project and the region.

(b) Freeway Off-Ramps (Threshold TRAF-5)

Impacts to freeway off-ramps would be less than significant. Thus, no mitigation measures are necessary.

(4) Public Transit and Alternative Transportation (Threshold TRAF-6)

Impacts to public transit and alternative transportation would be less than significant. Thus, no mitigation measures are necessary.

(5) Access and Circulation (Threshold TRAF-7)

Impacts regarding vehicular access and circulation would be less than significant. Thus, no mitigation measures are necessary.

(6) Parking Supply (Threshold TRAF-8)

Impacts regarding parking supply would be less than significant. Thus, no mitigation measures are necessary.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

(1) Construction Traffic, Access, Transit and Parking (Threshold TRAF-1)

Despite the incorporation of Project Design Features PDF-TRAF-1, Construction Traffic Management Plan, construction traffic impacts from construction worker vehicles and truck trips, for both Project-level and cumulative conditions, are conservatively concluded to be significant and unavoidable.

With implementation of PDF-TRAF-1 and PDF-TRAF-2, impacts related to construction-related vehicle access, pedestrian and bicycle access and safety, public transit service, and construction parking would be less than significant.

b. Operation

(1) Intersections Levels of Service (Threshold TRAF-2)

Table 4.L-22, *Existing Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis*, and **Table 4.L-23**, *Cumulative (2030) Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis*, summarize mitigation measures at intersections with potentially significant impacts using Los Angeles County's impact criteria at intersections located within unincorporated Los Angeles County. **Table 4.L-24**, *Existing Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis*, and **Table 4.L-25**, *Existing Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis*, summarize mitigation measures at intersections with potentially significant impacts located in incorporated cities using the impact criteria from the respective city. Below is a summary of the intersection impacts after implementation of the mitigation measures.

Normandie Avenue & Torrance Boulevard (Intersection #1) - The Project would result in a significant impact at this intersection in the Interim Existing plus 2023 Project plus Cumulative (2023) and Existing plus 2030 Project plus Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as the addition of separate right- turn lanes at the eastbound or westbound approaches, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Torrance Boulevard (Intersection #2) - The Project would result in a significant impact at this intersection in the Existing plus 2023 Project plus Cumulative and Existing plus 2030 Project plus Cumulative Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as additional northbound or southbound through lanes, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Normandie Avenue & Carson Street (Intersection #4) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Berendo Avenue & Carson Street (Intersection #6) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Medical Center Drive & Carson Street (Intersection #7) - The Project would result in a significant impact at this intersection in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Carson Street (Intersection #8) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & Carson Street (Intersection #9) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios. The implementation of this mitigation measure would reduce the Project-related impact to a less than significant level and would reduce the cumulative impact to a less than significant level in the AM peak hour. The impact during the PM peak hour would also be reduced, but not below a significant level. This improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, and because the improvement would not fully mitigate the identified impacts in all scenarios, this impact would be considered significant and unavoidable.

Vermont Avenue & 220th Street (Intersection #14) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound approaches to provide a dedicated left turn-lane but were determined to conflict with the Los Angeles County Transit Oriented Districts Access Study. The Study calls for curb extensions at all four crossings to shorten the pedestrian crossing distance. The intersection approaches do not have sufficient space to accommodate both curb extensions and additional lanes. Thus, this impact would remain significant and unavoidable.

220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - As shown in Tables 4.L-24 and 4.L-25, the implementation of Mitigation Measure TRAF-2 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Normandie Avenue & 223rd Street (Intersection #17) - The Project would result in a significant impact at this intersection in the Cumulative (2030) Existing plus 2030 Project and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & 223rd Street (Intersection #19) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & 223rd Street (Intersection #20) - As shown in Tables 4.L-22 and 4.L-23, the implementation of Mitigation Measure TRAF-3 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Overall, the Project would result in twelve (12) significant and unavoidable impacts to study area intersections, even though Tables 4.L-22 through 4.L-25 show that proposed improvements, if implemented, would reduce impacts at these intersections, because implementation of the proposed improvements is not entirely within the control of the lead agency.

(2) CMP Transportation System (Threshold TRAF-3)

Not applicable. Impacts to regional CMP transportation systems would be less than significant.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections (Threshold TRAF-4)

Mitigation Measure TRAF-4 requires that the developer make a fair-share contribution to address potentially significant impacts on freeway mainline segments, intersections under Caltrans jurisdiction, and off-ramps. Caltrans generally considers fair share contributions to constitute full mitigation of a significant impact. In addition, under CEQA Guidelines Section 15130(a)(3) fair share contribution could be considered adequate mitigation for cumulative traffic impacts. Options for addressing the impacts were identified, but because there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.

(b) Freeway Off-Ramps (Threshold TRAF-5)

Not applicable. Impacts to freeway off-ramps would be less than significant.

(4) Public Transit and Alternative Transportation (Threshold TRAF-6)

Not applicable. Impacts to public transit would be less than significant.

(5) Access and Circulation (Threshold TRAF-7)

Not applicable. Impacts regarding vehicular access and circulation would be less than significant.

(6) Parking Supply (Threshold TRAF-8)

Not applicable. Impacts regarding parking supply would be less than significant.

Table 4.L-22

Existing Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	LOS	Existing+Project V/C or Delay	LOS	Total Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	LOS	Project Increase In V/C	Significant Impacts
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.904	E	0.925	E	0.021	YES	**No Feasible Mitigation**			
					PM	0.93	E	0.962	E	0.032	YES				
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.642	B	0.067	NO	**No Feasible Mitigation**			
					PM	0.569	A	0.708	C	0.139	YES				
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.628	B	0.717	C	0.089	YES	**No Feasible Mitigation**			
					PM	0.611	B	0.620	B	0.009	NO				
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.946	E	0.041	YES	0.745	C	-0.069	NO
					PM	0.917	E	1.010	F	0.093	YES	0.862	F	0.013	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.814	D	0.907	E	0.093	YES	**No Feasible Mitigation**			
					PM	0.849	D	0.916	E	0.067	YES				
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.645	B	0.708	C	0.063	YES	**No Feasible Mitigation**			
					PM	0.696	B	0.806	D	0.11	YES				
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.807	D	0.828	D	0.021	YES	0.713	C	-0.042	NO
					PM	0.822	D	0.834	D	0.012	NO	0.779	E	-0.064	NO

Source: Fehr & Peers, 2016

Table 4.L-23

Cumulative (2030) Plus Project with Mitigation for Unincorporated Los Angeles County Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative (2030) V/C or Delay	LOS	Cumulative (2030)+Project V/C or Delay	LOS	Project Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	LOS	Project Increase In V/C	Significant Impacts
1	Normandie Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.962	E	0.966	E	0.031	YES				
					PM	0.993	E	1.000	E	0.064	YES	**No Feasible Mitigation**			
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.968	E	0.972	E	0.045	YES				
					PM	0.895	D	0.900	D	0.020	YES	**No Feasible Mitigation**			
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.946	E	0.967	E	0.063	YES				
					PM	1.007	F	1.038	F	0.108	YES	**No Feasible Mitigation**			
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.609	B	0.675	B	0.100	NO				
					PM	0.636	B	0.747	C	0.178	YES	**No Feasible Mitigation**			
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.661	B	0.751	C	0.123	YES				
					PM	0.678	B	0.722	C	0.111	YES	**No Feasible Mitigation**			
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.939	E	0.982	E	0.077	YES	0.780	C	-0.034	NO
					PM	0.982	E	1.075	F	0.158	YES	0.915	E	0.066	YES
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.848	D	0.941	E	0.127	YES				
					PM	0.906	E	0.974	E	0.125	YES	**No Feasible Mitigation**			
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.647	B	0.717	C	0.072	YES				
					PM	0.703	C	0.813	D	0.117	YES	**No Feasible Mitigation**			
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.811	D	0.833	D	0.026	YES	0.719	C	-0.036	NO
					PM	0.830	D	0.844	D	0.022	YES	0.797	C	-0.046	NO

Source: Fehr & Peers, 2016

Table 4.L-24

Existing Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Existing V/C or Delay	LOS	Existing+Project V/C or Delay	LOS	Project Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	LOS	Project Increase In V/C	Significant Impacts
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.785	C	0.022	NO				
					PM	0.837	D	0.872	D	0.035	YES	**No Feasible Mitigation**			
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.942	E	0.029	YES	0.907	E	-0.006	NO
					PM	0.886	D	1.000	E	0.114	YES	0.881	D	-0.005	NO

Source: Fehr & Peers, 2016

Table 4.L-25

Cumulative (2030) Plus Project with Mitigation for Incorporated Cities Intersection Level of Service Analysis

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative (2030) V/C or Delay	Cumulative (2030) LOS	Cumulative (2030)+Project V/C or Delay	Cumulative (2030)+Project LOS	Project Increase In V/C	Significant Impacts	C+P plus Mitigation V/C or Delay	C+P plus Mitigation LOS	Project Increase In V/C	Significant Impacts
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.910	E	0.933	E	0.023	YES	**No Feasible Mitigation**			
					PM	1.037	F	1.073	F	0.036	YES				
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	1.024	F	1.054	F	0.030	YES	1.017	F	-0.007	NO
					PM	1.006	F	1.121	F	0.115	YES	0.998	E	-0.008	NO

Source: Fehr & Peers, 2016

4. ENVIRONMENTAL IMPACT ANALYSIS
M. UTILITIES
1. WATER SUPPLY

1. INTRODUCTION

This section identifies the water purveyor responsible for providing water to the Project, and analyzes whether this water purveyor has adequate water supplies to serve the proposed Project. This section also describes the existing and proposed water distribution infrastructure in the Project area, and evaluates whether this infrastructure has sufficient capacity to serve the proposed Project. This section is based on several information sources, including a Project-specific Water Supply Assessment (WSA) provided by the California Water Service Company (Cal Water), the water purveyor serving the Medical Center Campus, which is included in Appendix J of this Draft EIR, and Cal Water's Rancho Dominguez District 2010 Urban Water Management Plan (UWMP).

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Water Supply

(a) Existing Water Sources and Supply[1]

The Medical Center Campus is located within Cal Water's Rancho Dominguez District service area, also referred to as the "Dominguez system". The Dominguez system is supplied by the following water sources:

1. Imported water purchased from Metropolitan Water District (MWD) of Southern California through the West Basin Municipal Water District (WBMWD).

2. Groundwater pumped from two adjudicated groundwater basins: the West Coast Basin and the Central Basin. Groundwater is extracted from both basins using 10 wells (8 active and 2 inactive).

3. Cal Water purchases treated desalted brackish groundwater produced in the C. Marvin Brewer Desalter owned by WBMWD in their West Basin Water Recycling Plant located in El Segundo.

In 2015, the Dominguez system used 26,886 acre-feet (AF)[2] of purchased water and 4,405 AF of groundwater pumped from Cal Water wells for a total of 31,291 AF. Hence, groundwater supplied 14 percent of total annual demand.

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[1] *Water supply information provided in this section is contained in the Water Supply Assessment prepared for the Master Plan Project by Yarne & Associates, Inc. on behalf of Cal Water. Yarne & Associates, Inc., "Harbor-UCLA Medical Center Campus SB610 Water Supply Assessment" prepared for California Water Service Company 2632 West 237th Street Torrance, California 90505. April 21, 2016. Included in Appendix J of this Draft EIR.*

[2] *One acre-foot of water is equal to approximately 328,000 gallons.*

Since 1926 (a period of 90 years), Cal Water has continuously supplied water to meet Dominguez system demands during normal, dry and multiple dry year periods using sources and water conservation measures as described in greater detail below. Actual and projected Dominguez system water supply sources and quantities are summarized below in **Table 4.M.1-1**, *Dominguez System Actual and Projected Water Supplies (AFY)*. Cal Water operates its potable water distribution system so that demand not met by groundwater sources is supplied through its interconnections with the WBMWD transmission system. Cal Water has a capital improvement program to maximize use of its adjudicated groundwater rights by constructing new wells and installing treatment on wells with non-compliant water quality. The plan is to provide sufficient well capacity to fully utilize its annual allocation. Currently, Cal Water leases a portion of its groundwater rights using short-term transfer agreements. The amount of recycled water listed in Table 4.M.1-1 is the projected demand from this source and does not include estimated unaccounted for losses in the recycled water distribution system. Purchased water would be used to provide the remaining supply.

Table 4.M.1-1

Dominguez System Actual and Projected Water Supplies (AFY)

Water Supply Sources	2010 Actual	2015	2020	2025	2030	2035	2040
West Basin Municipal Water District – Purchased Water	27,247	26,886	13,987	14,378	14,917	15,264	15,564
Cal Water Groundwater Wells	8,575	4,405	16,897	16,897	16,897	16,897	16,897
Recycled Water	4,515	5,089	6,776	7,481	8,260	9,120	10,069
Total	40,337	36,380	37,660	38,756	40,074	41,281	42,530

Source: California Water Service Company, 2016

(i) Purchased Imported Water

Purchased potable water is imported and supplied by MWD to WBMWD. Purchased water will continue to be the main supply source through 2019 per the UWMP. In 2020, groundwater is planned to provide 54.7 percent of potable water and in year 2040, 52 percent of potable supply.

Imported water from MWD is delivered through four interconnection feeders (Palos Verdes Feeder, Victoria Feeder, Long Beach Lateral and Extension and the Sepulveda Feeder) to WBMWD and through seven WBMWD service connections to the Dominguez system. The total rated capacity of the seven service connections is 72,000 gallons per minute (gpm). If operated at full capacity, these connections are capable of delivering up to 103.68 million gallons per day (mgd) or approximately 116,140 acre-feet per year (AFY), which is a flow rate higher than the distribution system could likely accommodate.

Cal Water has a supply purchase agreement with WBMWD. Water purchased by Cal Water and supplied to the Dominguez system comes from either the Colorado River Aqueduct (CRA), which is owned by MWD, or through the California Aqueduct, a facility of the State Water Project (SWP), which is owned and operated by the California Department of Water Resources (DWR).

MWD classifications of service and rate structure have changed in recent years and further changes are anticipated. Key to these changes is a purchase agreement for imported water between WBMWD and MWD. This agreement became effective January 1, 2003, had an initial term of five years, and establishes requirements for water sales within MWD's service area. The agreement sets a Base Allocation for each Purchaser, which is essentially their share of the supply MWD has made available to WBMWD. The Base Allocation is determined on that Purchaser's five-year average non-surplus purchases during fiscal years ending 1997 through 2001. Over the term of the agreement, the Purchaser commits to purchase at least 60 percent of the Base Allocation times five, which is known as the Purchase Commitment. If a Purchaser does not purchase the full Purchase Commitment over the term of the agreement, then they must pay for the balance at the current Tier 1 Supply Rate.

A two-tier rate and annual allocation is another aspect of this agreement. The agreement sets a Tier 1 Annual Maximum at 90 percent of the Base Allocation. All water purchased in any year in an amount that is equal to or less than the Tier 1 Maximum must be purchased at the current Tier 1 Rate. Any amount of water purchased in excess of the Tier 1 Annual Maximum must be at the Tier 2 Rate. In 2013, the Tier 1 rate for water purchased from WBMWD was $1,089/AF and the Tier 2 rate was $1,239/AF.

In the Imported Water Purchase Agreement between Cal Water and WBMWD, the Base Allocation, Tier Allocations, and Purchase Commitment are established as a combined amount for all four Cal Water systems served (Palos Verdes, Hermosa-Redondo, Dominguez and Hawthorne). The Dominguez system shares in the combined amount with the other three service areas. The agreement became initially effective on January 1, 2003. There have been several subsequent amendments, with No. 4 dated January 1, 2008, being the most recent. It eliminated Cal Water's Base Allocation, set the Tier 1 Annual Maximum to 70,000 acre-feet and the Purchase Commitment is 210,000 acre-feet. Cal Water has developed an allocation that distributes the Tier 1 Annual Maximum to each of its four districts, so that if the total Tier 1 Maximum is exceeded the applicable Tier 2 charges can be assessed to the appropriate district. Allocations among the four districts are as follows: Dominguez 22,400 AF, Hawthorne 4,900 AF, Hermosa-Redondo 16,800 AF, and Palos Verdes 25,900.

In-Lieu Seasonal Storage is an economic incentive program designed to encourage purveyors to shift groundwater production from winter to summer to reduce peak summer demands. Seasonal Storage Service is a classification for water that is available for delivery by MWD during the October through April period during years of adequate supply. Monthly certification is required to receive this reduced-price Seasonal Storage Service. To qualify for In-Lieu Seasonal Storage service water rates, a purveyor must reduce demand for supplemental water from MWD in the summer months (May to September) and shift production of groundwater from winter to summer. The baseline production ratio between local groundwater supply and total demand verifies that this shift has been accomplished. In-Lieu Seasonal Storage groundwater not pumped is left in the ground to augment groundwater replenishment. This unused groundwater results in a rebate or compensation from the Water Replenishment District (WRD) for the amount not pumped.

This program benefits MWD by reducing the summer peak flows that push MWD's treatment facilities and distribution system to capacity limits, and enables MWD to maximize water importation during winter when surplus flows are abundant in the areas of origin. Changes are anticipated in this conjunctive use program in the future. Cal Water's participation in this conjunctive use program in the future will depend on the makeup of the economic incentives provided by these changes.

(ii) Groundwater

In 1965 the Central Basin was adjudicated, and in 1961 the West Coast Basin was adjudicated, with the Department of Water Resources as Watermaster. The adjudication orders are attached to the Dominguez District 2010 UWMP as Appendices J and K for each basin, respectively. The DWR Annual Summary of Watermaster Service reports on groundwater status in each of the basins. This summary includes historical fluctuation of water level elevation in wells throughout the basin. These references indicate that, since the reduction in pumping began in 1954 and the adjudication was implemented in 1961, groundwater levels in the West Coast Basin have risen some 20 to 60 feet, depending on location. However, many groundwater elevations in the basin remain below sea level, requiring maintenance of seawater intrusion barriers.

The West Coast Basin is a pressurized aquifer groundwater basin with three primary aquifers: the 200-foot Sands, the Silverado Aquifer, and the Lower San Pedro Aquifer. These aquifers have continuity with the Pacific Ocean in Santa Monica Bay. Overdraft of the basin was caused by excessive pumping due to population growth and rapid industrialization of the Los Angeles Coastal Plain beginning in the 1930s. This overdraft caused lowering of the water pressure of the aquifers, which increased pumping cost and resulted in seawater intrusion. The adjudication of the West Coast Basin began in 1945 when Cal Water, along with the City if Torrance and the Palos Verdes Water Company, filed a lawsuit in Superior Court, Los Angeles County, to quiet title to the groundwater rights and control pumping in the basin. As part of the effort to resolve the overdraft condition, the WBMWD was formed in 1947 to distribute supplemental water to the major water purveyors imported into the region by the MWD. In 1955 when pumpers realized the severity of the overdraft, groundwater pumping was limited under an interim agreement. In 1961, the Court rescinded the interim agreement and signed the West Coast Basin Judgment.

The Dominguez Water Company was identified as a party to the judgment and granted water rights. Now Cal Water, as a result of the merger with Dominguez, owns 10,417.45 acre-feet of adjudicated rights in the West Coast Basin, or 16.15 percent of the total basin annual adjudicated rights of 64,486.25 acre-feet. This amount is in addition to the 4,070 acre-feet held by Cal Water's Hermosa- Redondo District. As a result of the reduction in pumping ordered by the adjudication and increased recharge via the injection wells of the seawater intrusion barrier, in-lieu replenishment and improved underflow from Central Basin, the water levels in the West Coast Basin have slowly recovered to near 1940 levels.

The adjudication of the Central Basin began not out of litigation as in the West Coast Basin, but out of the collective concern expressed by the major pumpers regarding the impacts that reduced groundwater quantity and quality would have on the future of their communities. The Central Basin Municipal Water District was formed in 1952 to distribute supplemental water to the major water purveyors. In 1954 it was annexed to the MWD, so that access to the imported water supplies was available to the region.

The WRD was created in 1959, largely out of cooperation between the West Coast Basin Water Association and the Central Basin Water Association, with the directive to facilitate artificial replenishment of the two basins as a means of eliminating the overdraft and halting seawater intrusion. To quiet the title to and limit production of the groundwater in Central Basin, the WRD filed a lawsuit in Superior Court, Los Angeles, in 1962 against more than 700 parties. Later that year after a vast majority of the pumpers approved of the approach, the Court adopted an interim agreement to limit the production from the basin. In 1965, following extensive meetings by

the parties to work out a settlement that was supported by pumpers representing over 75 percent of the basins anticipated water rights, the court approved the stipulated judgment for the Central Basin.

This judgment established an adjudicated water right for each party, but limited the allowable pumping allocation (APA) to 80 percent of the water right, which equals 217,367 acre-feet annually. The Dominguez Water Company was identified as a party to the judgment and granted water rights. As a result of the merger with Dominguez, Cal Water now owns these 8,100 acre-feet of adjudicated right with the associated 6,480 AFY of APA in the Central Basin. This amount is in addition to the 11,774 acre-feet held by Cal Water's East Los Angeles District. **Table 4.M.1-2**, *Cal Water Groundwater Pumping Rights*, below, summarizes Cal Water's Dominguez system allowable pumping allocation for the two basins.

Table 4.M.1-2

Cal Water Groundwater Pumping Rights

Basin	Pumping Rights AFY
Central Basin	6,480.00
West Coast Basin	10,417.45
Total	16,897.45

Source: California Water Service Company, 2016

The principle mechanisms for recharge in the West Coast Basin are injection of water into the seawater intrusion barriers, in-lieu replenishment, and inflow to the West Coast Basin from the Central Basin. The Central Basin is recharged through percolation of water applied to surface spreading ponds in the Montebello Forebay, in-lieu replenishment, and inflow to the Central Basin from the San Gabriel Valley.

The Los Angeles County Department of Public Works owns and operates all groundwater recharge facilities as a county-funded activity through a longstanding inter-agency agreement. As a result, costs associated with the capture and recharge of storm water runoff are not directly accounted for in the cost of water replenishment. All other water used for replenishing the groundwater of the Central and West Coast Basins is funded by the WRD through the Replenishment Assessment. Additionally, the WRD manages various groundwater quality cleanup programs. To finance its designated responsibilities, the WRD levies a Replenishment Assessment on every acre-foot of groundwater produced in the Central and West Coast Basins.

Cal Water's management plan for Dominguez District water supplies includes participating in existing regional conjunctive-use programs and making use of economic incentives and the lease market to the fullest extent possible.

Basin Boundaries and Hydrology

The West Coast Subbasin is bounded on the north by the Ballona Escarpment, an abandoned erosional channel from the Los Angeles River. On the east it is bounded by the Newport-Inglewood fault zone and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills. The surface of the sub-basin is crossed in the south by the Los Angeles River through the Dominguez Gap, and the San Gabriel River through the Alamitos Gap, both of which then flow into San Pedro Bay.

The Central Subbasin occupies a large portion of the southeastern part of the Coastal Plain of Los Angeles Groundwater Basin. This subbasin is bounded on the north by a surface divide called the La Brea High, and on the northeast and east by emergent less permeable Tertiary rocks of the Elysian, Repetto, Merced and Puente Hills. The southeast boundary between Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift. The Los Angeles and San Gabriel Rivers drain inland basins and pass across the surface of the Central Basin on their way to the Pacific Ocean Bay.

A detailed description of the basin is given in the California's Ground Water Bulletin 118, which is included as Appendix D in the Dominguez District 2010 UWMP. The Urban Water Management Plans for West Coast Basin and Central Basin are included in Appendix H and I, respectively, of the UWMP.

Groundwater Management Plan

As the regional groundwater management agency for two of the most utilized groundwater basins in the state of California, the WRD plays an integral role in overall water resource management in southern Los Angeles County. The WRD manages groundwater for nearly four million residents in 43 cities of southern Los Angeles County. The 420 square mile service area uses about 250,000 AF of groundwater per year, which equates to nearly 40 percent of the total demand for water. The WRD ensures that a reliable supply of high-quality groundwater is available through its clean water projects, water supply programs, and effective management principles. A copy of WRD's Strategic Plan is included as Appendix J in the Dominguez District 2010 UWMP.

Dominguez System Wells (Groundwater) Summary

For 2012, total production capacity of the 7 active wells in the Dominguez system was approximately 6,650 gpm, which if operated continuously would produce 10,735 AFY. Actual well production in 2012 was 7,991 AF or approximately 74.4 percent of production capacity. In 2015, well production decreased to 4,405 AF. However, for 2020 Cal Water projects annual well production of 16,897 AF (its allowable pumping allocation from the West and Central Basins) and the same amount through at least 2040. Three wells (219-02, 275-01, and 294-01) will have treatment facilities installed and become operational between 2016 and 2018, which will add 2,600 gpm for a total production of 14,932 AFY. Cal Water temporarily has lost some well production capacity due to localized groundwater quality issues and reduced well efficiencies. In 2009, well production capacity was approximately 10,700 AFY. If the wells were operated at 90 percent utilization, this would equal a production of 9,630 AFY out of its allowable pumping right of 16,987 AF. In 2000, Cal Water pumped 14,737 AF or 87 percent of its adjudicated rights.

Cal Water has additional well projects in its current capital budget program that it intends to bring on line before the year 2020 in order to bring production capacity to it allowable pumping allocation. In addition to capital improvement projects for adding production capacity, Cal Water has projects for constructing new wells to replace older wells that are declining in output or are non-functional. **Table 4.M.1-3**, *Dominguez System Existing Production Wells Summary*, below, provides a summary of existing well pumping rates for 2015 and projected well pumping rates for existing wells for 2020 for the Dominguez system.

Table 4.M.1-3

Dominguez System Existing Production Wells Summary

Well Number	2015 Discharge Rate (GPM)	Estimated 2020 Discharge Rate (GPM)
215-01	420	400
219-02	Treatment to be added – online 2017	600
203-01	Destroyed	0
277-01	670	500
279-01	750	700
294-01	Treatment to be added – online 2016	1,000
298-01	Well rehabilitation – online 2016	1,300
275-01	Treatment to be added – online 2016	700
272-02	Treatment to be added – online 2017	500
290-01	700	700
297-01	650	600
Total	**3,190**	**7,000**

Source: California Water Service Company, 2016

Cal Water is implementing the recommendations of its 2009 WSFMP which include in addition to continued maintenance and improvements of existing wells construction of five to seven new wells to achieve full use of Cal Water's its groundwater rights and to replace wells at the end of their useful life. In 2016, Cal Water plans to replace station 215-02, which has been demolished. By 2020, it recommends replacement of station 290-01 (700 gpm). If the average production rate of a new well is 1,200 gpm, five new wells would have a combined production rate of 6,000 gpm. Total well production capacity in 2020, assuming no other changes in the other wells listed in Table 4.M.1-3, would be 7,000 gpm plus 6,000 gpm, for a total of 13,000 gpm. If these wells operate at a rate of 90 percent of production capacity (allows for downtime for maintenance), they could provide

a groundwater supply of 18,888 AFY. Cal Water's allowable pumping groundwater right is 16,987AFY. In summary, Cal Water's groundwater pumping right as a percentage of available production would be 90 percent (16,987 AFY/18,888 AFY). Cal Water provides ongoing maintenance, well rehabilitation and engineering support to maintain production in all of its active wells including adding treatment facilities for wells with water quality issues.

(iii) Recycled Water

Although Los Angeles County Sanitation District's (LACSD) Joint Water Pollution Control Plant (JWPCP) provides wastewater collection and treatment services for the Dominguez service area, recycled water comes from WBMWD's West Basin Water Recycling Facility (WBWRF). The source of water to that facility is secondary effluent from the City of Los Angeles' Hyperion Wastewater Treatment Plant, which provides secondary treatment using the activated sludge process. Most of the Hyperion treated effluent is disposed of through an ocean outfall. Approximately six percent of treated effluent goes to the WBWRF in El Segundo where it undergoes chemical clarification, recarbonation, microfiltration, and chlorination. The WBWRF produces 42,000 AFY (37.5 mgd) of recycled water and has a maximum capacity of 67,210 AFY (60 mgd).

WBMWD has one of the largest recycled water programs in the United States. WBMWD has identified over 105 economically feasible recycled water users. Fully implemented, the recycling program has the potential to use over 67,210 AFY of recycled water. In the Dominguez system, Cal Water began purchasing recycled water from WBMWD in 2000 for industrial process waters and landscape irrigation. WBMWD and Cal Water's plan is to increase use of recycled water with as new customers as WBMWD's distribution system is expanded. This will result in less potable water use where that water is being used for those purposes.

Recycled water from the WBWRF is used for groundwater replenishment through more than 100 injection wells. In addition to serving Cal Water the WBWRF provides recycled water to more than 140 sites in Manhattan Beach, Torrance, Hermosa Beach, Carson, and Inglewood. Its biggest customers are the Chevron, Mobil and BP oil refineries. It should be noted that Cal Water operates and maintains the recycled water distribution system under contract to WBMWD. WBMWD is responsible for:

1. Determining the technical and economic feasibility of supplying recycled water to the Dominguez service area
2. Encouraging the use of and optimizing the use of recycled water in the Dominguez service area
3. Extension of recycled water lines within the Dominguez service area

Cal Water actively supports use of recycled water by its customers and offers recycled water at a reduced cost. WBMWD has identified over 105 feasible recycled water users with a combined estimated average annual demand of 19,100 AFY. In 2015, Cal Water supplied 5,089 AF of WBMWD recycled water to 11 customers in the Dominguez system. Examples of recycled customers include the BP/ARCO refinery, the Home Depot sports complex with numerous soccer fields, and the Cal State University Dominguez Hills campus.

The Harbor-UCLA Medical Center Campus is not close to an existing WBMWD recycled water transmission main. WBWMD would have to construct a recycled transmission pipeline running west from an existing line in Carson for several miles. Hence, the WSA takes the position that in the next 5 years at least, all water demands for the project will be met by potable supplies.

The WBMWD Water Recycling Master Plan identified potential customers in the Dominguez service area. Currently there are eleven customers in the Dominguez system that use recycled water. The WBMWD plan ambitiously projected an increase in commercial, industrial and irrigation customers to 158 services by 2007 and use of 10,800 AFY. WBMWD's recycling plan includes several projects to install pipelines capable of delivering recycled water throughout the Harbor/South Bay area.

WBMWD believes there is a significant growth potential for recycled water; hence, the projected increase in recycled water use from 5,080 AFY in 2015 to 10,069 AFY in 2014 or an increase of approximately 5,000 AFY in 25 years (200 AFY per year increase) can be considered to be conservative when compared to the projections in WBMWD's Water Recycling Master Plan. Given four continuous years of severe drought in California (2011 - 2014) and the emphasis on developing local supply sources by MWD, WBMWD's strong development plan for recycled water use, projected recycled water use growth are conservative since in the future, WBMWD plans to further extend its pipe delivery system for recycled water in the Harbor/South Bay area.

Estimates of increased use of recycled water in WBMWD's Water Recycling Master Plan (WRMP) are quite high when compared to what has actually occurred in the Dominguez system. The WRMP assumes several large water users will switch to recycled water rather pump groundwater for which they hold water rights at a cost nearly double the cost of groundwater. The WRMP anticipates large uses of recycled water by several industrial customers for processes for which use of recycled water has not been demonstrated. Hence, for the Dominguez system, Cal Water uses a lower growth projection than WBMWD. **Table 4.M.1-4**, *Normal Hydrologic Year Supply and Demand Comparison (AFY)*, below, summarizes Cal Water's projected recycled water supply in the Dominguez system through 2040. Cal Water assumes that 80 percent of recycled water supply will be for industrial use and 20 percent for landscape irrigation.

Table 4.M.1-4

Normal Hydrologic Year Supply and Demand Comparison (AFY)

	2015	2020	2025	2030	2035	2040
Purchased water	26,886	13,987	14,378	14,917	15,264	15,564
Groundwater	4,405	16,897	16,897	16,897	16,897	16,897
Recycled water	5,089	6,776	7,481	8,260	9,120	10,069
Supply totals	36,380	37,660	38,756	40,074	41,281	42,530
Demand totals	36,380	37,660	38,756	40,074	41,281	42,530
Difference	0	0	0	0	0	0

Source: California Water Service Company, 2016

(iv) Desalinated Water

Desalted Brackish Groundwater

Seawater intrusion into the groundwater of the West Coast Basin has been a problem since the 1930s. Two seawater intrusion barriers, the West Coast Basin Barrier and the Dominguez Gap Barrier, have been constructed and put into operation to stop salt water intrusion. The Los Angeles County Department of Public Works is responsible for maintenance of these barriers and the WRD provides freshwater that is injected into these barriers. A large amount of brackish water still lies inland of the saltwater barriers. It is being removed by extraction wells and treated at the C. Marvin Brewer Desalter, which is a reverse osmosis treatment plant that started operating in 1993. Dominguez Water Corporation, with the support of the WBMWD, WRD, MWD, and the US Bureau of Reclamation established the desalter project. Its costs of operation are reduced through a MWD incentive program so that the unit cost of desalinated brackish water is slightly less than non-interruptible imported freshwater from MWD. Since the merger of Cal Water and Dominguez Water Corporation in 2000, Cal Water has operated the desalter project.

Desalinated Ocean Water

In 2014, WBMWD completed an ocean water desalination demonstration project at the L.A. Conservation Corps' SEA Lab facility in Redondo Beach for the purpose of developing and collecting data for planning, permitting, design, construction, and operation of a full-scale desalination facility. The demonstration plant used full-scale equipment to assess operating factors, evaluate alternative processes and assess water quality and energy efficiency. Based on the results of the study, WBMWD determined that building a full-scale desalination plant is feasible.

1. WBMWD intends to build a 20 mgd desalination plant in El Segundo (expandable to 60 mgd) because that location offers many advantages and has none of the significant issues associated with the demonstration plant site in Redondo Beach. Because of the extensive permitting and approval requirements, conducting the necessary environmental and scientific field studies, preparing the necessary draft and final documents, obtaining funding, designing, constructing, testing and commissioning of all new facilities could take at least 10 years to complete.

2. WBMWD is interested in discussing with Cal Water its interest in participating in its El Segundo desalination plant and what that might entail in terms of supply, costs and other factors. Cal Water is considering this option.

3. The research completed by WBMWD at the Redondo Beach demonstration plant could provide useful information to Cal Water in locating possible treatment plant sites and in developing a preliminary feasibility assessment should Cal Water elect to pursue its own desalination project. An in-depth technical, environmental, permitting and cost analysis would be required to provide the information needed to decide whether or not it was feasible for Cal Water to move forward with its own desalination project.

Transfer or Exchange Agreements

Both the West Coast Basin and Central Basin judgments allow for transfer of groundwater rights through sale or lease agreements between parties and for the carryover of unused rights in an amount up to 20 percent of the

groundwater rights held by a party. DWR is the designated Watermaster for both the West Coast Basin and Central Basin Adjudications. In that capacity, DWR accounts for all groundwater production in the basin, and annually reports on groundwater production and related groundwater-use transactions. The parties must file monthly production reports and notify the Watermaster regarding all leases or sales of rights.

The lease or purchase of additional adjudicated water rights could be used to increase supply reliability and availability. Obtaining additional adjudicated rights would further increase the savings available to the system under MWD's seasonal service program. Hence, the Dominguez system's program for increasing reliable groundwater production capacity of its wells to fully utilize all of its existing adjudicated rights and those of other agencies when opportunities become available. In the past nine years, Cal Water leased a portion of its adjudicated rights in both basins on a short-term basis to other pumpers that had production capacity and had the need for more water. As Cal Water increases its well production capacity, it will not renew these leases. Cal Water has had several short- term leases with local municipalities and private companies to use their available excess groundwater allocations for supply and will evaluate negotiating new leases as Dominguez system well capacity increases and full use of Cal Water's allowable pumping allocation is achieved.

(b) Future Water Supply

Cal Water's plan for the Dominguez system and its three neighboring districts is to continuously provide adequate reliable supplies through facilities that meet peak demand requirements and have sufficient reserve capacity for fire protection. Cal Water recognizes that water supply planning is an ongoing process that requires regular reviews of assumptions and conditions.

The reliability of MWD imported water supplies has been affected by a number of factors in recent years, so MWD has implemented several programs to improve supply reliability:

1. Financial incentives for development of local supplies
2. Use of imported supplies on a seasonal basis and in a manner that maximizes the importation of supplies into Southern California
3. Storage for surplus imported supplies for future use
4. Restore use of local groundwater that have been contaminated

Cal Water will evaluate prospective additional supply projects and regional supply conditions to include:

1. Status of West Coast and Central Basin groundwater basin storage, availability of groundwater and utilization of adjudicated water rights.
2. Transfer Agreements with other utilities that hold adjudicated groundwater rights in the two basins and have surplus water rights available.
3. Status and maintenance of seawater intrusion barriers managed by the Los Angeles County Department of Public Works.

4. Increased participation in WBMWD's water recycling program in the Dominguez and adjacent systems.

5. Possible participation in WBMWD's desalination treatment project.

Cal Water coordinates its supply planning activities with other purveyors who are served by WBMWD. Cal Water participated in the development of the WBMWD Water Shortage Contingency Plan. Proposed Programs in this plan include:

1. West Coast Basin Judgment Work Group - Representatives of the West Coast Basin Water Association are developing possible amendments to provide more flexible operations during drought, expansion of storage and conjunctive operation of the basin, and innovative water management practices.

2. Water Supply and Drought Management Planning.

3. Implementation of the Best Management Practices through a Memorandum of Understanding.

4. West Coast Basin Reclamation Program.

5. West Coast Basin Saline Plume Mitigation Planning.

While Cal Water recognizes that MWD and WBMWD are committed to providing reliable and affordable imported water supplies, it also recognizes that as water demand increases the potential for water shortages does also. MWD's and WBMWD's objective is to provide 100 percent supply reliability over the next twenty years to meet all non-discounted, non-interruptible demand in the region. MWD initiatives to ensure this reliability include the Integrated Resource Plan (IRP), the Water Surplus and Drought Management Plan (WS&DMP) and the Local Resource Investments program.

As indicated previously, Cal Water is committed to implementing new programs and projects in increasing water conservation, expanding use recycled water and maximizing use of its groundwater rights to decrease reliability on MWD supplied water.

(c) Supply Adequacy and Reliability

This section combines and compares previously presented information on projected demand and supplies for the Dominguez system to address the question of whether Dominguez system supplies are adequate and reliable for the next 20 years for normal hydrologic conditions, one dry year and a multiple dry year period.

(i) Normal Water Year

Groundwater supply is limited to Cal Water's adjusted pumping allocation (APA) and by the capacity of wells to pump water. As explained previously, Cal Water is installing new wells to increase pumping capacity and adding wellhead treatment to existing wells with water quality issues. Cal Water plans to maximize use of its APA by 2020. Recycled water supply is matched to expected demand from this source. If some industrial customers in

the Dominguez system were to convert their process water use to recycled water sooner, this would decrease potable water demand and make existing potable supplies available for future growth.

Cal Water's combined projected purchased water for all four of its districts receiving WBMWD water will be below its Tier I maximum of 70,000 AFY in normal hydrologic years. According to MWD's 2010 Regional Urban Water Management Plan, sufficient supplies of imported water will be available in normal hydrologic years to meet all projected demands. For the WSA analysis as previously noted, normal demand is considered equal to Cal Water's calculated demand minus one standard deviation rather than the SBx7-7 target water demand projection (see discussion of SBx7-7 below under Regulatory Framework Summary). This results in a higher potable demand from 2020 to 2040. Table 4.M.1-4 above compares demand with supply for a normal hydrologic year and demonstrates adequacy of supply to meet demands.

(ii) Single Dry Year

Cal Water projects no decrease in total supply available and that it will meet projected demands. As noted previously, groundwater and recycled water are expected to be available in the quantities projected and are not affected by a dry year. MWD's 2010 Regional Urban Water Management Plan indicates sufficient supplies of imported water will be available in single dry years to meet all projected demands. MWD indicates that the policies in its 2010 Integrated Resources Plan (IRP) update will insure this reliability. Therefore, the supply is projected to be fully meet demand during a single dry year as shown below in **Table 4.M.1-5**, *Single Dry Year Supply and Demand Comparison (AFY)*.

Table 4.M.1-5

Single Dry Year Supply and Demand Comparison (AFY)

	2015	2020	2025	2030	2035	2040
Purchased water	26,886	13,987	14,378	14,917	15,264	15,564
Groundwater	4,405	16,897	16,897	16,897	16,897	16,897
Recycled water	**5,089**	**6,776**	**7,481**	**8,260**	**9,120**	**10,069**
Supply totals	36,380	37,660	38,756	40,074	41,281	42,530
Demand totals	36,380	37,660	38,756	40,074	41,281	42,530
Difference	0	0	0	0	0	0

Source: California Water Service Company, 2016

(iii) Multiple Dry Year Period

Because of adequate existing groundwater basin storage volume and ongoing regional groundwater recharge programs, groundwater supply is considered reliable. Therefore, Cal Water will be able pump up to its annual APA based on need and well production capacity. The quantity of recycled water to be delivered in the Dominguez system during a multiple dry year period is expected to be the same as that delivered during a normal hydrologic year. MWD's 2010 Regional Urban Water Management Plan indicates that sufficient supplies

of imported water will be available during multiple dry years to meet all projected demands. MWD believes that the policies in the 2010 IRP update will insure reliability.

As a conservative approach, a scenario with 10 percent reduction of MWD supply in year 2 and 20 percent in year 3 of a multiple dry year period was developed. **Table 4.M.1-6**, *Multiple Dry Year Period Supply and Demand Comparison: 1st & 2nd Years (AFY)*, below, presents this water supply scenario for an assumed multiple dry year period from 2015 - 2017. Normal year demand is assumed for year 2010. The quantity of MWD imported water delivered to the Dominguez system is assumed to be reduced by 10 percent in 2016 and by 20 percent in 2017. The quantity of groundwater pumped and recycled water increases as shown in Table 4.M.1-6. Groundwater and recycled water supplies are not expected to be affected by a multiple dry year period. Table 4.M.1-6 shows that even if there were cut backs in MWD supply of 10 percent and 20 percent, Dominguez system supplies would be adequate to meet projected normal demand during a multiple dry year period.

Table 4.M.1-6

Multiple Dry Year Period Supply and Demand Comparison: 1st & 2nd Years (AFY)

Water Supply Source	2010 Normal Water Year Water Supply	Multiple Dry Water Year Water Supply		
		2015	2016	2017
Purchased	27,247	26,886	24,522	21,798
Recycled	4,515	5,089	5,426	5,764
Groundwater	8,575	4,405	6,608	9,270
Total Supply	40,337	36,380	36,556	43,354
Demand	40,377	36,380	36,556	36,832

Source: California Water Service Company, 2016

Table 4.M.1-7, *Multiple Dry Year Period: 3rd Year (AFY)*, below, is a comparison of supply to normal demand for the 3rd year in a multiple dry year period where a 20-percent reduction (relative to 2010) in purchased water is assumed. Cal Water will be implementing increased water conservation program measures during the period from 2015 to 2020, which should result in further decreases in per capita water use as previously discussed; however, no additional potable water demand reduction over what is shown in Table 4.M.1-7 is assumed. Recycled water use will be increasing and by 2020, Cal Water expects to be able to pump it full groundwater allocation. Table 4.M.1-7 shows that even with a 20-percent reduction in purchased water, total supplies are more than adequate to meet normal projected demands for the Dominguez system.

During dry years when deliveries from the Colorado River Aqueduct and the SWP are reduced, MWD can draw water from other storage areas established through groundwater banking and transfer agreements made with other agencies. These agreements are further described in MWD's Water Surplus and Drought Management Plan (WSDM Plan).

Table 4.M.1-7

Multiple Dry Year Period: 3rd Year (AFY)

	Supply Source	2010	2015	2020	2025	2030
Third Dry Year	Purchased	27,247	21,798	21,798	21,798	21,798
	Groundwater	8,575	4,405	16,897	16,897	16,897
	Recycled water	4,515	5,089	6,776	7,481	8,260
	Supply Total	40,337	36,380	45,471	46,176	46,955
	Demand Total	40,337	36,380	37,660	38,756	40,074

Source: California Water Service Company, 2016

(2) Water Demand

(a) Dominguez District Background Information

The Dominguez system within the Rancho Dominguez District of Cal Water currently provides water service to the existing Medical Center Campus. Cal Water's Rancho Dominguez District is located in the southern corner of Los Angeles County approximately ten miles north of Los Angeles Harbor. The Rancho Dominguez District includes three separate regulated water systems, a leased system, and various operations and billing contracts.

The Dominguez system serves most of the City of Carson, as well as a portion of the City of Torrance and small sections of the cities of Compton, Long Beach and Los Angeles and unincorporated Los Angeles County. The service area covers approximately 25 square miles and is bounded on the north by the cities of Redondo Beach, Torrance, Los Angeles, Carson and Compton, on the east by Long Beach, on the south by the cities of Los Angeles, Lomita and Torrance, and on the west by Redondo Beach.

Senate Bill 610 (Chapter 643, Statutes of 2001) (SB 610) amended state law as of January 1, 2002, to include consideration of water supply availability when cities and counties are making land use development decisions (see further discussion of SB 610 below under Regulatory Framework Summary). SB 610 requires information on water supply availability be provided to local public agency decision-makers prior to approval of development projects that meet or exceed any of the following criteria:

1. A residential development of more than 500 dwelling units.
2. A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet.
3. A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A hotel or motel with more than 500 rooms.

5. An industrial, manufacturing or processing plant or industrial park planned to house more than 1,000 persons occupying more than 40 acres of land or having more than 650,000 square feet of floor area.

6. A mixed-used project that includes one or more of the projects specified above.

7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Depending on the definitions used, the proposed Harbor-UCLA Master Plan Project exceeds criteria 2, 3, 5, 6 and 7 above, and as such, a WSA is required. As such, a WSA was prepared for the Project that assesses the adequacy of the water supply to meet the estimated demands of the proposed Harbor-UCLA Project over the next 20 years and those of Cal Water's Dominguez system customers and projected new users under normal, single dry year and multiple dry year conditions (Water Code §10911(a)). SB 610 requires that the information presented in a WSA be included in the administrative record that is the basis for an approval action by the local public agency. Cal Water uses U.S. Census data in estimating populations in all of its districts in California. Its methodology for estimating existing and future populations has been reviewed and accepted by the California Public Utilities Commission (CPUC), which provides regulatory oversight of privately owned water and wastewater utilities. In its 2010 UWMP, Cal Water used year 2000 census data because 2010 data were not available to local governments until the beginning of 2012. Cal Water is using 2010 U.S. Census data in the Dominguez 2015 UWMP. That data and more recent projections of population growth in the service area are the basis for water demand forecasts.

Estimates of the population serviced by Cal Water in the Dominguez system are based on overlaying the 2010 U.S. Census Tract Block data with the Dominguez system service area. A summary of the census data for 2010 for the Dominguez system is shown below in **Table 4.M.1-8**, *Summary of Census 2010 Data for Dominguez System*.

Table 4.M.1-8

Summary of Census 2010 Data for Dominguez System

	Census Tract Block	Population	Dwelling Units
Dominguez Service Area	889	141,105	45,021

Source: California Water Service Company, 2016

The data presented in Table 4.M.1-8 were used as a baseline for estimating future population in the Dominguez system. To forecast population to 2040, the 2010 Census population was divided by the total number of dwelling units served by Cal Water in 2000 to obtain an average of 3.134 persons per dwelling unit. This average number of persons per dwelling unit value was multiplied by the projected number of dwelling units in the Dominguez system for future years to obtain the population forecast.

To estimate future residential service counts, Cal Water used the 10-year average annual growth rate of 0.873-percent calculated from service counts using U.S. Census data from 2000 and 2010. To estimate total population, the projected residential service counts are multiplied by the estimated number of persons per residential unit based on U.S. Census data. **Table 4.M.1-9**, *Dominguez System Population Projections*, below, summarizes Cal Water's projected population for the Dominguez system in five-year increments based on the 10-year long-term average service connection growth rates and 2010 US Census data used to determine persons per dwelling unit.

Table 4.M.1-9

Dominguez System Population Projections

	2005	2010	2015	2020	2025	2030	2035	2040
Persons/Dwelling Unit	3.127	3.134	3.134	3.134	3.134	3.134	3.134	3.134
Total Dwelling Units	44,946	45,024	45,382	46,012	46,650	47,297	47,954	48,619
Number of Persons	140,546	141,105	142,227	144,201	146,202	148,230	150,287	152,372

Source: California Water Service Company, 2016

Cal Water's user classes for customer services are as follows:

1. Single-family Residential
2. Multi-family Residential
3. Commercial
4. Industrial
5. Government
6. Other

The total number of customer services for the Dominguez system for 2010 was 32,629. In 2012, total customer services were 32,737 or an increase of 108 services in two years or 54 services per year. Virtually all of these were residential with single-family being 66 percent of the increase. Hence, the data from 2010 continues to be an accurate indicator of water use by user class.

Single-family residential services totaled 28,574 (88 percent of total). Multi-family residential services totaled 704 (two percent of total) and commercial totaled 2,866 (nine percent of total). All other user classes comprised the remaining one percent of total. Classes using the most water are single-family residential, commercial, and industrial. Single-family residential and commercial uses increased constantly from 1992 until about 2003/2004, after which they have declined to almost 1992 levels. Water use in the residential sector is for permanent single- and multi-family residences. There are no seasonal customers. The industrial

sector has had some fluctuations, but overall is fairly constant. Multi-residential and governmental sectors have been constant since 1992. Recycled water was not available in the Dominguez system until early 2000.

(b) Historical and Current Water Demand

(i) Dominguez System Water Demand

Projected increases in the number of customers in each user class are based on historic growth rates for that class unless a particular growth rate was determined to be non-representative then the overall customer growth rate was used.

Historically, Cal Water projected demand by multiplying the projected number of services for each user class by one of three (high, average and low) historic service rates for that class. The three service rates were derived from customer water records. The sum of the projected demands for each user class equals the total projected demand for the Dominguez system. Three separate demand projections for the Dominguez system were calculated in this manner: high, average and low. After the passage of Senate Bill 7 (SBx7-7, see further discussion below under Regulatory Framework Summary), the above method is no longer used by Cal Water as the primary method for making projected demands. However, these calculations are still used as the basis for projected services, population, and distribution of demand among user classes.

Demand projections in the 2010 UWMP were made in accordance with SBx7-7 requirements. Two demand projections were made: 1) an unadjusted baseline demand and 2) a target demand. The unadjusted baseline water demand projection is the total demand expected without any conservation. It is equal to forecasted population multiplied by the base per capita water use, which is the average for the period from 2005 to 2009 or 225 gallons per person per day. Updated demand projections were made by Cal Water in 2015 which reflect different methods and sources.

The target water demand projection includes conservation savings due to both passive and active demand management. Target demand is calculated by multiplying SBx7-7 target per capita water use values by the projected population. The water demand projection calculation used for SBx7-7 compliance is based on future population projections and per capita per day water use target values. Projected water demand based on user class (customer type) cannot be determined by this method. To obtain a breakdown of future demand by user class, Cal Water calculated the ratio of demand for each user class to total demand. This ratio was applied to the total baseline demand forecast to develop projected potable water demands by user class for 2020 to 2040. The SBx7-7 demand forecast includes conservation savings associated with the demand management measures described later in this section. As shown below in **Table 4.M.1-10**, *Actual 2010 and 2015 Potable Water Use Dominguez System (AF)*, total potable water use in the Dominguez system for 2015 was 31,291 AF, which was 1,701 AF less than total water use in 2010. Thus, even with an estimated population increase of 1,122 people in five years, increased water conservation due in part to measures implemented by Cal Water resulted in less water use.

Table 4.M.1-10

Actual 2010 and 2015 Potable Water Use Dominguez System (AF)

Water Use Sectors	2010		2015		Difference
	# of accounts	*Use*	*# of accounts*	*Use*	*Use*
Single family	28,574	9,937	28,732	8,012	-1,925
Multi-family	704	2,661	742	2,428	-233
Commercial	2,866	7,308	2,869	8,077	+769
Industrial	162	10,953	158	10,772	-181
Institutional/government	286	1,438	278	1,312	-126
Other	26	67	34	59	-8
Unaccounted for Water	-	628	-	631	+3
Total	**32,629**	**32,992**	**32,813**	**31,291**	**-1,701**

Source: California Water Service Company, 2016

California Senate Bill x7- 7 Baseline and Targets

Cal Water is expanding water conservation programs for its 24 California service districts. Over the next five years, conservation program expenditures will increase significantly due to the state requiring future reductions in per capita urban water use. Senate Bill No. 7 (SBx7-7) adopted in November 2009 (see further discussion below under Regulatory Framework Summary) mandates a statewide 20 percent reduction in per capita urban water use by December 31, 2020. The CPUC is directing Class A and B water utilities, including Cal Water, to adopt conservation programs and rate structures designed to achieve reductions in per capita water use. In preparing to achieve increased water conservation, Cal Water in 2010 developed five-year conservation program plans for each of its service districts. The complete Dominguez District Conservation Master Plan is included in Appendix G of the 2010 UWMP. An updated Conservation Master Plan will be included in the 2015 UWMP.

SBx7-7 required progress toward the 2020 goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. SBx7-7 requires each urban retail water supplier to develop 2015 and 2020 urban water use targets in accordance with specific requirements and provides several ways to calculate water use reduction targets. Retail water suppliers can also form regional alliances within the same hydrologic region to achieve compliance. Cal Water plans to include the Dominguez system in a regional alliance with four other Cal Water districts in the South Coast hydrologic region. For the five districts, Cal Water has calculated both district-specific targets and a regional alliance target. The specific targets for Dominguez system are:

1. 193 gallons per capita per day (gpcd) by 2015
2. 171 gpcd by 2020

Dominguez system 2015 demand including distribution system losses averaged 27,911,572 gpd for an estimated population of 142,227 persons which equals 196.2 gpcd, or 3.2 gpcd more than the 2015 target value, which is an exceedance of 1.6 percent.

For 2020, per capita demand is to decrease by 25.2 gpcd, or 12.8 percent, in order to meet the Dominguez system target. **Table 4.M.1-11**, *Dominguez System Potable Water Demand Actual and Projected (AF)*, below, provides two projected potable water demand forecasts for the Dominguez water system: 1) based on historic water use by user class and projected growth in each user class minus one standard deviation, 2) the SBx7-7 method described above. The reason for presenting two is that achieving SBx7-7 compliance based on using the 171 gpcd by 2020 will be challenging since it depends on achieving in higher levels of water conservation than what was realized in 2015. The Cal Water method selected would result in a per capita water use of 191 gpcd in 2020 and 188.8 gpcd in 2040, which are below the 2015 SBx7-7 target value but above the 2020 value. To be conservative, the WSA prepared for the Master Plan Project uses the higher demand forecast (Cal Water Average – Standard Deviation) shown in Table 4.M.1-11.

Table 4.M.1-11

Dominguez System Potable Water Demand Actual and Projected (AF)

	2005*	2010*	2015*	2020	2025	2030	2035	2040
Cal Water Average – Standard Deviation	36,499	32,992	31,291	30,884	31,221	31,567	31,910	32,260
SBx7-7	36,499	32,992	31,291	27,643	28,028	28,416	28,810	29,210
Difference	0	0	0	3,241	3,193	3,147	3,100	3,050

**Actual demand from year indicated*

Source: California Water Service Company, 2016

(ii) Recycled Water Demand

Cal Water purchases recycled water from West Basin Municipal Water District (WBMWD) and provides it to a number of customers for non-potable uses, thereby reducing use of potable water. **Table 4.M.1-12**, *Actual and Projected Recycled Water Use in Dominguez System (AF)*, below, provides updated projections on recycled water use. The quantity of recycled water delivered to the distribution system is greater than recorded or projected customer use due to pipe leakage, authorized but unmeasured water use and unauthorized and unmeasured use. More information on the recycled water source and system for delivery and existing and projected customers is provided later.

Table 4.M.1-12

Actual and Projected Recycled Water Use in Dominguez System (AF)

	2010	2015	2020	2025	2030	2035	2040
Recycled Water Use	4,515	5,089	6,776	7,481	8,260	9,120	10,069

Source:

Actual and projected total demand (potable and recycled water use) for the Dominguez system is shown below in **Table 4.M.1-13**, *Dominguez System Total Water Demand: Potable and Recycled Water Use Actual and Projected (AF)*.

Table 4.M.1-13

Dominguez System Total Water Demand: Potable and Recycled Water Use Actual and Projected (AF)

	2005 (Actual)	2010 (Actual)	2015	2020	2025	2030	2035	2040
Water Use	40,356	37,507	36,280	37,660	38,702	39,823	41,030	42,279

Source: California Water Service Company, 2016

(iii) Dominguez System Demand Management

Cal Water has and is significantly expanding its water conservation programs. State law, CPUC directives and a state water conservation organization are focused on reducing urban water use and have provided much of the impetus for this emphasis. This includes the following factors:

1. Recent decisions by the CPUC directing regulated water utilities to reduce per capita urban water demand.

2. State legislation mandating urban water suppliers reduce per capita demand 20 percent by 2020.

3. Memorandum of Understanding Regarding Urban Water Conservation in California (MOU).

A brief summary of each of these factors is provided below.

The CPUC's Decision 07-05-062 directed Class A and B water utilities to submit a plan to achieve a five-percent reduction in average customer water use over each three-year rate cycle. This policy was refined under Decision 08-02-036, which established a water use reduction goal of three to six percent in per customer or service connection consumption every three years once a full conservation program, with price and non-price components, is in place. These decisions anticipated enactment of policies by the State legislature to reduce urban water use in California 20 percent by 2020.

SBx7-7 requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. SBx7-7 requires each urban retail water supplier to develop interim and 2020 urban water use targets. Urban retail water suppliers will not be eligible for state water grants or loans unless they comply with SBx7-7's requirements.

There are three ways in which a water supplier can comply with the MOU. The first way is to implement a set of water conservation best management practices (BMPs) according to the requirements and schedules set forth in

Exhibit 1 of the MOU. The second way, called Flex Track compliance, is to implement conservation programs expected to save an equivalent or greater volume of water than the BMPs. The third way, similar to SBx7-7, is to reduce per capita water use. Each of these compliance options is briefly described below.

Originally, the MOU established a set of BMPs that signatories agreed to implement in good faith. For each BMP, the MOU established the actions required by the water supplier (e.g. site surveys, fixture and appliance rebates, water use budgets, volumetric pricing and conservation rate designs), the implementation schedule, and the required level of effort (in the MOU this is referred to as the coverage requirement). Additionally, the MOU established the terms by which a water supplier could opt out of implementing a BMP.

BMPs are grouped into five categories. Two categories, Utility Operations and Education, are "Foundational BMPs" because they are considered essential water conservation activities by any utility and are adopted for implementation by all signatories to the MOU as ongoing practices with no time limits. The remaining BMPs are "Programmatic BMPs" and are organized into Residential, Commercial, Industrial, and Institutional (CII), and Landscape categories. **Table 4.M.1-14**, *MOU Best Management Practices*, below, lists the BMPs by category. The requirements and coverage levels of each BMP are set forth in Exhibit 1 of the MOU. Cal Water's CUWCC annual reports, which detail BMP implementation, are included as Appendix G in the 2010 UWMP.

Table 4.M.1-14

MOU Best Management Practices

BMP Group	BMP Name
1. Utility Operations Programs (F)	Conservation Coordinator
	Water Waste Prevention
	Wholesale Agency Assistance Programs
	Water Loss Control
	Metering & Volumetric Rates
	Retail Conservation Pricing
2. Education Programs (F)	Public Information Programs
	School Education Programs
3. Residential (P)	Residential Assistance Program
	Landscape Water Surveys
	High Efficiency Clothes Washer Program
	Watersense Toilet Program
	Watersense Specifications for Residential Development
4. Commercial, Industrial, Institutional (P)	Reduce baseline CII water use by 10% in 10 years
5. Landscape (P)	Large Landscape Water Budget Programs
	Large Landscape Water Surveys

F = Foundational BMP, P = Programmatic BMP

Source: California Water Service Company, 2016

Under Flex Track, a water supplier can estimate the expected water savings over the 10-year period 2009-2018 if it were to implement the programmatic BMPs in accordance with the MOU's schedule, coverage, and exemption requirements, and then achieve these water savings through any combination of programs it desires. Thus, through the Flex Track compliance option, a water supplier agrees to save a certain volume of water using whatever it determines to be the best combination of programs. Because the savings target depends on the programmatic BMP coverage requirements, which in turn are functions of service area size and composition of demand, the volume of water to be saved under this compliance option must be calculated separately for each supplier. The methodologies and tools for water suppliers to implement these calculations had not been developed by the CUWCC at the time of preparation of the 2010 UWMP. They will be used in the 2015 Dominguez system UWMP.

Under the gpcd option, a water supplier can comply with the MOU by reducing its baseline gpcd by 18 percent by 2018. The baseline is the ten-year period 1997-2006. The MOU also establishes interim gpcd targets and the highest acceptable levels of water use deemed to be in compliance with this option. The MOU's gpcd option is similar to using Method 1 to set the SBx7-7 target, except that it uses a fixed baseline period and only runs through 2018. This compliance option may be difficult to achieve for Cal Water districts that are part of a regional alliance for purposes of SBx7-7 compliance because savings as a percent of demand will vary considerably among the districts in the alliance. It may also conflict with district-specific SBx7-7 targets set using method 3 (hydrologic region-based target). Because of these potential conflicts, this is not considered a viable MOU compliance option for Cal Water districts.

Cal Water uses Flex Track to comply with the MOU. This compliance option offers the most flexibility in selecting conservation programs suited to each Cal Water district and allows for more streamlined reporting. Because CUWCC tools for calculating a district's Flex Track savings target were not available in the 2010 UWMP, Cal Water developed its own target estimates. Cal Water will update these estimates in the 2015 UWMP using the CUWCC Flex Track target calculator.

(iv) Water Conservation Master Plans

To comply with requirements for urban water use reduction, Cal Water developed Water Conservation Master Plans (WCMP) for each of its service districts. WCMPs set forth a framework for compliance and describe Cal Water's specific conservation actions to be implemented in the next five years. Major tasks in the WCMPs include:

1. A complete review of State policies and development of a compliance strategy
2. Calculating all appropriate per capita targets
3. Determining water savings required from new programs
4. Performing an analysis of conservation programs
5. Developing a portfolio of conservation program actions
6. Creating a plan for monitoring and updating the WCMP

The Water Conservation Master Plan for the Dominguez system is included in its entirety as Appendix G of the Dominguez District 2010 UWMP and will be included in the 2015 UWMP. A discussion of baseline and target water use is in Section 3 of the UWMP. Details on water savings requirements and the programs to be implemented are also provided that document. **Table 4.M.1-15**, *Cal Water Conservation Programs*, below, provides a summary of water conservation programs selected for evaluation.

Table 4.M.1-15

Cal Water Conservation Programs

Program Name	Description	Target Market
CORE PROGRAMS		
Rebate/Vouchers for toilets, urinals, and clothes washers	Provide customer rebates for high-efficiency toilets, urinals, and clothes washers	All customer segments
Residential Surveys	Provide residential surveys to low-income customers, high-bill customers, and upon customer request or as pre-screen for participation in direct install programs	All residential market segments
Residential Showerhead/Water Conservation Kit Distribution	Provide residential showerhead/water conservation kits to customers upon request, as part of residential surveys, and as part of school education curriculum	All residential market segments
Pop-Up Nozzle Irrigation System Distribution	Offer high-efficiency pop-up irrigation nozzles through customer vouchers or direct install.	All customer segments
Public Information/Education	Provide conservation messaging via radio, bill inserts, direct mail, and other appropriate methods. Provide schools with age appropriate educational materials and activities. Continue sponsorship of Disney Planet Challenge program.	All customer segments
NON-CORE PROGRAMS		
Toilet/Urinal Direct Install Program	Offer direct installation programs for replacement of non-HE toilets and urinals	All customer segments
Smart Irrigation Controller Contractor Incentives	Offer contractor incentives for installation of smart irrigation controllers	All customer segments
Large Landscape Water Use Reports	Expand existing Cal Water Large Landscape Water Use Report Program providing large landscape customers with monthly water use reports and budgets	Non residential customers with significant landscape water use and potential savings

Table 4.M.1-15 (Continued)

Cal Water Conservation Programs

Program Name	Description	Target Market
Large Landscape Surveys & Irrigation System Incentives	Provide surveys and irrigation system upgrade financial incentives to large landscape customers participating in the Large Landscape Water Use Reports programs and other targeted customers	Non residential customers with significant landscape water use and potential savings
Food Industry Rebates/Vouchers	Offer customer/dealer/distributor rebates/vouchers for high-efficiency dishwashers, food steamers, ice machines, and pre-rinse spray valves	Food and drink establishments, institutional food service providers
Cooling Tower Retrofits	Offer customer/dealer/distributor rebates/vouchers of cooling tower retrofits	Non-residential market segments with significant HVAC water use
Industrial Process Audits and Retrofit Incentives	Offer engineering audits/surveys and financial incentives for process water efficiency improvement	Non-residential market segments with significant industrial process water uses

Source: California Water Service Company, 2016

(v) Dominguez System Conservation Programs

Conservation programs selected for the Dominguez system are summarized below in **Table 4.M.1-16**, *Dominguez System Projected Water Savings by Conservation Program*. A water savings requirement analysis showed that after accounting for water savings from existing water efficiency codes and ordinances, scheduled adjustments to water rates, and past investment in conservation programs, projected 2015 baseline demand (excluding recycled water use) in the Dominguez system is 1,307 AFY above the level required for SBx7-7 compliance. The analysis also showed that 713 AFY of water savings from new programs would be required to satisfy MOU compliance requirements in 2015.

(vi) Water Shortage Allocation Plans

Cal Water has also developed Water Shortage Allocation Plans (WSAP), which are plans of action to reduce water demand should significant water supply shortages occur. These actions may be implemented for several months or several years depending on circumstances. The WSAP differs from the WCMP, which is focused on achieving permanent reductions in per capita water use by Cal Water's customers and is not driven by significant short or long reductions in supply. In the short- term, the WSAP assists Cal Water in further reducing demand so that it matches significant reductions in supply.

Implementation of Cal Water's WSAP for the Dominguez system will generally be triggered by actions taken by the West Basin Municipal Water District (WBMWD) and the Metropolitan Water District (MWD). Except in

Table 4.M.1-16

Dominguez System Projected Water Savings by Conservation Program

Program	Water Savings AFY				
	2011	2012	2013	2014	2015
CORE PROGRAMS					
Rebates/Vouchers					
Toilets	24.5	48.0	70.6	105.5	139.0
Clothes Washers	10.9	21.3	31.3	41.2	50.6
Urinals	0.0	0.0	0.0	0.0	0.0
Customer Surveys/Audits	34.3	65.3	93.1	135.3	173.3
Conservation Kit Distribution	9.0	16.9	23.9	30.0	35.4
Pop-Up Nozzle Distribution	34.6	69.3	103.9	138.6	173.2
Subtotal Core Programs	113.3	220.8	322.8	450.5	571.5
NON-CORE PROGRAMS					
Direct Install Toilets/Urinals	19.1	38.7	57.5	141.5	222.2
Smart Irrigation Controller Vendor Incentives	1.6	3.2	4.9	15.7	26.5
Large Landscape Water Use Reports	5.6	5.6	5.6	11.2	11.2
Large Landscape Surveys/Incentives	9.0	18.0	27.0	36.0	44.9
Commercial Kitchen Rebates/Vouchers	0.0	0.0	0.0	14.9	29.9
Cooling Tower/Process Water Retrofit Incentives	58.6	117.3	175.9	194.2	212.4
Subtotal Non-Core Programs	93.9	182.8	270.8	413.4	547.1
Total Core and Non-Core Program Savings	207.3	403.5	593.6	864.0	1,118.6

Source: California Water Service Company, 2016

unusual circumstances, Cal Water will follow the lead of these agencies when deciding whether to implement its WSAP. Cal Water has a four-stage approach that corresponds to specific levels of projected water supply shortage. Depending on the supply reduction target, this approach becomes increasingly more aggressive in requiring customer water use reductions. The stage selected depends on such factors as wholesale supply reductions, availability of alternative supplies, time of year and coordinated regional actions among all affected water utilities and agencies.

The percentage of supply shortage determined by MWD will be a significant factor in Cal Water's decision on which stage of supply reduction it will implement for the Dominguez system. Supply reductions percentages are shown for each of the four stages below in **Table 4.M.1-17**, *Cal Water Supply Shortage Reduction Stages*. A description of each stage is provided below.

Table 4.M.1-17

Cal Water Supply Shortage Reduction Stages

Stage	Projected Supply Reduction %
Stage 1	5 to 10%
Stage 2	10 to 20%
Stage 3	20 to 35%
Stage 4	35 to >50%

Source: California Water Service Company, 2016

Stage 1 is for water supply shortages of up to 10 percent and can be used to address annual variations in precipitation and mild dry year periods of one or two years duration. All reductions in Stage 1 are voluntary and impacts to customers are considered minimal. Actions to be taken by Cal Water in Stage 1 are listed below in **Table 4.M.1-18**, *WSCP Stage 1 Demand Reduction*.

Table 4.M.1-18

WSCP Stage 1 Demand Reduction

Stage 1	Cal Water Actions
• 5 to 10 percent • Shortage Up to 10 Percent Reduction Goal • Voluntary Reductions	• Request voluntary customer conservation as described in CPUC Rule 14.1. • Maintain an ongoing public information campaign. • Maintain conservation kit distribution programs. • Maintain school education programs. • Maintain incentive programs for high efficiency devices. • Coordinate drought response with wholesale suppliers and cities. • Lobby cities for passage of drought ordinances. • Discontinue system flushing except for water quality purposes. • Request that restaurants serve water only on request.

Source: California Water Service Company, 2016

Stage 2 is based on projected water supply shortages between 10 and 20 percent. Stage 2 is for water shortages of moderate severity such as those caused by a multi-year dry period. Reductions by customers can be voluntary or mandatory depending on percentage of water shortage. Mandatory requirements would likely be implemented if supply shortage exceeds 15 percent. Customers will experience moderate impacts on normal water use and some businesses may experience financial impacts. In Stage 2, Cal Water intensifies demand reduction by implementing the actions listed below in **Table 4.M.1-19**, *WSCP Stage 2 Demand Reduction*.

Table 4.M.1-19

WSCP Stage 2 Demand Reduction

Stage 2	Cal Water Actions
• 10 to 20 Percent Shortage • Up to 20 Percent Reduction Goal • Voluntary or Mandatory Reductions	• Increase or continue all actions from Stage 1. • Implement communication plan with customers, cities, and wholesale suppliers. • Request voluntary or mandatory customer reductions. • File Schedule 14.1 with CPUC approval if necessary. • Request memorandum account to track penalty rate proceeds and other drought related expenses. • Lobby for implementation of drought ordinances. • Monitor water use for compliance with reduction targets.

Source: California Water Service Company, 2016

Stage 3 will be activated if there is a water supply reduction between 20 and 35 percent. This stage can be triggered by a very severe multi-year dry period or major failures in facilities for storage, transmission, treatment water and distribution facilities due to a natural disaster such as an earthquake. Supply reduction of these percentages could impact public health and safety and cause significant financial impacts on local businesses.

All reductions are mandatory and customer allocations will be made. In Stage 3, Cal Water will take the actions listed below in **Table 4.M.1-20**, *WSCP Stage 3 Demand Reduction*.

Table 4.M.1-20

WSCP Stage 3 Demand Reduction

Stage 3	Cal Water Actions
• 20 to 35 Percent Shortage • Up to 35 Percent Reduction Goal • Mandatory Reductions	• Increase or continue all actions from previous stages. • Implement mandatory conservation with CPUC approval. • Install flow restrictors on repeat offenders. • Require customers to have high efficiency devices before granting increased allocations. • Require participation in survey before granting an increased allocation.

Source: California Water Service Company, 2016

Stage 4 would be triggered by a reduction of supply greater than 35 percent, and possibly above 50 percent. This would be a crisis caused by a most severe multi-year dry period, a severe natural disaster resulting in catastrophic failure of major water supply infrastructure. In Stage 4, Cal Water will take the additional actions listed below in **Table 4.M.1-21**, *WSCP Stage 4 Demand Reduction*.

Table 4.M.1-21

WSCP Stage 4 Demand Reduction

Stage 4	Cal Water Actions
• 35 to 50+ Percent Shortage • Up to and above a 50 percent Reduction Goal Mandatory Reductions	• Increase all actions from previous stages. • Discontinue service for repeat offenders. • Monitor water use daily for compliance with reduction targets. • Prohibit potable water use for landscape irrigation and other non- essential activities

Source: California Water Service Company, 2016

Cal Water's groundwater supply from the Central and West Basins is limited to its APA of 16,897 AFY, which is based on the safe yield of each basin and is fixed in both wet and multiple dry year periods. After Dominguez system well pumping capacity is increased to sustainably produce the APA, groundwater supply can be used to offset reductions in imported water from WBMWD. Recycled water is a drought-proof supply not subject to reductions by WBMWD. During critical water shortage periods, Cal Water will maximize recycled water use with existing customers and work on increasing use by additional customers in order to reduce potable water demand.

In April of each year, MWD assesses its available water supply for the coming water year and determines if reductions in water use by its member agencies are not required, are advisable or are in fact needed. MWD evaluates the performance of WBMWD retailers as a whole and will only assess penalties to WBMWD if retailers' collective use exceeds its allocation. These reduction targets are passed along through WBMWD to Cal Water and from Cal Water to its customers. If requested by MWD, the allocation period begin on July 1st and continues for at least one year or until the availability of supplies warrants the lifting of requesting water use reductions.

During all stages of water shortages, water production data for all sources are monitored by Dominguez system management. Customer water use data is concurrently monitored to determine if demand reduction percentages are being achieved and, if not, which customers require greater attention by Cal Water.

(3) Existing Harbor-UCLA Medical Center Water Use

Cal Water provides water service to the Medical Center Campus through four metered service connections. **Table 4.M.1-22**, *Harbor-UCLA Medical Center Campus Annual Water Use Data (gpd)*, below, provides a summary of Cal Water metered water use sales data by year from 2012 through 2015 for the existing Medical Center Campus.

As shown in Table 4.M.1-22, annual average daily potable metered water use for these four years is 185,105 gpd or 207.5 AFY. The peak annual daily use in 2014 was 199,130 gpd and the lowest annual daily use in 2015 was 157,508 gpd, which represents a difference of 41,622 gpd, or a 20.9-percent reduction. Presumably, the reduction between 2014 and 2015 reflects increased water conservation actions as a result

Table 4.M.1-22

Harbor-UCLA Medical Center Campus Annual Water Use Data (gpd)

Year	Service Connection 1	Service Connection 2	Service Connection 3	Service Connection 4	Total All Connections
2012	114,782	32,279	44,107	594	191,763
2013	78,860	39,570	73,515	74	192,019
2014	91,850	42,925	64,283	72	199,130
2015	94,240	25,668	37,601	0	157,508
Average:					
gpd	94,933	35,110	54,877	185	185,105
AFY	106.4	39.4	61.5	0.2	207.5

Source: California Water Service Company, 2016

of four years of drought and California's mandate for all urban areas to achieve a 25-percent reduction in annual water use.

The total developed square footage of the existing Medical Center Campus is 1,279,284 square feet. Therefore, the average water use factor for all existing facilities (including an estimated 2.5 acres of landscaping) is 185,105 gpd/1,279,284 square feet, or 0.1447 gpd/square foot of development.

(4) Existing Water Distribution Infrastructure[3]

(a) Domestic Water Facilities

The Project Site is located within the service area of Cal Water, which is responsible for constructing, operating, and maintaining the water conveyance and treatment infrastructure serving the Medical Center Campus and the surrounding area. As such, Cal Water owns and maintains distribution mains within the roadways around the medical center that range in size from six inches to 33 inches in diameter. Based on preliminary utility research and conversations with facility staff, the Medical Center Campus is currently served off of the Cal Water mains at four connection points with a backup system connection off of a water main owned and operated by the Los Angeles Department of Water and Power (LADWP) that is not continuously operational.

The four connections to the Cal Water water system are made at various locations. One connection is made from the 220th Street main line, approximately 450 feet west of Vermont Avenue and is near the Central Plant. Another single connection is made from the Vermont Avenue main line approximately 300 feet north of 220th street. The final two connections are made from the Carson Street main. One of the Carson Street connections is located adjacent to the main hospital entrance off of Carson Street, approximately 600 feet

[3] *Information presented in this section regarding existing water distribution infrastructure serving the Medical Center Campus is provided on pages 65 and 66 of the Harbor-UCLA Master Plan prepared by Perkins+Will(June 2012).*

west of Vermont Avenue. The other Carson Street connection is located close to mid-block, approximately 1400 feet west of Vermont Avenue. The LADWP connection is made from Normandie Avenue, approximately 300 feet south of Carson Street.

Existing pressure tests were obtained from Cal Water for different locations near the medical center during late 2009 and 2010 at three locations including Carson Street and Normandie Avenue, 220th Street and Vermont Avenue, just west of Vermont Avenue, and 220th Street and Vermont Avenue, just east of Vermont Avenue. The pressure test results are summarized below in **Table 4.M.1-23**, *Harbor-UCLA Medical Center Campus Water Pressure Test Results*.

Table 4.M.1-23

Harbor-UCLA Medical Center Campus Water Pressure Test Results

Location	Static Pressure	Residual Pressure	Total Flow Observed	Calculated Flow at 20 PSI
220th and Vermont, West of Vermont	78 psi	63 psi	4545 gpm	9434 gpm
Carson and Normandie	75 psi	68 psi	2148 gpm	6538 gpm
220th and Vermont East of Vermont	80 psi	28 psi	1358 gpm	1467 gpm

Source: Perkins+Will, 2012

The 220th Street and Vermont Avenue, east of Vermont Avenue pressure test was obtained from a hydrant connected to a six-inch water main in 220th Street which may have caused the significant pressure drop for this test compared to the other two fire flow tests which were taken off of 10-inch or larger mains.

MWD owns a 78-inch transmission main in 220th Avenue. Given the size of the pipeline, it is highly unlikely that any service connections will be allowed off of this pipeline as MWD typically does not allow individual connection to its distribution mains. This is currently the only known MWD transmission main in the area.

Based on the 1993 District 5 Interceptor Relief Trunk Sewer As-Built plans, an LADWP-owned 30-inch water main is shown on Normandie Avenue. No flow tests were performed on this system, though facility staff indicated that when the on-site system was originally connected to the LADWP main, the high pressure in the system caused damage to several on-site water mains. Subsequently, a pressure regulator was placed on this connection.

The on-site water system for the Medical Center Campus is looped and consists of 10-inch and 12-inch main lines. Generally, water mains are located in the main north-south and east-west roads on the Medical Center Campus. The system was overhauled recently after the connection to the LAWPD water main caused multiple system failures. The water pipe network is relatively new and maintenance should not be a major issue. Most of the on-site building fire services are connected to the on-site looped system, though the site

water plan indicates that the hospital fire service is taken directly from the Vermont Avenue water main.

(b) Reclaimed Water Facilities

Reclaimed Water is currently not provided to the existing Medical Center Campus, as noted above. Previous studies investigated opportunities for serving Harbor-UCLA with recycled water for landscape irrigation. According to staff from the Los Angeles County Sanitation Districts (LACSD), their recycling efforts are concentrated in the eastern areas of the County and there are no plans to extend the system to the Torrance area in LACSD's District Number 5.

West Basin Municipal Water District (WBMWD) does have recycled water distribution systems in the west County area according to WBMWD staff input. The closest facilities WBMWD has to the project site are about three miles away, with no future plans for extending their system to the vicinity of the Medical Center Campus.

b. Regulatory Framework Summary

Following is a discussion of the regulatory plans, regulations, and requirements related to water supply applicable at the Medical Center Campus.

(1) Federal

(a) Safe Drinking Water Act

The primary federal legislation concerning domestic water supply is the Safe Drinking Water Act (SDWA) of 1974. The SDWA provides the U.S. Environmental Protection Agency (USEPA) with the authority to regulate the quality of water supplies. The SDWA required USEPA to set interim primary drinking water regulations that establish recommended maximum contamination levels (RMCLs) for each contaminant that may have an adverse effect on human health. Since promulgation of the National Primary Drinking Water Regulations, USEPA has developed additional drinking water quality standards for volatile organic chemicals, fluoride, surface water treatment, total coliform bacteria, lead, copper, synthetic organic contaminants, and inorganic contaminants. All domestic water supplies are required to meet these standards.

(2) State

(a) California Urban Water Management Planning Act(Assembly Bill 797)

The California Urban Water Management Planning Act (California Water Code [CWC] Division 6, Part 2.6, Sections 10610-10656) addresses several State policies regarding water conservation and the development of water management plans to ensure the efficient use of available supplies. The Act also requires water suppliers to develop water management plans every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, dry, and multiple-dry years. Specifically, municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 AFY of water must adopt an UWMP.

(b) Senate Bill 610

State legislation addressing water supply, Senate Bill (SB) 610, became effective January 1, 2002. SB 610, codified in CWC Section 10910 et seq., describes requirements for both water supply assessments (WSAs) and UWMPs applicable to the California Environmental Quality Act (CEQA) process. SB 610 requires that for projects subject to CEQA which meet specific size criteria, the water supplier must prepare a WSA that determines whether the projected water demand associated with the proposed project is included as part of the most recently adopted UWMP. Specifically, a WSA must identify existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' water deliveries received by the public water system. In addition, it must address water supplies over a 20-year period and consider normal, single-dry, and multiple-dry year conditions. In accordance with SB 610 and Section 10912 of the CWC, projects subject to CEQA and requiring completion of a WSA include the following:

- Residential developments of more than 500 dwelling units;
- Shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- Hotels, motels, or both, having more than 500 rooms;
- Industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area;
- Mixed-use projects that include one or more of the projects specified in this subdivision; or
- Projects that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

The WSA must be approved by the public water system at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the WSA.

(c) California Code of Regulations

(i) Title 20

Title 20, Sections 1605.1(h) and 1605.1(i) of the California Code of Regulations (CCR) establishes efficiency standards (maximum flow rates) for all new federally regulated plumbing fittings and fixtures, including such fixtures as showerheads, lavatory faucets, and toilets. Among the standards, the maximum flow rate for showerheads and lavatory faucets are 2.5 gpm at 80 pounds per square inch (psi) and 2.2 gpm at 60 psi, respectively. The standard for toilets is 1.8 gallons per flush. In addition, Section 1605.3(h) establishes State efficiency standards for non-federally regulated plumbing fittings, including commercial pre-rinse spray valves.

(ii) Title 24, Part 11

Part 11 of Title 24, the title that regulates the design and construction of buildings, establishes the California Green Building Standards Code (CALGreen). The purpose of CALGreen is to improve public health, safety and general welfare by: 1) enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and 2) encouraging sustainable construction practices in the categories of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CalGreen includes both mandatory measures and voluntary measures. The mandatory measures establish minimum baselines that must be met in order for a building to be approved. The voluntary measures can be adopted by local jurisdictions for greater efficiency.

(d) State Executive Order B-29-15[4]

In response to the current drought conditions, Governor Brown signed Executive Order B-29-15 on April 1, 2015. The Order requires an immediate 25 percent mandatory reduction in overall potable urban water use Statewide, from 2013 levels, through at least February 28, 2016. This is applicable to all cities, towns, and urban water supplies in California (such as the RWD). The Order also requires RWD to provide funding to allow for lawn replacement programs; requires the California Energy Commission to provide rebates for water-efficient appliances; prohibits irrigation of ornamental turf on public street medians with potable water; use of only drip or microspray irrigation systems in new residential construction; and requires urban water suppliers to develop rate structures and other pricing mechanisms, including but not limited to surcharges, fees and penalties, to maximize water conservation consistent with Statewide water restrictions.

(e) State Water Resources Control Board 2015 Emergency Water Conservation Regulations[5]

On March 17, 2015, the State Water Resources Control Board (SWRCB) adopted Emergency Water Conservation Regulations in response to California's current drought and State Executive Order B-29-15 (discussed above). The Regulations identify mandatory water conservation requirements for all Californians including, but not limited to, the following:

- Prohibits:
    - Using potable water to wash sidewalks and driveways;
    - Allowing runoff when irrigating with potable water;
    - Using hoses with no shutoff nozzles to wash cars;
    - Using potable water in decorative water features that do not recalculate the water;
    - Irrigating outdoor areas within 48 hours following measurable rainfall;
    - Serving water to customers in restaurants unless the customer requests it; and

[4] *State of California, Executive Department, Executive Order B-29-15, signed April 1, 2015.*

[5] *State Water Resources Control Board, 2015 Emergency Water Conservation Regulations Fact Sheet, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/fs_conservreg_032715.pdf. Accessed June 17, 2015.*

- Irrigating outdoor areas more than two days per week.

- Requires:
  - Hotels and motels to offer their guests the option to not have their linens and towels laundered daily; and
  - Large urban water suppliers (serving >3000 connections) to:
    - Impose restrictions on outdoor irrigation;
    - Notify customers about leaks that are within the customer's control;
    - Report on water use monthly; and
    - Report on compliance and enforcement.

Violations of prohibited activities are considered infractions punishable by fines of up to $500 per day. Furthermore, the State Water Board can issue cease and desist orders and fines against and water agencies that do not impose mandatory outdoor irrigation restrictions on their customers. The regulations are in effect through at least the end of 2015.

(f) Water Conservation Act of 2009[6]

The California Water Conservation Act of 2009, otherwise known as Senate Bill X7-7 (SBx7-7), was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The bill also requires, among other things, that the Department of Water Resources, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020. The state must make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015. Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.

An urban retail water supplier shall include in its water management plan due July 2011 the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. The Department of Water resources, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part. The Department of Water Resources shall adopt regulations for implementation of the provisions relating to process water.

A Commercial, Institutional, Industrial (CII) task force is to be established that will develop and implement urban best management practices for statewide water savings. Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

[6] *http://www.water.ca.gov/wateruseefficiency/sb7/*

(3) Regional

(a) Cal Water Dominguez District Urban Water Management Plan

California Water Code (CWC) Section 10644(a) requires urban water suppliers to file with the Department of Water Resources, the California State Library, and any city or county within which the supplier provides water supplies, a copy of its Urban Water Management Plan (UWMP), no later than 30 days after adoption. Cal Water complies with the California Water Code and files an UWMP at least once every five years on or before December 31, in years ending in five and zero.

All urban water suppliers as defined in CWC Section 10617 (including wholesalers), either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet annually are required to prepare an UWMP. Cal Water's 2010 UWMP, the most recently adopted UWMP for the Rancho Dominguez service area, is a foundation document and source of information for a Water Supply Assessment and a Written Verification of Water Supply. An UWMP also serves as:

- A long-range planning document for water supply,
- Source data for development of a regional water plan, and
- A source document for cities and counties as they prepare their General Plans.
- A key component to Integrated Regional Water Management Plans

(4) Local

(a) Los Angeles County General Plan 2035

As discussed in the Public Services and Facilities Element of the Los Angeles County General Plan 2035, the conservation of the water supply is a primary goal of the County. To reduce the County's dependence on imported water, County agencies are establishing various water conservation programs. One example from DPW is the creation of water reclamation projects and groundwater recharge facilities to capture stormwater runoff. Another effort by DPW is participation in a Water Augmentation Study, which is striving to make parcel-level groundwater recharge feasible. Additional actions include the Board of Supervisor's 2008 Countywide Water Supply and Conservation Alert. This resolution urges residents, businesses, and water purveyors to intensify water conservation efforts and directs all County departments to implement measures to achieve a 15 to 20 percent reduction in overall water demand.

The General Plan supports water conservation efforts that focus on curbing demand by reducing consumption through technological advances, such as aerators and motion sensors on low flush toilets and stalls, onsite gray water reclamation and dual plumbing; promoting xeriscaping; and organizing educational campaigns to discourage wasteful water consumption.

Goals and policies contained in the Public Services and Facilities Element that are relevant to water supply include the following:

Goal PS/F 2: Increased water conservation efforts.

- Policy PS/F 2.1: Support water conservation measures.
- Policy PS/F 2.2: Support educational outreach efforts that discourage wasteful water consumption.

Goal PS/F 3: Increased local water supplies through the use of new technologies.

- Policy PS/F 3.1: Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.
- Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.

(b) County of Los Angeles Green Building Standards Code(Title 31)

In 2008, Los Angeles County adopted the Green Building Program, which included the Green Building Ordinance, Low Impact Development (LID) Ordinance, and Drought-Tolerant Landscaping Ordinance. The County also created an Implementation Task Force and Technical Manual. In November 2013, in response to the mandates set forth in the 2010 CALGreen, the Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31). Among other things, the Green Building Standards Code promotes water conservation by requiring the installation of smart irrigation controllers and high-efficiency toilets, design features that maximize the infiltration of stormwater for groundwater recharge, landscaping using drought-tolerant species, and limiting turf areas.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Water Infrastructure

The analysis of water infrastructure capacity in this section is based on the location and flow capacity of water distribution facilities and other water infrastructure serving the Medical Center Campus. Based on the projected demands of the Master Plan Project, the analysis evaluates whether the existing off-site facilities are adequate to serve future development under the Master Plan Project.

(2) Water Supply

The Harbor-UCLA Project was not specifically included in Cal Water's Dominguez system 2010 Urban Water Management Plan (UWMP); therefore, its water requirements relative to existing and future demand and supply are addressed in the project-specific WSA included in Appendix J of this Draft EIR. The 2010 UWMP is based on data recorded through 2010 and is still the most recent UWMP document for the Dominguez system service area within which the Medical Center Campus is located. Cal Water is currently preparing a 2015 Draft UWMP and has collected and compiled data on population growth, water demand and water supplies from 2010 to 2015. These data, where available were used in the Master Plan Project WSA. In June

2009, Cal Water completed a Water Supply and Facilities Master Plan (WSFMP) for the Dominguez system that also included an assessment of future water demand and supply, which has information that has been used in preparing by Cal Water in preparing its UWMP. Based on the long-term supply and demand projections within the Dominguez system, which is the service area for the Master Plan Project, the demands of the Master Plan Project were compared in the WSA against these projections to determine if the Project demands are within the available supplies anticipated to be available at Master Plan Project buildout and beyond.

b. Thresholds of Significance

The potential for populations and housing impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

XVIII. Utilities and Service Systems. Would the project:

b) Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses?

In consideration of the above factors, the following thresholds are utilized to determine if the Project would result in potentially significant impacts on water infrastructure or water supply. The Project would result in potentially significant impacts if it would result in either of the following:

WS-1: Would the Project create water system capacity problems, or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

WS-2: Would the Project have insufficient reliable water supplies available to serve Project demand from existing entitlements and resources, considering existing and projected water demands from other land uses?

c. Project Characteristics or Design Features

Of existing campus facilities, 759,649 square feet are to be demolished. Total new construction would total 1,908,520 square feet at Master Plan buildout in 2030. Total planned facilities area in year 2023 total 1,400,425 square feet while at build out in year 2030 the total would be 2,457,355 square feet, for a total net increase in building space of 1,178,071 square feet.

All existing uses (administrative office, day-care center, central utilities/industrial/infrastructure, hospital/inpatient, library, medical offices/outpatient, biomedical research and development, warehouse/storage) would be included to some degree in the Master Plan Project, though the intensity of

most of these would increase. Specifically, hospital space would increase from 648,810 square feet to 1,202,655 square feet; LA BioMed space would increase from 94,754 square feet to 225,000 square feet. New biomedical research space within the Bioscience Tech Park would be 250,000 square feet, while new retail area would be 35,000 square feet.

The proposed Master Plan Project would replace existing facilities with those that will fully comply with more stringent and current LA County water conservation requirements including the California Plumbing Code and the California Green Building Code, which mandate installation of water conserving plumbing fixtures and fittings. However, it is not known how much additional water demand may be created by new laboratories and other water using medical and biomedical research and development activities. Therefore, as an offset to the installation of more water conserving fixtures, machines and cleaning practices, the existing average water use factor of 0.1447 gpd/square feet is used.

Therefore, the estimated water use in 2023, excluding irrigation of landscape area improvements, is:

1,400,425 square feet x 0.1447 gpd/square feet = 202,642 gpd or 227.2 AFY

The proposed Master Plan Project includes a substantial increase in landscaped areas when compared to the existing Medical Center Campus, which is minimally landscaped. The landscaped area estimate using the Master Plan Campus map is 26.5 acres. The estimated existing landscaped area is about 2.5 acres; therefore, the net increase in landscaped area is 24 acres.

For the year 2023 it is assumed that 56 percent of the total landscaped area or 13.4 acres would be in place (same percentage as the 2023 building space area is to the 2030 building space area.)

The landscape plan identifies a number of plants, shrubs and trees which are drought tolerant. A typical historic Southern California irrigation rate for public landscaped areas is between three and four AFY/acre. For a more water conserving irrigation system (i.e., drip system) with plantings that are more drought tolerant, an irrigation rate of 2.5 AFY/acre is assumed. This would result in an irrigation water use of 33.5 AFY in the year 2023 and 60 AFY in the year 2030.

The Harbor-UCLA Medical Center Campus is not proximate to West Basin Municipal Water District's (WBMWD) recycled water transmission pipeline which could supply recycled water for landscape irrigation. While it is suggested this option be explored with WBMWD, the assumption in the WSA is that landscape irrigation will be done with potable water. Therefore, estimated Medical Center Campus Project water demand in 2023 is: 227.2 + 33.5 = 260.7 AFY.

For the year 2030 (Master Plan Project build out), estimated water use, excluding irrigation of landscaped area improvements is 2,457,355 gpd x 0.1447 gpd/square feet = 355,579 gpd (or 398.6 AFY).

Total estimated Medical Center Campus Project water demand in 2030 is: 398.5 + 60 = 458.6 AFY. Net new water demand for the Medical Center Project is as follows:

- Year 2023: 53.2 AFY (260.7 – 207.5)
- Year 2030: 251.1 FY (458.6 – 207.5)

California Water Code 10631, Paragraph (e) (2), requires a water use projection (average annual demand forecast) in five-year increments for the 20-year forecasted period. The average annual day demand in five-year forecast increments for the Master Plan Project for the next 20 years is shown below in **Table 4.M.1-24**, *Harbor-UCLA Medical Center Project Demand Forecast (Net Increase)*.

Table 4.M.1-24

Harbor-UCLA Medical Center Project Demand Forecast (Net Increase)

Year	2015	2020	2025	2030	2035	2040
Net Demand Increase (AF)	0	0	54	251	251	251

Source: California Water Service Company, 2016

d. Project Impacts

(1) Water Distribution Facilities

Threshold WS-1: Would the Project create water system capacity problems, or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact Statement WS-1: *Construction of the water infrastructure required to serve the Master Plan Project would not result in significant environmental effects. Impacts would be less than significant.*

The proposed Project would require construction of some new on-site domestic water and fire water conveyance facilities (pipelines, sub-meters, and other connections) and the connection of this system to the existing off-site facilities discussed above. This would require on-site trenching for new or relocated water lines and welding activities to connect the new hardware. No active water lines serving adjacent properties bisect the Project Site, so there would be no potential to interrupt water service to adjacent properties (such as due to inadvertent damage of existing lines) during construction.

Although there appears to be significant pressures in the area, future development for any of the proposed Master Plan Project components would be required to verify if the existing system can supply adequate pressures and flows to and within the Medical Center Campus based on final development type and building fire flow requirements once specific details of such development are known. If future services are anticipated to be taken off of six-inch or eight-inch mains in the street, additional fire flow tests would need to be conducted from hydrants connected to the mains that are anticipated for connection to verify the pressure and flow in the system at that location. Such tests and verification would be carried out by the affected agency, including Cal Water, the Los Angeles County Department of Public Works, and/or LADWP, as applicable, in order to demonstrate that capacity exists. Should system improvements be necessary to achieve adequate capacity for proposed uses, such improvements would be carried out as part of the overall construction effort for those Master Plan Project improvements.

County of Los Angeles Fire Department (LACFD) personnel indicated that the on-site fire flow requirement would be determined using Table B105.1 from the California Fire Code. The maximum required fire flow established in Table B105.1 is 6,000 gallons per minute (gpm) at 20 pounds per square inch residual pressure for type IA, IB, IIA, and IIIA building construction types. The maximum required fire flow for type IIB, IIIB, IV, V-A, and V-B building construction is 8,000 gpm as 20 psi residual pressure. Required fire flows are also based on building square footages. The County of Los Angeles Fire Code allows for a 50-percent reduction of the required fire flows for buildings as approved by the fire department on a project-by-project basis. Hydraulic modeling of the on-site and off-site water distribution systems will be required by LACFD for new building construction on the Medical Center Campus as part of the Master Plan Project. Similar to non-fire flow-related improvements, any necessary construction to provide adequate fire flow infrastructure would be carried out as part of overall Master Plan Project construction activities, which would be largely limited to the Medical Center Campus itself.

Overall, the environmental effects associated with trenching and other activities required to install and connect the on-site water system are addressed as part of the larger construction-related impacts of the proposed Project in the appropriate impact sections of this Draft EIR (e.g., Sections 4.B., Air Quality, 4.E., Geology and Soils, 4.G., Hydrology and Water Quality, etc.). No additional environmental effects would occur beyond short-term construction-related effects as once constructed these facilities would operate passively with little, if any, operational activity needed. As such, impacts related to water distribution infrastructure would be less than significant.

(2) Water Supply

Threshold WS-2: Would the Project have insufficient reliable water supplies available to serve Project demand from existing entitlements and resources, considering existing and projected water demands from other land uses?

Impact Statement WS-2: *Implementation of the proposed Master Plan Project would not result in a demand for water that would exceed projected available supplies. As such, impacts would be less than significant.*

(a) Harbor-UCLA Medical Center Project and Dominguez System Demand Comparison

Table 4.M.1-25, *Dominguez System and Harbor-UCLA Medical Center Net New Project Potable Water Demands (AF)*, below, summarizes the Dominguez system and Master Plan Project projected potable water demands in five-year increments. Since the Harbor-UCLA Medical Center Master Plan Project was not explicitly part of the projected increase in Dominguez system demand, the water demands of previously anticipated development and the Master Plan Project are combined for the purposes of assessing the additive demands of the Project and other demand sources in the service area. As shown in Table 4.M.1-25, in 2025, projected Harbor-UCLA Medical Center project water demand would cause an increase in Dominguez system demand of 54 AF, compared to 31,221 AF from previously anticipated development, or only 0.17 percent of total demand in the service area. In 2030, projected Master Plan Project water demand would cause an increase in Dominguez system demand of 251 AF, compared to 31,567 AF for all other development, or an increase of 0.8 percent.

Table 4.M.1-25

Dominguez System and Harbor-UCLA Medical Center Net New Project Potable Water Demands (AF)

	2015	2020	2025	2030	2035	2040
Dominguez System	31,291	30,884	31,221	31,567	31,910	32,260
Harbor-UCLA Master Plan Project	0	0	54	251	251	251
Combined Demand	31,291	30,884	31,275	31,818	32,161	32,511

Source: California Water Service Company, 2016

As stated above, the Harbor-UCLA Master Plan Project's increase in demand is not considered part of the demand forecast for the Dominguez system; therefore, it was treated in the WSA as additive since the total projected increase in demand from 2025 to 2030 for the Dominguez system is 346 AFY while the Harbor-UCLA Medical Campus project increase is 197 AFY, or approximately 57 percent of the Dominguez system increase. Nonetheless, based on the information and analysis presented in the Project WSA, the Harbor-UCLA Master Plan Project demand in 2030 represents only 0.8 percent of total Dominguez system demand, and therefore implementation of the Master Plan Project would not affect the ability of Cal Water to provide an adequate supply to meet water demands in the Project's service area. As such, impacts to water supply would be less than significant.

e. Cumulative Impacts

(1) Water Infrastructure

The related projects identified in Chapter 3.0, General Description of Environmental Setting, of this Draft EIR, located in various jurisdictions in the vicinity of the Medical Center Campus and thus many are not located within Cal Water's Dominguez system service area. Nonetheless, each related project would be reviewed by Cal Water, LADWP, or other water service provider that operates and maintains water conveyance infrastructure within each respective service area, to ensure its infrastructure could adequately serve those projects. Because of this circumstance and because the same infrastructure is not anticipated to serve the Project and many of the related projects, the Master Plan Project, considered together with the related projects, is not anticipated to have a cumulatively considerable contribution to cumulatively significant impacts on water infrastructure.

(2) Water Supply

With respect to cumulative water supply impacts, the Project-specific analysis presented above also represents the cumulative analysis because it considers water demand and supply within the whole of Cal Water's Dominquez system service area at Project buildout in 2030. While many of the related projects are located outside the Cal Water Dominquez system service area, and thus would not contribute to cumulative water demands on this system, those that are within the Master Plan Project service area are anticipated to have been included in the overall growth projections utilized in the 2010 UWMP. Per the Project WSA,

because cumulative plus Project water demand in 2030 would not exceed Cal Water's 2030 water supply projections in light of anticipated demands, the contribution to cumulative water supply impacts of the proposed Master Plan Project would not be cumulatively considerable. More specifically, as discussed in the Project WSA, based on (1) the adequacy of existing and planned supplies from WBMWD and MWD, (2) plans to construct new wells and maintain existing wells including constructing treatment facilities to address water quality issues where needed in order to fully utilize its adjudicated groundwater rights, (3) plans to continue to participate in MWD's in-lieu storage program for increasing basin groundwater storage for use during drought periods, (4) plans to increase use of recycled water from WBMWD, (5) in-place, ongoing and planned expanded water conservation programs and best management practices for reducing demand during normal and single and multiple dry years, (6) continuing participation in regional supply programs sponsored by WBMWD and MWD, (7) success in obtaining increased reductions in water use during multiple dry years by implementing its four-stage water demand reduction program, and (8) ninety years of experience in continuously providing an adequate supply to meet demands during normal, single and multiple dry years in the Dominguez service area, Cal Water concludes that for the next 24 years (2016 – 2040), the Dominguez system will have adequate water supplies to meet projected demands associated with the proposed Master Plan Project and those of all existing customers and other anticipated future customers for normal, single dry year and multiple dry year conditions.

4. MITIGATION MEASURES

With the implementation of Project water system improvements, potential impacts on the water distribution system and water supply would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts with regard to water infrastructure and water supply as a result of implementation of the Master Plan Project would be less than significant.

4. ENVIRONMENTAL IMPACT ANALYSIS
M. UTILITIES AND SERVICE SYSTEMS
2. WASTEWATER

1. INTRODUCTION

This section addresses potential impacts on existing wastewater infrastructure and treatment facilities and analyzes whether sufficient capacity is available to serve Project demand. This section incorporates information from the Los Angeles County 2035 General Plan Update Public Services and Facilities Element (Public Services Element, 2015) and associated EIR (2015), and other County plans and available information available through the Sanitation Districts of Los Angeles County's website.[1]

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Wastewater Treatment and Collection Services

The Sanitation Districts of Los Angeles County (LACSDs) are a partnership of 24 independent special districts that serve the wastewater and solid waste management needs of approximately 5.5 million people in Los Angeles County. The LACSDs' service area covers approximately 824 square miles and encompasses 78 cities and unincorporated territory within the County.[2] Within the LACSDs' service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and County that are tributary to the Sanitation Districts' wastewater collection system. The LACSDs own, operate, and maintain approximately 1,400 miles of sewers, ranging from 8 to 144 inches in diameter, that convey approximately 500 million gallons per day of wastewater to 11 wastewater treatment plants.[3] Included in the LACSDs' wastewater collection system are 48 active pumping plants located throughout the County. The LACSDs' service area includes wastewater collection systems located within the Joint Outfall System, the Santa Clarita Valley, and the Antelope Valley. The Project Site is located within the service area of the Sanitation Districts' Joint Outfall System for wastewater collection and the Joint Water Pollution Control Plan (JWPCP), located in the City of Carson, approximately 1.5 miles south of the Project Site, for wastewater treatment.

Sanitary wastewater is treated in the following three phases:[4]

- Primary Treatment: removal of solids using settling tanks
- Secondary Treatment: reduction of organic matter using bacteria and oxygen; followed by further removal of solids

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1 *Sanitation Districts of Los Angeles County. http://www.lacsd.org/*

2 *Sanitation Districts of Los Angeles County. Wastewater Collection Systems. Available at: http://www.lacsd.org/wastewater/wwfacilities/wcs.asp. Accessed February 2016.*

3 *Ibid.*

4 *Sanitation Districts of Los Angeles County. Wastewater Treatment and Water Reclamation. Available at: http://www.lacsd.org/wastewater/wwfacilities/moresanj.asp. Accessed February 2016.*

- Tertiary Treatment: filtration of wastewater to remove any solids remaining after the first two phases of treatment

Most wastewater that undergoes tertiary treatment is disinfected after tertiary treatment. Disinfection methods include chlorine bleach and ultraviolet light. Tertiary-treated wastewater is often reused (i.e. recycled) for landscape and agricultural irrigation, groundwater recharge, and industrial uses.[5]

(2) Wastewater Treatment Facilities

As noted above, the Project Site is served by the Joint Water Pollution Control Plant (JWPCP), which is located at 24501 S. Figueroa Street in the City of Carson, approximately 1.5 miles south of the Project Site. The plant occupies approximately 420 acres to the east of the Harbor (110) Freeway. The JWPCP is one of the largest wastewater treatment plants in the world and is the largest of the LACSDs' wastewater treatment plants. The facility provides both primary and secondary treatment for approximately 280 million gallons of wastewater per day (mgd), and has a total permitted capacity of 400 mgd.[6]

Solids collected in Primary Treatment and Secondary Treatment are processed in anaerobic digestion tanks where bacteria break down organic material and produce methane gas. After digestion, the solids are dewatered at Solids Processing and hauled off-site to composting, land application, and landfill disposal. Methane gas generated in the anaerobic digestion process is used to produce power and digester heating steam in a Total Energy Facility that utilizes gas turbines and waste-heat recovery steam generators. The on-site generation of electricity permits the JWPCP to produce most of its electricity.[7]

The plant serves a population of approximately 3.5 million people throughout Los Angeles County. Prior to discharge, the treated wastewater is disinfected with sodium hypochlorite and sent to the Pacific Ocean through a network of outfalls. These outfalls extend 1.5 miles off the Palos Verdes Peninsula to a depth of 200 feet.[8]

(3) Wastewater Conveyance Facilities

The public sewer system in the Project Site vicinity is owned and maintained by LACSD. Several large trunk sewers exist around the perimeter of the Project Site including a 90-inch and a 63-inch sewer in Normandie Avenue, a 63-inch sewer within the easement at the southern end of the Project Site, a 55-inch sewer that runs through roughly the center of the Campus site within the abandoned Meyler Street Alignment (Joint Outfall D, Unit 8), a 66-inch, 78-inch, and eight-inch sewer in Vermont Avenue, and a 66-inch sewer in Carson which eventually turns to the north just west of Berendo Street.[9]

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5 *County of Los Angeles. Los Angeles County General Plan Update Draft EIR. Page 5.17-2.*

6 *Sanitation Districts of Los Angeles County. Joint Water Pollution Control Plant (JWPCP). Available at: http://www.lacsd.org/wastewater/wwfacilities/jwpcp/default.asp. Accessed February 2016.*

7 *Ibid.*

8 *Ibid.*

9 *Perkins+Will. Harbor-UCLA Campus Master Plan. Engineering Background: Sewer. Page 66.*

Review of the existing on-site sewer plans and conversations with Harbor-UCLA facilities staff indicate that the portion of the site east of Central Drive, approximately 25 percent of the Campus area, including the existing Hospital, Central Plant, and cooling tower is served by sewer mains in Vermont Avenue, 220th Street, and Carson Street.[10] The remaining 75 percent of the Campus area, located west of Central Drive, is served by an on-site sewer network that discharges to the LACSDs' Joint Outfall D, Unit 8 trunk sewer through a single point of connection. Harbor-UCLA facilities staff has indicated that there are currently no capacity issues with the on-site sewer system and that the pipes are in good condition.[11] The sizes of the on-site main lines are currently unknown.

However, the LADSDs have a will-serve process which includes published estimated loadings for sanitary sewers based on land uses. In a letter dated August 24, 2011, the District indicated that the Joint Outfall D Unit 8 trunk sewer has a capacity of 28.4 mgd and a measured peak flow rate of 17.0 mgd as of 2008.[12]

(4) Existing Wastewater Generation

Existing uses on the Medical Center Campus currently generate wastewater, which is conveyed by existing sewers in the Project Site vicinity and treated at the JWPCP in the City of Carson. Existing wastewater generation on-site is summarized below in **Table 4.M.2-1**, *Existing Wastewater Generation*, which is based on sewage generation factors provided by both LACSDs and the City of Los Angeles (where LACSDs generation factors are not provided for specific land uses). As shown in Table 4.M.2-1, existing uses on the Medical Center Campus currently generate approximately 171,646 gallons per day (gpd) or 0.176 mgd of wastewater.

b. Regulatory Framework

(1) Federal

Wastewater treatment before effluent is discharged to Waters of the United States is required by the federal Clean Water Act (CWA), United States Code, Title 33, Sections 1251 et seq. The federal Clean Water Act is described in further detail in Section 4.G., *Hydrology and Water Quality*, of this Draft EIR.

(2) State

In California, State Water Resources Control Board (SWRCB) is responsible for ensuring the highest reasonable quality of waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The 1969 Porter-Cologne Water Quality Control Act, codified in the California Water Code, authorizes the SWRCB to implement programs to control polluted discharges into State waters. This law essentially implements the requirements of the CWA. Pursuant to this law, the local Regional Water Quality Control Board (RWQCB) is required to establish the wastewater concentrations of a number of specific hazardous substances in treated wastewater discharge. The Los Angeles RWQCB regulates wastewater discharges and water quality in the southern/coastal portions of Los Angeles County, including the Project Site.

[10] *Ibid.*

[11] *Ibid.*

[12] *Ibid.*

Table 4.M.2-1

Existing Wastewater Generation

Land Use	Generation Factor [a]	Units (beds, s.f.)	Wastewater Generation (gpd)	Wastewater Generation (mgd)
Existing Uses				
Administrative Office	200 gpd/ksf	23,435 s.f.	4,687	0.005
Day-Care Center	200 gpd/ksf	4,360 s.f.	872	0.001
Central Utilities/Industrial /Infrastructure	170 gpd/ksf	112,719 s.f.	19,162	0.019
Hospital/Inpatient	70 gpd/bed	453 beds [b]	26,110	0.026
Library	80 gpd/ksf	22,500 s.f.	1,800	0.002
Medical Office/Outpatient	300 gpd/ksf	327,304 s.f.	98,191	0.098
Biomedical Research & Development	250 gpd/ksf	94,754 s.f.	23,689	0.024
Warehouse/Storage	25 gpd/ksf	45,402 s.f.	1,135	0.001
Retail	150 gpd/ksf	0 s.f.	-	-
Total Existing Wastewater Generation			***171,646***	***0.176***

Notes: ksf = thousand square feet s.f. = square feet gpd = gallons per day mgd = million gallons per day

[a] *Factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions, Table 3.15-6 of the LAC+USC Draft Environmental Impact Report, as well as in Table M.2-12, Sewage Generation Factors, of the Los Angeles CEQA Thresholds Guide (2006)..*

[b] *Although the existing Hospital is licensed for 453 beds, only 373 beds are currently staffed, and thus only these beds would count toward existing solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

(3) County

(a) Los Angeles County General Plan

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element. Applicable goals and polices from this Element are identified below:

- **Policy PS/F 4.1:** Encourage the planning and continued development of efficient countywide sewer conveyance treatment systems.
- **Policy PS/F 4.2:** Support capital improvement plans to improve aging and deficient wastewater systems, particularly in areas where the General Plan encourages development, such as TODs.

(b) Los Angeles County Wastewater Ordinance

The Los Angeles County Wastewater Ordinance was enacted pursuant to authority contained in the County Sanitation District Act, California Health and Safety Code Sections 4700 through 4859, and exercises authority conferred by law including but not limited to Health and Safety Code Sections 5400 through 5474, and California Government Code Sections 54725 through 54740. The purpose of this Ordinance is 1) to

protect the environment and public health; 2) to provide for the maximum possible beneficial public use of the LACSDs' sewerage facilities through adequate regulation of sewer construction, sewer use and industrial wastewater discharges; 3) to provide for equitable distribution of the LACSDs' costs; and 4) to provide procedures for complying with requirements placed upon the LACSDs by other regulatory agencies. The provisions of the Ordinance apply to all direct or indirect discharges, including the discharge of all wastewater, to any part of the sewerage systems of the LACSDs, or to other sewerage systems tributary to the LACSDs' sewerage system. The provisions of the Ordinance also apply to wastewater originating outside the territorial boundaries of the LACSDs or outside the boundaries of Los Angeles County if such wastewater eventually enters the LACSDs' sewerage system. The Ordinance, among other things, regulates sewer construction and provides for the approval of plans for sewer construction and implements federal and state pollution control regulations. The Ordinance also provides for the issuance of permits, including Permits for Industrial Wastewater Discharge, prohibits the discharge of certain wastes, and regulates the quantity and quality of other waste discharges. Further, the Ordinance imposes wastewater pretreatment requirements upon waste dischargers and provides for the regulation of the degree of such pretreatment. Lastly, the Ordinance provides for the filing of Wastewater Treatment Surcharge Statements, imposes fees and charges, and provides for the distribution of revenue. Violations of this Ordinance are subject to criminal fines and penalties, civil liabilities and other penalties in accordance with law.

(c) Los Angeles County Connection Fee Ordinance and Program

Capital improvements to LACSDs' water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the LACSDs' sewerage system or by existing users that significantly increase the quantity or strength of their wastewater discharge. The Connection Fee Program ensures that all users pay their fair share for any necessary expansion of the system. Estimated wastewater generation factors used in determining connection fees in the LACSDs' 22 member Districts are set forth in the Connection Fee Ordinance for each respective District available on LACSDs' website. The purpose of the Ordinance is to impose fees for the privilege of connecting facilities to the sewerage system or for the privilege of increasing the strength or quantity of wastewater discharged into connected facilities, and to provide for the collection of those fees. Revenue derived under the Ordinance is used for expansion of the LACSDs' capital facilities and to fund loans as provided for in the Ordinance.

The LACSDs are empowered to fix fees or charges for the privilege of connecting directly or indirectly to the sewerage system and to prescribe, revise, and collect fees, tolls, rates, rentals, or other charges for services and facilities furnished by the LACSDs pursuant to California Health & Safety Code Section 5471. The revenue derived under the Ordinance is in addition to all revenue otherwise collected by or on behalf of the LACSDs including, but not limited, to ad valorem taxes, federal and state grants and loans, bond revenue, contract revenue, investment income, annexation fees, service charges, and wastewater treatment surcharges imposed under the Wastewater Ordinance (see discussion above).

3. ENVIRONMENTAL IMPACTS

a. Methodology

The wastewater generation of the proposed Project was estimated using wastewater generation factors contained in Table 1, *Loadings for Each Class of Land Use*, provided by the LACSDs, as well as factors provided

by the City of Los Angeles Bureau of Sanitation (for those land uses for which the LACSDs' table provides no generation factors). The amount of wastewater generated from the existing uses was determined based on these factors. The amount of wastewater generated by the proposed uses was then calculated. The amount of wastewater generated by existing uses was subtracted from the Project's wastewater generation to determine the net increase in wastewater that would occur at the Project Site. The Project's estimated increase in wastewater flow is compared to the existing conditions to assess the capacity of the existing sewer system and the ability of the system to accommodate the additional flows. In order to evaluate treatment capacity, the Project's estimated wastewater generation and projected average dry water flow is compared with the available treatment capacity at the JWPCP in the City of Carson. Cumulative wastewater generation is also compared with the available capacity of the LACSDs' treatment system using the average dry weather flow.

b. Thresholds of Significance

The potential for wastewater impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the CEQA Guidelines. These questions are as follows:

(XVIII) Utilities and Service Systems. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In consideration of the above factors, the following thresholds are utilized to determine if the Project would result in potentially significant impacts on wastewater services and facilities if it would result in any of the following:

WW-1: Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

WW-2: Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

WW-3: Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that is has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

c. Project Characteristics

As under existing conditions, the LACSDs will continue to be the primary provider of sanitary sewer service to the Medical Center Campus. In addition, it is anticipated the trunk sewers that currently exist around the

perimeter of the Project Site and through the Medical Center Campus will remain throughout and following implementation of the Master Plan Project. The proposed sanitary sewer conveyance system will closely match the existing conveyance system and consist of a network of sewer pipes generally located within the primary vehicular circulation areas. Please see **Figure 4.M.2-1**, *Proposed Sewer Infrastructure*, below, for an illustration of proposed sewer improvements on the Medical Center Campus.

As with the existing system, it is anticipated that approximately 75 percent of the existing Medical Center Campus, including the New Hospital Tower, LA BioMed Campus, Bioscience Tech Park, and proposed outpatient clinics will continue to be served by an on-site sewer network that discharges to Sanitation District Joint Outfall D, Unit 8 trunk sewer in the old Meyer Street right-of-way through a single point of connection. The existing connection may be used until such time a new connection might be warranted with development of the proposed Central Plant and back-of-house operations at the Medical Center Campus. The remaining 25 percent of the campus area, including the PCDC, existing tower and Surgery and Emergency Room Replacement Project will likely still continue to be served by sewer mains in Vermont Avenue, 220th Street, and Carson Street.

d. Project Impacts

Threshold WW-1: Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Threshold WW-2: Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects**?**

Threshold WW-3: Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Impact Statement WW-1: *Although construction and operation of the Project would result in an increase in wastewater generation that would increase the overall demands on wastewater conveyance and treatment facilities in the area, this increase would not exceed the available capacity of affected wastewater facilities and thus would not, directly or indirectly, result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater conveyance and treatment would be less than significant.*

(1) Construction

Construction of the proposed Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. Construction relative to the wastewater system for the Project would occur at the Project site and immediate vicinity. The design of these connections would be developed by a professional engineer and approved by the County Department of Public Works (DPW). In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to

achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs.

During construction of the proposed Project, which would occur in several phases intermittently through year 2030, a negligible amount of wastewater would be generated by construction workers. It is anticipated that portable toilets would be provided by the construction contractor(s) and the waste disposed of off-site. Wastewater generation from construction activities is not anticipated to cause a measurable increase in wastewater flows at a point where, and at a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained. In addition, construction is not anticipated to generate wastewater flows that would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the County's General Plan or other wastewater facilities planning documents. Therefore, construction impacts to the wastewater conveyance and treatment system serving the Project Site would be less than significant.

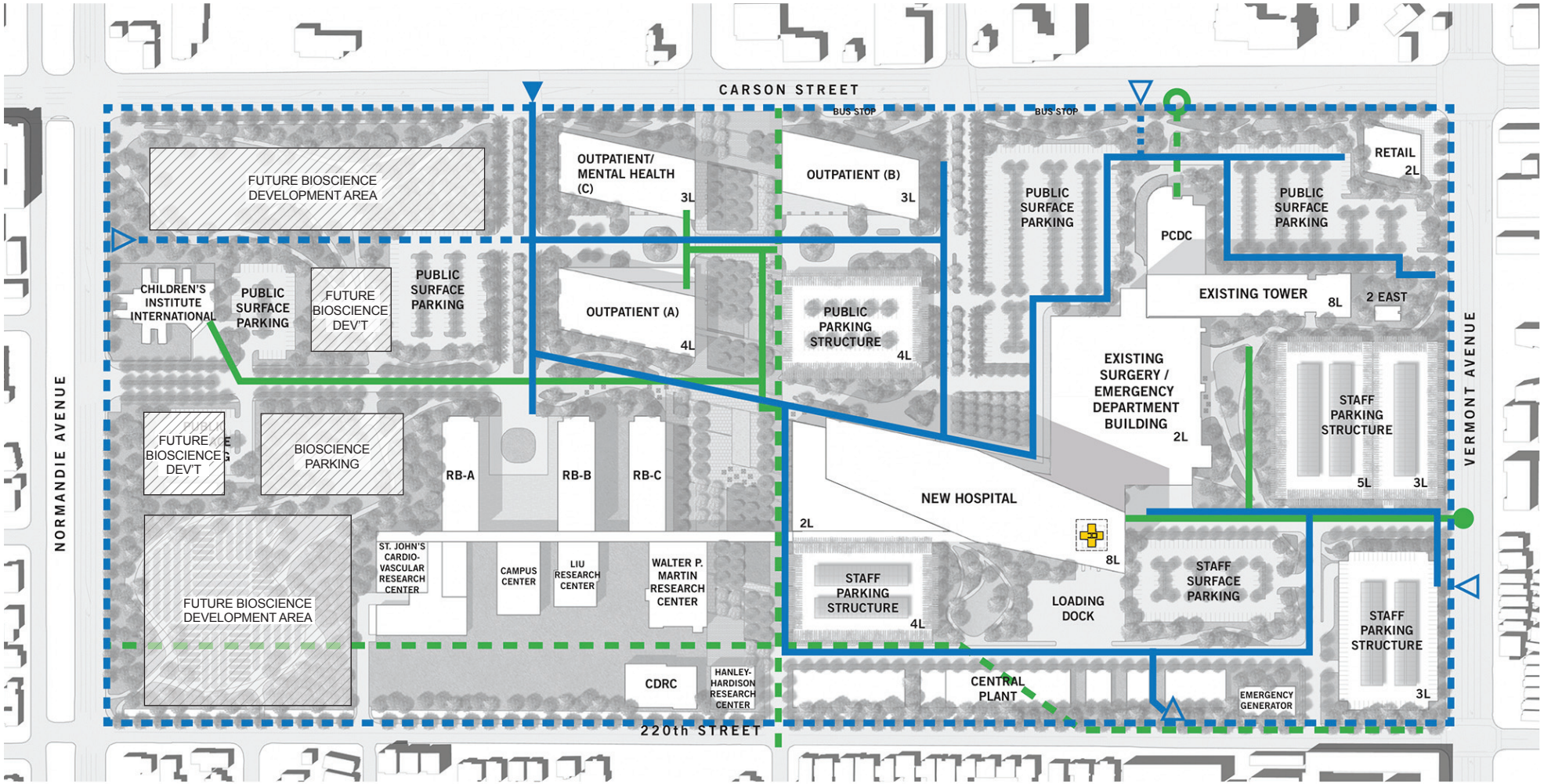
(2) Operation

The Project site would continue to be served by existing County water and utility lines, including sewer lines. As indicated in **Table 4.M.2-2,** *Wastewater Generated During Operation*, the proposed Project would result in an estimated average daily wastewater generation of approximately 343,644 gpd (0.344 mgd). However, subtracting the existing generation of 171,646 gpd (0.172 mgd), the Project would result in a net increase of 171,998 gpd (0.172 mgd) of wastewater generation over existing conditions.

The proposed increase of 171,998 gpd that would result from Project implementation would represent 0.143-percent of JWPCP's total remaining capacity of 120 mgd. Thus, given the amount of wastewater generated by the proposed Project and existing wastewater treatment capacity, notwithstanding any future wastewater treatment capacity that may be implemented before Project buildout in year 2030, adequate wastewater capacity would be available to serve the proposed Project. Based on the above, the Project would not result in an increase in wastewater flows that would result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater treatment and infrastructure would be less than significant.

e. Cumulative Impacts

Chapter 3.0, General Description of Environmental Setting, of this Draft EIR identifies 26 related projects located in the vicinity of the Project Site. Although not all the wastewater generated by the various related projects is conveyed to the JWPCP for treatment, all the related projects were included in this cumulative analysis in order to present a conservative estimate of potential cumulative wastewater generation and associated impacts. As shown in **Table 4.M.2-3,** *Estimated Cumulative Wastewater Generation*, the estimated wastewater generation associated with related projects on average is approximately 1,041,437 gpd (1.041 mgd). The proposed Project would contribute an additional 171,998 gpd (0.172 mgd). The estimated generation for the proposed Project and the related projects would be a combined total of approximately 1,213,435 gpd (1.214 mgd). As discussed above, the JWPCP has a current treatment capacity of 400 mgd and a current average dry water flow of approximately 280 mgd. The cumulative wastewater generation from



LEGEND

- EXISTING SEWER SYSTEM
- PROPOSED SEWER SYSTEM
- EXIST. POINT OF CONNECTION
- PROPOSED POINT OF CONNECTION
- EXISTING WATERLINE
- PROPOSED WATERLINE
- EXISTING WATER POINT OF CONN.
- PROP. WATER POINT OF CONN

PCR

N

0 400 Feet

Proposed Sewer Infrastructure

Harbor-UCLA Medical Center Master Plan

Source: Fehr & Peers, 2016.

FIGURE

4.M.2-1

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Table 4.M.2-2

Wastewater Generated During Operation

Land Use	Generation Factor [a]	Units (beds, s.f.)	Wastewater Generation (gpd)	Wastewater Generation (mgd)
Proposed Uses				
Administrative Office	200 gpd/ksf	130,635 s.f.	26,127	0.026
Day-Care Center	200 gpd/ksf	4,360 s.f.	872	0.001
Central Utilities/Industrial /Infrastructure	170 gpd/ksf	129,205 s.f.	21,965	0.022
Hospital/Inpatient	70 gpd/bed	446 beds [b]	26,530	0.027
Library	80 gpd/ksf	0 s.f.	-	-
Medical Office/Outpatient	300 gpd/ksf	480,500 s.f.	144,150	0.144
Biomedical Research & Development	250 gpd/ksf	475,000 s.f.	118,750	0.119
Warehouse/Storage	25 gpd/ksf	0 s.f.	-	-
Retail	150 gpd/ksf	35,000 s.f.	5,250	0.005
Total Proposed Wastewater Generation			***343,644***	***0.344***
Total Existing Wastewater Generation			***171,646***	***0.172***
Net Increase			**171,998**	**0.172**

Notes: ksf = thousand square feet s.f. = square feet gpd = gallons per day mgd = million gallons per day

[a] *Factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions, Table 3.15-6 of the LAC+USC Draft Environmental Impact Report, as well as in Table M.2-12, Sewage Generation Factors, of Los Angeles CEQA Thresholds Guide (2006).*

[b] *Although the New Hospital would be licensed for 446 beds (as currently proposed), only 379 beds are expected to be staffed, and thus only these beds would count toward future solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

the 26 related projects and the proposed Project, therefore, would represent just over one percent of the current 120 mgd of available treatment capacity at the JWPCP. The average flow projections in conjunction with the cumulative wastewater estimate from related projects represents a conservative analysis as the average dry water flow projections already take into account future population growth, including growth such as that represented by related projects. Furthermore, as with the proposed Project, these estimates do not account for reductions in wastewater generation that would occur with implementation of conservation measures. As the proposed Project, in conjunction with related project development, would not cause an increase in wastewater flows that would result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, cumulative wastewater impacts would be less than significant.

Table 4.M.2-3

Estimated Cumulative Wastewater Generation

Land Uses	Quantity (units/ rooms/ square feet)	Wastewater Generation Factor [a]	Wastewater Generated (gpd)	Wastewater Generated (mgd)
Related Projects				
Multifamily Residential [b]	2,769	195 gpd/unit	539,955	0.540
Single Family Residential	66	260 gpd/unit	17,160	0.017
Retail	1,580,640	150 gpd/ksf	237,096	0.237
Auto Dealer and Service Station [c]	10,198	100 gpd/ksf	1,020	0.001
Office	480	200 gpd/ksf	96	0.001
Medical Office [d]	11,340	300 gpd/ksf	3,402	0.003
Hotel	300	125 gpd/room	37,500	0.038
Restaurant	81,125	1,000 gpd/ksf	81,125	0.081
Other Services [e]	296,800	350 gpd/ksf	103,880	0.104
Manufacturing/Warehouse	84,015	200 gpd/ksf	16,803	0.017
Industrial	17,000	200 gpd/ksf	3,400	0.003
Total Related Projects			**1,041,437**	**1.042**
Proposed Project (Net Increase)			**171,998**	**0.172**
Cumulative Wastewater Generation			**1,213,435**	**1.214**

Notes: ksf = thousand square feet s.f. = square feet gpd = gallons per day mgd = million gallons per day

[a] *Factors provided in Table 1, Loadings for Each Class of Land Use, of the LACSDs' Will Serve Program Instructions, Table 3.15-6 of the LAC+USC Draft Environmental Impact Report, as well as in Table M.2-12, Sewage Generation Factors, of Los Angeles CEQA Thresholds Guide (2006).*

[b] *Multifamily Residential includes apartments and condos, but higher condominium use factor is applied to be conservative.*

[c] *Auto Dealer and Service Station includes Automated Car Wash and Automobile Care Center.*

[d] *Medical Office uses wastewater generation factors for professional offices.*

[e] *Other services includes Public Venues, Recreation, and a Transit Center – used LACSDs Auditorium/Amusement factor to be conservative.*

Source: PCR Services Corporation, 2016.

4. MITIGATION MEASURES

With the implementation of Project wastewater system improvements and compliance with applicable County regulatory requirements regarding wastewater, potential impacts on the wastewater system would be less than significant. Therefore, no mitigation measures are required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Potential impacts with regard to wastewater as a result of implementation of the Project would be less than significant and no mitigation measures would be required.

4. ENVIRONMENTAL IMPACT ANALYSIS
M. UTILITIES AND SERVICE SYSTEMS
3. SOLID WASTE

1. INTRODUCTION

This section addresses potential impacts on existing and planned capacity of designated landfill sites and inert materials landfill sites; and whether sufficient capacity is available to serve Project demand. Consistency with applicable goals and programs to divert waste and increase recycling of the waste stream is also evaluated. This section incorporates information from the Los Angeles County 2035 General Plan Update Public Services and Facilities Element (Public Services Element, 2015) and associated EIR (2015), and other County plans and environmental documents, including the Los Angeles County Integrated Waste Management Plan 2014 Annual Report.

2. ENVIRONMENTAL SETTING

a. Existing Conditions

(1) Existing Site Conditions

The approximately 72-acre Project Site is currently occupied by the Harbor-UCLA Medical Center Campus and associated surface parking. Waste generation volumes from operations on a day-to-day basis vary as there are multiple waste sources throughout the Campus, ranging from medical and biohazardous waste, to everyday Municipal Solid Waste (MSW), such as food waste. As summarized below in **Table 4.M.3-1**, *Existing Solid Waste Generation*, it is estimated that the Harbor-UCLA Medical Center Campus currently generates approximately 1,817 tons of solid waste per year.[1] Harbor-UCLA Medical Center's Environmental Services Department is responsible for the collection, transportation, and processing of the existing Hospital's waste stream, which includes general waste, regulated medical waste, sharps containers, pharmaceutical waste, chemo waste, and pathogen waste.

(2) Solid Waste Disposal Services

(a) Countywide Collection Services

For many years, two-thirds of the unincorporated areas (primarily in the San Gabriel Valley and Antelope Valley Planning Areas), residential and commercial solid waste collection services were provided through an open-market system, whereby each resident/business directly arranged for trash collection services with no County involvement. Due to changes in federal and state laws regarding waste reduction, and changing public attitudes toward protecting the environment and increasing consumer demands for better service, the

[1] *The total estimated existing solid waste generation includes Regulated Medical Waste (RMW) or sharps containers, which are estimated to generate approximately 2,200 pounds per day (1.1 tons per day) per page H-23 of the Harbor-UCLA Master Plan Addendum. This translates to approximately 401.5 tons per year, which is included in the overall 1,817 tons per year of total solid waste generated on-site.*

Table 4.M.3-1

Existing Solid Waste Generation

Land Use	Generation Factor	Units (beds, s.f.)	Solid Waste Generation (lbs./day)	Solid Waste Generation (tons/year)
Existing Uses				
Administrative Office	6 lbs./ksf/day	23,435 s.f.	140.61	25.66
Day-Care Center	6 lbs./ksf/day	4,360 s.f.	26.16	4.77
Central Utilities/Industrial /Infrastructure	6 lbs./ksf/day	112,719 s.f.	676.31	123.43
Hospital/Inpatient	16 lbs./day/bed	453 beds [a]	5,968.00	1,089.16
Library	7 lbs./ksf/day	22,500 s.f.	157.50	28.74
Medical Office/Outpatient	6 lbs./ksf/day	327,304 s.f.	1,963.82	358.40
Biomedical Research & Development	6 lbs./ksf/day	94,754 s.f.	568.52	103.76
Warehouse/Storage	10 lbs./ksf/day	45,402 s.f.	454.02	82.86
Retail	6 lbs./ksf/day	0 s.f.	-	-
Total Existing Solid Waste Generation			***9,954.94***	***1,816.78***

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

[a] *Although the existing Hospital is licensed for 453 beds, only 373 beds are currently staffed, and thus only these beds would count toward existing solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

open-market system was unable to fully adapt to these conditions. In response, beginning in 2007, the Department of Public Works (DPW) gradually implemented a system establishing commercial and residential Garbage Disposal Districts (GDDs) to replace the open-market system. Garbage Disposal Districts (GDDs) are designated areas within the unincorporated areas where trash collection and disposal services are provided to both residents and businesses by a private waste hauler that contracts with DPW. Operational expenses are paid from revenues generated through special property tax assessments. To date, the County has established seven GDDs in the unincorporated areas in South Los Angeles and Malibu communities. Because the Harbor-UCLA Medical Center is owned and operated by DPW as a public facility, it is not part of a GDD.

(b) Harbor-UCLA Medical Center Campus Collection Services

The Los Angeles County DPW Environmental Services is responsible for the collection, transport and processing of the Medical Centers Campus' waste stream. The waste generated on-site includes 1) General Waste, 2) Regulated Medical Waste (RMW), 3) Sharps Containers, 4) Pharmaceutical Waste, 5) Chemo Waste, and 6) Pathological Waste.[2] All waste processing equipment and staging space is currently located at the loading dock area south of the recently completed Surgery and Emergency Room. The equipment consists of a sterilizer, a 40-cubic-yard compactor/container, and a cardboard baler. Regulated Medical Waste is currently sterilized in the sterilizer, and then added to the General Waste compactor/container. The 40-

[2] *Perkins+Will. Harbor-UCLA Campus Master Plan Addendum. June 2012. Page H-23.*

cubic-yard compactor/container is emptied four to five times per week. Twenty six (26) additional three-cubic-yard dumpsters are also located throughout the Medical Center Campus, which are emptied four days per week.[3]

(3) Regional Landfill Capacity

Regional planning for the provision of landfill services is provided by the County of Los Angeles which, in response to the California Integrated Waste Management Act of 1989, prepared and administers a Countywide Integrated Waste Management Plan (ColWMP). As part of its obligations, Los Angeles County continually evaluates landfill disposal needs and capacity through preparation of ColWMP Annual Reports. Within each annual report, future landfill disposal needs over the ensuing 15-year planning horizon are addressed, in part by determining the available landfill capacity.[4] As discussed in the Los Angeles County Countywide Integrated Waste Management Plan 2014 Annual Report (published in December 2015), due to lack of consumer demand for materials, slowdown in the construction industry, and the production and manufacturing of goods, the amount of waste that residents and business generated and disposed of in Los Angeles County has continued to decrease substantially since 2006 and has generally stayed even from 2009 through 2014. In 2014, Los Angeles County disposed of approximately 9 million tons of materials, compared to approximately 12 million tons in 2005.[5] Of that amount, the majority was accommodated by in-County Class III landfills (4.6 million tons), followed by exports to out-of-County landfills (3.7 million tons) and transformation facilities (562,685 tons).[6] The remaining disposal capacity for the County's Class III landfills is estimated at approximately 112 million tons as of December 31, 2014.[7] It is estimated that by year 2029, the cumulative demand for disposal capacity will have reached a total of approximately 99.8 million tons, or approximately 89 percent of the existing remaining capacity.[8] As such, projected cumulative County disposal demands would continue to be met even without the provision of additional disposal capacity at the various permitted facilities. However, as further discussed below, additional disposal capacity is being sought through a number of options, including in-County landfill expansions, exports to out-of-County facilities, and source reduction and recycling to ensure adequate capacity is maintained in the long-term.

Of the various landfills serving the County of Los Angeles, Sunshine Canyon Landfill is the largest recipient of non-hazardous MSW, i.e. Class III waste materials. This landfill received 2.4 million tons of solid waste in 2014, which accounts for approximately 27% of the total solid waste disposed in 2014.[9] This landfill had a remaining capacity 64.7 million tons in 2014, with an expected life expectancy of 23 years.[10]

The annual amount of disposed inert waste materials, such as earth, landscaping, concrete and asphalt, in 2014 was 315,884 tons. It is estimated that that this disposal amount represents the generation of

[3] *Ibid, Page H-23.*

[4] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015.*

[5] *Ibid, Page 5, Figure 1.*

[6] *Ibid, Page 24.*

[7] *Ibid, Page 31, Figure 20.*

[8] *Ibid, Appendix E-2, Table 5.*

[9] *Ibid, Page 27, Figure 5.*

[10] *Ibid, Page 31, Figure 20 and Page 32, Figure 21.*

approximately 21.9 million tons with a 60 percent diversion rate. As of 2014, the Azusa Land Reclamation is the only permitted Inert Waste Landfill in Los Angeles County with a full solid waste facility permit. The remaining capacity of this landfill is estimated at 59.8 million tons. Given the remaining permitted capacity and at the average disposal rate of 1,215 tons per day in 2014, this capacity would be exhausted in approximately 189 years. In addition to the County-permitted facility, there are a number of Inert Debris Engineered Fill Operation facilities operating under State permit provisions that provide additional capacity in the County, processing approximately 4.3 million tons in 2014.[11]

Aggressive waste reduction and diversion programs on a countywide level have helped reduce disposal levels at the County's landfills. As described in the Regulatory Framework section below, the County has prepared and is updating its Countywide Integrated Waste Management Plan, including annual reports and a master plan for meeting waste disposal needs over the next 20 years. The most recent Annual Report indicates that, as noted above, the County can adequately meet future Class III disposal needs through 2029 through scenarios that include a combination of all or some of the following: (1) expansion of existing in-County Class III landfills; (2) studying, promoting, and developing conversion technologies; (3) expansion of transfer and processing infrastructure; (4) development of a waste-by-rail system; and (5) maximization of waste reduction and recycling.[12]

(4) County Recycling Efforts

As discussed further below in the regulatory discussion, the County of Los Angeles has numerous plans, policies and regulations that address the future provision of solid waste services and reductions of the solid waste stream. These waste reduction measures increased recycling goals for the County and State (e.g., AB341's goal of reduce, recycle, or compost at least 75 percent of solid waste that would go to landfills by 2020) and require monitoring activities to attain the recycling goals. Multiple cities within the County have already achieved an earlier goal of achieving a 50% waste reduction to landfills. The County Department of Public Works' Clean LA Program provides multiple initiatives to recycle waste, including the SmartBusiness Recycling Program, Construction and Demolition Debris Recycling and Reuse Program, and the Los Angeles County Materials Exchange.[13] The 2014 Los Angeles County Integrated Waste Management Plan indicates that in 2014, the County generated approximately 21.9 million tons of potential solid waste. Of this total, the County diverted 13.1 million tons (or approximately 60%) from disposal into landfills.[14]

b. Regulatory Framework

(1) State of California

(a) Assembly Bill 939 - California Integrated Waste Management Act of 1989

The State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939) to improve solid waste disposal management with respect to (1) source reduction, (2) recycling and composting, and

[11] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015.*

[12] *Ibid, Page 50.*

[13] *http://dpw.lacounty.gov/epd/cleanla/3Rs.aspx*

[14] *Ibid, Page 25.*

(3) environmentally safe transformation and land disposal. AB 939 mandates jurisdictions to meet a diversion goal of 25 percent by 1995 and 50 percent by 2000.[15]

AB 939 requires that all counties have to prepare a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP had to include had to include a Source Reduction and Recycling Element (SRRE) to address waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste (asbestos, sewage sludge, etc.), and household hazardous waste. The CIWMP also had to include a Nondisposal Facility Element (NDFE) to identify nondisposal facilities to be used in order to assist counties in reaching AB 939's diversion mandates. Nondisposal facilities include material recovery facilities, transfer stations, large-scale composting facilities, and other facilities that require a solid waste facility permit. Lastly, the CIWMP has to include a Household Hazardous Waste Element (HHWE) to reduce the amount of hazardous household waste generated and to provide the County with convenient collection services and promote waste minimization/reduction techniques. It also requires counties to develop a Siting Element that addresses how each county, and cities within that county, will manage their solid waste disposal over 15-year planning periods. The Siting Elements also include goals and policies to ease the use of out-of-County/remote landfills and foster the development of alternatives to landfill disposal (e.g. conversion technologies). See further discussion of the Los Angeles County Siting Element below under Los Angeles County regulations. Oversight of these activities was set up under the charge of the California Integrated Waste Management Board (CIWMB). The duties and responsibilities of CIWMB were transferred to the California Department of Resources, Recycling, and Recovery (CalRecycle) as of January 1, 2010.

(b) Assembly Bill 1327 - California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), passed on October 11, 1991, required CalRecycle to develop a model ordinance for adoption of recyclable materials in development projects by March 1, 1993. Local agencies were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects by September 1, 1993. If, by that date, a local agency had not adopted its own ordinance, the model ordinance adopted by the CalRecycle took effect and shall be enforced by the local agency.

(c) Senate Bill 1374 – Construction and Demolition Waste Materials Diversion Requirements

Senate Bill 1374 was signed into law in 2002 to assist jurisdictions with diverting their construction and demolition (C&D) waste material. The legislation requires that the CIWMB complete five items in regards to the diversion of construction and demolition waste: (1) adopt a model ordinance for diverting 50 percent to 75 percent of all construction and demolition debris from landfills; (2) consult with multiple regulators and waste entities (e.g. California State Association of Counties, private and public waste services, building construction materials industry, etc.) during the development of the model ordinance; (3) compile a report on programs that can be implemented to increase diversion of C&D debris; (4) post a report on the agency's website for general contractors on methods that contractors can use to increase diversion of C&D waste materials; (5) post on the agency's website a report for local governments with suggestions on programs to

[15] *https://www.edcgov.us/Government/EMD/SolidWaste/The_Intergrated_Waste_Management_Act_AB_939.aspx*

increase diversion of C&D waste materials. The model ordinance was adopted by CalRecycle on March 16, 2004.

(2) Los Angeles County

(a) Countywide Integrated Waste Management Plan (ColWMP)

Pursuant to AB 939, each County is required to prepare and administer a Countywide Integrated Waste Management Plan (the aforementioned ColWMP), including preparation of an Annual Report. The ColWMP, per AB 939, is to comprise of the various counties' and cities' solid waste reduction planning documents, plus an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element (CSE). The Summary Plan describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. The County's Department of Public Works is responsible for preparing and administering the Summary Plan and the CSE. The Summary Plan for the Count was approved by CalRecycle on June 23, 1999. The CSE was approved by CalRecycle on June 24, 1998. A revised CSE was completed in 2012. An EIR for this document was scheduled to be released for public review in early 2016, but as of March 2016 the document has not been published.

In addition, as part of its regulatory efforts, the County has prepared a long-term master plan which describes how the County will manage solid waste through the year 2050. The 2050 Plan identifies measures to meet the landfill needs over the time horizon and includes such measures as conserving in-County disposal capacity, implementing waste diversion programs, fostering alternatives to landfills, and identifying funding resources to carry out the plan.

(b) Construction and Demolition (C&D) Debris Recycling and Reuse Program

On January 4, 2005, the County of Los Angeles Board of Supervisors adopted the C&D Debris Recycling and Reuse Ordinance which added Chapter 20.87 to the Los Angeles County Code. The ordinance requires projects to recycle or reuse 50 percent of the debris generated. The ordinance is meant to increase the diversion of construction and demolition debris from disposal facilities to assist California's statewide waste reduction mandates.

Los Angeles County adopted the Green Buildings Standard Code, which became effective on January 1, 2011. The Code enforces more stringent provisions for all construction and demolition projects after January 1, 2011; non-residential projects must recycle a minimum of 50 percent of the debris generated by weight.

(c) Roadmap to a Sustainable Waste Management Future

On October 21, 2014, the Board of Supervisors adopted the Roadmap to a Sustainable Waste Management Future, establishing a goal to divert 80 percent of solid waste generated in the unincorporated County areas from landfills by 2025, 90 percent by 2035, and 95 percent or more by 2045.[16] The County's efforts to achieve waste diversion are guided by the new waste management paradigm, which places a greater

[16] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Page 7.*

emphasis on source reduction, reuse, recycling, and otherwise maximizing the benefits and use of materials over disposal.

(d) Los Angeles County General Plan Update (2035)

As a County-run facility operated on County-owned land, the proposed Project is subject to the Los Angeles County General Plan Update (2035), including the Public Services and Facilities Element. Applicable goals and polices from the Public Services and Facilities Element are identified below:

Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution.

- **Policy PS/F 5.5:** Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
- **Policy PS/F 5.7:** Encourage the recycling of construction and demolition debris generated by public and private projects.
- **Policy PS/F 5.8:** Ensure adequate and regular waste and recycling collection services.
- **Policy PS/F 5.9:** Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

3. ENVIRONMENTAL IMPACTS

a. Methodology

The analysis of impacts on solid waste disposal addresses the amount of waste debris that would be generated by the Project and whether sufficient landfill capacity is available to receive that waste debris. The amount of waste debris generated is determined by multiplying the amount of each of the Project uses by per unit waste generation factors associated with each use. The availability of landfill capacity is taken directly from the County of Los Angeles Countywide Integrated Waste Management Plan, 2014 Annual Report. The Project's waste generation is compared to existing and planned capacities to determine potential Project impact.

The analysis also addresses the Project's consistency with policies and programs to increase diversion of waste materials from landfills and increase the recycling of materials in support of sustainability/green growth. Applicable policies and programs are summarized, and their goals and standards are noted. The Project's design features are reviewed for consistency with those goals and standards.

b. Thresholds of Significance

The potential for solid waste impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based on Appendix G of the State *CEQA Guidelines*. These questions are as follows:

XVIII. Utilities and Service Systems. Would the project:

a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

b) Comply with federal, state, and local statutes and regulations related to solid waste?

Based on the above factors, the Project would have a potentially significant impact on Solid Waste if it would:

SW-1 Would the Project generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project?

SW-2 Would the Project conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste?

c. Project Characteristics

The Project would generate construction debris as the result of demolition of existing buildings, excavation, grading, and construction of new buildings. A summary of land uses to be removed is provided in Table 2-2, *Disposition of Existing Buildings*, in Chapter 2.0, *Project Description*, of this Draft EIR. The long-term operations of the Project assumes continued operation of the Harbor-UCLA Medical Center in a manner similar to existing conditions, and would also introduce the new Bioscience Tech Park to the Project Site which would generate additional solid waste that requires disposal, some of which would end up at County landfills sites.

Nonetheless, the Project would include design provisions that respond to compliance measures and public goals that address reductions in waste generation and the resulting waste stream. Among these, the Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED®) "Silver" level certification, which identifies and give credit for green building techniques and other sustainability features. Green building practices will be integrated into all building design, construction, and operation.

d. Project Impacts

Threshold SW-1: Would the Project generate solid waste in excess of the permitted capacity of the disposal facilities serving the Project?

(1) Construction Impacts

Impact Statement SW-1: *The Project would generate construction debris due to demolition and removal of multiple buildings throughout the Campus, grading and excavation, and construction of new buildings. Disposal of waste materials would achieve a minimum diversion or recycling rate of 50 percent, as required by County regulations, and adequate capacity exists at the County's C&D disposal sites. As such, impacts related to solid waste disposal capacity due to construction activities would be less than significant.*

The Project proposes the construction of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Construction would generate inert solid waste (e.g. construction demolition and debris) which would be disposed at an unclassified landfill. The Master Plan Project would be implemented in phases through the year 2030. The construction work for the Project Site includes the demolition of 759,649 square feet of existing buildings for Harbor-UCLA Medical Center and LA BioMed and the construction of 1,908,520 square feet of total building construction for Harbor-UCLA Medical Center, LA BioMed, and the Bioscience Tech Park.

Construction of the Project's new buildings would require earthwork and construction of the new buildings. Demolition of existing buildings would also occur. Each of these activities would generate demolition waste including but not limited to soil, asphalt, wood, paper, glass, plastic, metals, and cardboard that would be disposed of in the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. The amount of demolition waste anticipated to be generated by the Project is shown in **Table 4.M.3-2,** *Estimated C&D Waste Generation*. As indicated therein, the Project would result in approximately 294,738 cubic yards of demolition waste. The total earthwork-soil volume will be 428,396 cubic yards, of which 154,154 cubic yards is export. There will be an additional 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. More information regarding the soil remediation and tanks is in Section 4.F., *Hazards and Hazardous Materials*, of this Draft EIR.

Based on these quantities, construction of the proposed Project is estimated to generate 166,530 tons of soil 179,053 tons of demolition debris, and 4,142 tons of construction debris for a combined total of 349,725 tons of C&D waste as shown in Table 4.M.3-2. These numbers do not take into account the amount of C&D waste that could potentially be diverted via source reduction and recycling programs within the County. Pursuant to the C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code, the Project must recycle or reuse 50 percent of the debris generated.

As noted above, the County-certified waste processing facilities recycle amounts varying from 50 percent to 75 percent of the waste stream. Therefore, the most waste that would require disposal at a landfill site (i.e., assuming the lower 50 percent diversion rate) would be approximately 174,863 tons over the 15-year construction period. The C&D waste would be disposed of at the County's Azusa Land Reclamation landfill or one of the State-permitted Inert Debris Engineered Fill Operation facilities. As indicated above, the remaining disposal capacity for the Azusa Land Reclamation facility is 59.8 million tons. The Project's total solid waste disposal need during construction would represent approximately 0.29-percent of the estimated remaining capacity at the County's inert landfill. The Department of Public Works estimates that the remaining life of the Azusa Land Reclamation is 189 years based on the 2014 average disposal rate of 1,215 tons per day.[17] The County's inert fill landfills would have adequate capacity to accommodate Project-generated inert waste, and construction impacts relative to solid waste would be less than significant.

(2) Operation

[17] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Page 32.*

Table 4.M.3-2

Estimated C&D Waste Generation

Debris Type	Quantity	Generation Factor	Waste Generation (in tons)
Site Preparation			
Earthwork-Soil	154,194 c.y.	1 cubic yd = 1.08 tons [b]	166,530 tons
Demolition	294,738 c.y. [a]	1 cubic yd = 0.6075 tons [b]	179,053 tons
Site Preparation Subtotal			***345,583 tons***
Building Construction			
Total Building Area (including parking and exterior walls)	1,908,520 square feet	1 square foot = 0.00217 tons [c]	4,142 tons
Building Subtotal			***4,142 tons***
Grand Total			**349,725 tons**

Notes: c.y. = cubic yards s.f. = square feet

[a] *Includes demotion of interiors, structures, and asphalt/parking areas.*

[b] *CalRecyle Diversion Study Guide, http://www.calrecycle.ca.gov/LGCentral/Library/DSG/ICandD.htm, Accessed September 18, 2014. Factors converted from 80 lbs/cf to 1.08 tons/cy; and 45 lbs/cf to 0.6075 tons/cy.*

[c] *Generation factor obtained from U.S. EPA, Estimating 2003 Building-Related Construction and Demolition Materials Amounts, 2003, Page 8. Factor converted from 4.34 lbs/sf for non-residential uses to 0.00217 tons/sf.*

Source: PCR Service Corporation, 2014.

Impact Statement SW-2: *Impacts on waste disposal facilities from operations would be less than significant because the County has sufficient landfill capacity to accommodate residual waste generation. The Project would generate solid waste as the result of operation of Project Site, but there will not be a substantial increase in operations and solid waste generation. Waste disposal would include design features and compliance with County waste disposal procedures for recycling and diversion of waste from County landfills.*

The estimated solid waste generation for the Project is shown in **Table 4.M.3-3,** *Solid Waste Generated During Operation*. Based on waste generation factors from the California Department of Resources Recycling and Recovery website, and net increases in square footage for the Project, it is estimated that the total waste generation from the existing uses to be demolished would be approximately 1,817 tons per year. The total waste generation from the Proposed Uses would be approximately 2,481 tons per year. As such, the Project would result in a net increase of approximately 664 tons of solid waste generated per year. These estimates do not take into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs within the City.

Table 4.M.3-3

Solid Waste Generated During Operation

Land Use	Generation Factor	Units (beds, s.f.)	Solid Waste Generation (lbs./day)	Solid Waste Generation (tons/year)
Proposed Uses				
Administrative Office	6 lbs./ksf/day	130,635 s.f.	783.81	143.05
Day-Care Center	6 lbs./ksf/day	4,360 s.f.	26.16	4.77
Central Utilities/Industrial /Infrastructure	6 lbs./ksf/day	129,205 s.f.	775.23	141.48
Hospital/Inpatient	16 lbs./day/bed	446 beds [a]	6,064.00	1,106.68
Library	7 lbs./ksf/day	0 s.f.	0	0
Medical Office/Outpatient	6 lbs./ksf/day	480,500 s.f.	2,883.00	526.15
Biomedical Research & Development	6 lbs./ksf/day	475,000 s.f.	2,850.00	520.13
Warehouse/Storage	10 lbs./ksf/day	0 s.f.	-	-
Retail	6 lbs./ksf/day	35,000 s.f.	210.00	38.33
Total Proposed Solid Waste Generation			***13,592.20***	***2,480.59***
Total Existing Solid Waste Generation			***9,954.94***	***1,816.78***
Net Increase			**3,637.26**	**663.81**

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

[a] *Although the New Hospital would be licensed for 446 beds (as currently proposed), only 379 beds are expected to be staffed, and thus only these beds would count toward future solid waste generation for hospital/inpatient uses.*

Source: PCR Services Corporation, 2016

Countywide, the ColWMP assumes a diversion rate of 60 percent for 2014, and anticipates an increase up to 75 percent by year 2020.[18] The Project's net increase in annual solid waste generation, not accounting for diversion, would represent a negligible increment to the County's 2014 annual waste generation of 9.2 million tons per year, as the additional 663 tons would be approximately 0.007-percent of the annual total, and less than 0.0006-percent of the remaining 112-million-ton capacity in the County's Class III landfills.

In year 2029, the year prior to the proposed buildout of the Master Plan Project, the County expects that cumulative demand for use of the currently available 112 million tons of capacity would be approximately 99.8 million tons. This would leave an available capacity of approximately 12.2 million tons of capacity to serve the Project, even without the provision of additional capacity compared to existing conditions. Further, the 2014 daily disposal rate in the County landfills was 14,567 tons per day versus a maximum daily capacity of 28,549 tons per day, resulting in an additional permitted daily capacity of 13,982 tons per day.[19] The Project's net additional daily generation volume of 1.82 tons, would be approximately 0.01 percent of the additional daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent.

[18] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2, Table 5.*

[19] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Appendix E-2 Table 1.*

As noted above, the Sunshine Canyon Landfill is the primary recipient of County waste disposal. The maximum daily capacity for this landfill is 12,100 tons per day and the 2014 disposal rate was 7,582 tons per day, indicating a residual daily capacity of 4,518 tons per day of capacity. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.013-percent of the residual daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.005-percent.

As described in the CoIWMP 2014 Annual Report, future disposal needs over the next 15-year planning horizon (2029) would be adequately met through the use of in-County and out-of-County facilities through a number of strategies that would be carried out over the years. It should also be noted that with annual reviews of demand and capacity in each subsequent Annual Report, the 15-year planning horizon provides sufficient lead time for the County to address any future shortfalls in landfill capacity.

Based on the above discussion, the Project would not generate solid waste in sufficient quantities to substantially reduce the County's existing estimated landfill capacity or otherwise limit the County's ability to address ongoing landfill capacity needs via existing capacity and other options for increasing capacity. Therefore, impacts on solid waste disposal from Project operations would be less than significant.

Threshold SW-2: Would the Project conflict with federal, state, and local statutes, ordinances, policies, and regulations related to solid waste?

Impact Statement SW-3: *The Project would be implemented in compliance with all applicable Federal, State and local regulatory requirements regarding diversion of landfill materials and efficient use of County landfill facilities. Thus, impacts would be less than significant.*

(3) Consistency with Regulatory Framework

The Project would comply with applicable regulations related to solid waste, including those pertaining to waste reduction and recycling, as summarized above in the Regulatory Framework subsection. In accordance with California's Green Building Standards Code for Non-residential development, development projects must recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste (Section No. 5.408). The Los Angeles County Construction and Demolition Debris Recycling and Reuse Ordinance (Chapter 20.87) also requires the recycling or reuse of at least 50 percent of all construction and demolition debris. Furthermore, the Project would implement source reduction and recycling strategies to comply with the County's Roadmap to a Sustainable Waste Management Future, which established a goal to divert 80 percent of solid waste generated in the unincorporated County areas from landfills by 2025, 90 percent by 2035, and 95 percent or more by 2045. Because the Harbor-UCLA Medical Center is a public facility under the control of the Department of Public Works, which also is responsible for waste collection and recycling efforts at the Medical Center Campus, it is anticipated that the Project would implement all applicable regulations related to solid waste and recycling at the facility, and thus impacts in this regard would be less than significant.

e. Cumulative Impacts

Cumulative impacts associated with disposal of waste materials on landfill facilities are a regional phenomenon addressed by regional agencies, in this case the County of Los Angeles. County planning for future landfill capacity addresses expected cumulative demand over 15-year planning increments. The Los Angeles County Integrated Waste Management Plan, 2014 Annual Report anticipates a 10.1 percent increase in population growth within the County of Los Angeles by 2029 and an increase of 15.0 percent in employment.[20]

With regard to construction, the above analysis indicates that the Project's contribution to cumulative impacts would include 166,530 tons of soil and 179,053 tons of demolition and construction debris for a combined total of 349,725 tons of C&D waste, or 174,863 tons after accounting for 50 percent mandatory diversion. The 26 related projects identified in Table 3-1 in Chapter 3.0 of this Draft EIR would also contribute to the generation of C&D waste materials. All of the related projects are located within Los Angeles County and would therefore be subject to the same C&D recycling regulations as the proposed Project. Further, all of the related projects would have the same options for disposal as the proposed Project; i.e. the County's Azusa Land Reclamation landfill or one of the State-permitted Inert Debris Engineered Fill Operation facilities. As indicated above, the remaining disposal capacity for the Azusa Land Reclamation facility is 59.8 million tons; and the Department of Public Works estimates that the remaining life span of the Azusa Land Reclamation is 189 years based on the 2014 average disposal rate of 1,215 tons per day.[21] Given this future capacity, independent of the additional capacity at the State-permitted Inert Debris Engineered Fill Operation facilities, it is expected that all C&D waste can be accommodated for the foreseeable future, and cumulative impacts regarding the disposal of C&D waste would not occur.

With regard to future solid waste generation from the operations of new development, the contribution of the 26 related projects along with the proposed Project would contribute an increment to the overall cumulative demand for landfill disposal. As shown in **Table 4.M.3-4,** *Cumulative Solid Waste Generated - Operations*, the estimated solid waste requiring landfill disposal for the 26 related projects, not accounting for diversion and recycling, would be 32,926 pounds per day or 6,009 tons per year. The cumulative annual disposal inclusive of the Project would be 36,564 pounds per day or 6,673 tons per year. The cumulative daily generation, therefore, would be approximately 18.3 tons per day. Again, these estimates do not take into account the amount of solid waste that would potentially be diverted via source reduction and recycling programs within the County, which is assumed to be approximately 60 percent. The cumulative annual solid waste generation of 6,673 tons, not accounting for diversion, would represent 0.073-percent of the County's annual waste generation of 9.2 million tons per year, and 0.006-percent of the remaining 112-million-ton capacity in the County's Class III landfills.

[20] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015, Appendix E-2, Table 4.*

[21] *Ibid, Page 32.*

Table 4.M.3-4

Cumulative Solid Waste Generated - Operations

Land Uses	Quantity (units/ rooms/ square feet)	Solid Waste Generation Factor [a]		Solid Waste Generated (pounds/day)	Solid Waste Generated (tons/year)
Related Projects					
Multifamily Residential [b]	2,769	4	lbs/unit/day	11,076	2,021.37
Single Family Residential	66	10	lbs/unit/day	660	120.45
Retail	1,580,640	6	lbs/ksf/day	9,483.84	1,730.80
Auto Dealer and Service Station [c]	10,198	9	lbs/ksf/day	91.78	16.75
Office	480	6	lbs/ksf/day	2.88	0.53
Medical Office [d]	11,340	6	lbs/ksf/day	68.04	12.42
Hotel	300	2	lbs/room/day	600.00	109.50
Restaurant	81,125	5	lbs/ksf/day	405.63	74.03
Other Services [e]	296,800	31.2	lbs/ksf/day	9,260.16	1,689.98
Manufacturing/Warehouse	84,015	14.2	lbs/ksf/day	1,193.01	217.73
Industrial	17,000	5	lbs/ksf/day	85.00	15.51
Total				**32,926.34**	**6,009.07**
Proposed Project (Net Increase)				**3,637.26**	**663.81**
Cumulative Solid Waste Generation				**36,563.60**	**6,672.88**

Notes: ksf = thousand square feet s.f. = square feet lbs = pounds

[a] *Generation factors are taken from CalRecycle Waste Characterization: Estimated Solid Waste Generation and Disposal Rates (http://www.calrecycle.ca.gov/WASTECHAR/WasteGenRates/).*

[b] *Multifamily Residential includes apartments and condos.*

[c] *Auto Dealer and Service Station includes Automated Car Wash and Automobile Care Center.*

[d] *Medical Office uses waste generation factors for large offices.*

[e] *Other services includes Public Venues, Recreation, and a Transit Center.*

Source: PCR Services Corporation, 2016.

In 2029, the year prior the anticipated buildout of the Master Plan Project, the County expects that cumulative demand for use of the currently available 112 million tons of capacity would be approximately 99.8 million tons. This would leave an available capacity of approximately 12.2 million tons of capacity to serve the cumulative development in the Project vicinity, even without the provision of additional capacity compared to existing conditions. Further, the 2014 daily disposal rate in the County landfills was 14,567 tons per day versus a maximum daily capacity of 28,549 tons per day, resulting in an additional permitted daily capacity of 13,982 tons per day.[22] The additional cumulative daily generation volume of 18.3 tons per day would be approximately 0.13-percent of the additional daily capacity, assuming no diversion. With 60 percent diversion it would be approximately 0.005 percent.

[22] *Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2014 Annual Report, December 2015. Appendix E-2 Table 1.*

As noted above, the CoIWMP 2014 Annual Report indicates that future disposal needs over the next 15-year planning horizon (2029) would be adequately met through the use of in-County and out-of-County facilities through a number of strategies that would carried out over the years.

As discussed above, the Project, in conjunction with other related projects in the area, would not generate solid waste in sufficient quantities to substantially reduce the County's existing estimated landfill capacity or otherwise limit the County's ability to address ongoing landfill capacity needs via existing capacity and other options for increasing capacity. Therefore, the waste generation from the cumulative development would be less than significant.

4. MITIGATION MEASURES

No mitigation measures are required, as impacts would be less than significant given compliance with regulatory requirements related to solid waste disposal and recycling.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project-specific and cumulative impacts related to solid waste disposal would be less than significant.

5.0 ALTERNATIVES

A. INTRODUCTION

Under CEQA, and as indicated in California Public Resources Code Section 21002.1(a), the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process intended to consider ways to mitigate or avoid the significant environmental effects of a project.

Guidance regarding the definition of project alternatives is provided in State *CEQA Guidelines* Section 15126.6(a) as follows:

> An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

The State *CEQA Guidelines* emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[1] The State *CEQA Guidelines* further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed.[2]

In selecting project alternatives for analysis, potential alternatives should be feasible. The State *CEQA Guidelines* Section 15126.(f)(1) explains that:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

The State *CEQA Guidelines* require the analysis of a "no project" alternative and, depending on the circumstances, evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. In general, the environmentally superior alternative is the alternative with the least adverse impacts on the environment. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify another environmentally superior alternative among the other alternatives.[3]

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1 *CEQA Guidelines Section 15126.6(b) .*

2 *Ibid., Section 15126.6(f) .*

3 *Ibid., Section 15126.6(e) (2) .*

Section 15126.6(d) of the State *CEQA Guidelines* states that alternatives analysis need not be presented in the same level of detail as the assessment of the proposed project. Rather, the EIR is required to provide sufficient information to allow meaningful evaluation, analysis and comparison with the proposed project.

B. OBJECTIVES OF THE PROPOSED PROJECT

The underlying purpose and primary objective of the Master Plan Project is to redevelop the County-owned Harbor-UCLA Medical Center Campus to support a modern, integrated healthcare delivery system which provides a New Hospital Tower to replace the acute care functions of the Existing Hospital before the state law deadline to meet seismic standards for critical trauma/ tertiary acute care services so that the South Bay service region and the County seamlessly retain this key link in the County-wide trauma hospital safety net which features biomedical research and development facilities and integrates inpatient and outpatient services in a renovated and expanded setting. As discussed in Chapter 2.0, Project Description, of this Draft EIR, this goal is supported by the following objectives:

1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.

2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.

3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways;

4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.

5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.

6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.

7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.

8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."

C. SUMMARY OF THE ALTERNATIVES

This chapter considered a total of seven (7) alternatives to the Project, three of which were considered but were not selected for further analysis, and the remaining four of which, including the "no project" alternative noted previously and three other "build" alternatives, are comprehensively evaluated below. The three alternatives that were considered but rejected after initial analysis included Alternative Off-Site Locations, Alternative On-Site Uses, and a No Bioscience Tech Park Alternative. The No Project Alternative for this analysis is referred to as the No Project/No Build Alternative. Under the No Project/No Build Alternative, the Project would not be developed and the use of the entire Harbor-UCLA Medical Center Campus would continue as under current conditions.

Three additional alternatives were selected, as noted above, with the goal of identifying ways to reduce or avoid significant unavoidable impacts that would result from implementation of the Project, including temporary construction-related traffic impacts; long-term operational traffic impacts; cumulative construction noise impacts; and temporary operational helicopter noise impacts. Based on these significant unavoidable environmental impacts and the objectives established for the Project (set forth above), the following alternatives are evaluated:

1. No Project/No Build Alternative
2. Reduced Intensity Alternative A: Acute Bed and Other Plan Reductions
3. Reduced Intensity Alternative B: Further Acute Bed and Other Plan Reductions
4. Reduced Intensity Alternative C: New Acute Bed Hospital Tower Only

D. ALTERNATIVES CONSIDERED AND REJECTED

The State *CEQA Guidelines* Section 15126.6(c) provides that an EIR should identify alternatives that were considered for analysis but rejected and briefly explain the reasons for their rejection. According to the State *CEQA Guidelines*, the following factors may be used to eliminate alternatives from detailed consideration: the alternative's failure to meet most of the basic Project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. Alternatives that have been considered and rejected as infeasible are discussed below.

1. Alternative Off-Site Locations

CEQA does not require that analysis of alternative sites always be included in an EIR. However, if all the surrounding circumstances make it reasonable to consider an alternative site, then this Alternative should be

considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR". If no feasible alternative locations exist, the EIR must disclose the reasons for this conclusion.[4]

Among the factors that may be considered when addressing the feasibility of alternatives is site suitability, economic viability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site.[5]

The Medical Center Campus is unique in the Project area (West Carson and vicinity) because of its size, current uses, availability for development, and central location with respect to the sizeable daytime employee population and 24-hour residential populations within the surrounding communities. The Medical Center Campus is also highly visible and easily accessible from major roadways (Vermont Avenue, Normandie Avenue, Carson Street and 220th Street) and the Harbor Freeway.

Within unincorporated Los Angeles County, and in the Project area (West Carson) there is a scarcity of vacant properties, or developed properties suitable for redevelopment, that are similarly sized to the Medical Center Campus, are proximate to existing public services with easy access from an existing public road and freeway visibility, and are near compatible uses. Furthermore, to replace the entire existing Medical Center Campus, which has been located here since 1943 and serves many thousands of people, to a completely new and undeveloped location would likely result in impacts greater than the Project, while redevelopment of an already urbanized site elsewhere in the region would not serve the population that currently relies on the services provided at the Medical Center Campus. Furthermore, acquisition of a similarly sized property, whether public or private, would involve substantial capital costs that would not otherwise be necessary at the existing Medical Center Campus, as the Project Site is currently under the sole ownership of the County of Los Angeles.

Implementation of the Project at an off-site location, therefore, would not meet the Project objectives of modernizing and renovating the current Medical Center Campus or optimizing use of County property and resources. In addition, the County did not consider implementation of other alternatives discussed in this chapter at any off-site locations, based on the discussion above regarding the Project. For these reasons, this development scenario, was not considered for further analysis in this Draft EIR.

2. Alternative On-Site Uses

As discussed in Chapter 2.0, Project Description, of this Draft EIR, the existing Medical Center Campus has been utilized for hospital, outpatient, research, and other related activities for many decades, with substantial investment by the County and other on-site tenants in support of these functions. As further stated in Chapter 2.0, Harbor-UCLA Medical Center expects increasing demand in its service area, which currently encompasses 10 million people and is expected to grow by an estimated 600,000, through 2030. It is projected that the service area will include an additional 190,000 Medicare-eligible patients by the

[4] *State CEQA Guidelines, Section 15126.6(f) (2)*

[5] *Ibid., Section 15126.6(f) (1)*

buildout horizon, an assumption based on an anticipated increase in the service area population and aging, and is expected to affect demand for certain services as well as the overall volume of patient visits, which is in turn expected to increase by an estimated 20 percent by 2030, even assuming some percentage of future patients transfer back to Martin Luther King Hospital or other hospitals. Further, it is expected that there will be an increasing need for Harbor-UCLA to enhance its outpatient programs and other patient support services. In light of the expected increase in its service area population and increased demand for its services, a physician workforce shortage in Los Angeles, and the lack of plans for the new construction of other acute care hospital facilities in the region by the Master Plan Project buildout horizon, Harbor-UCLA sees a clear need to invest in its facilities and programs at the existing Medical Center Campus in order to continue to fulfill its role as a strategic piece of the healthcare "safety net" of Los Angeles County in general and for South Bay communities in particular. Given the County's ownership of the 72-acre Medical Center Campus property, substantial long-term investment in hospital and related health care and research facilities at the site, and location within the geography such facilities serve, redevelopment of the Medical Center Campus with land uses other than hospital, outpatient, biomedical research and related supporting uses was not considered for further analysis in this Draft EIR.

In addition, this development scenario would not achieve many of the key objectives of the Project including achieving compliance with seismic safety requirements for acute care facilities; supporting the renovation of existing healthcare facilities; providing for a fundamental reorganization, expansion, and integration of outpatient services; renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region; providing opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities; encouraging a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research; and achieving optimum public utilization of land and buildings under the ownership and control of the County. As such, the County did not consider pursuing development of other uses on the Medical Center Campus that are not proposed by the Board of Supervisors or the Harbor-UCLA Master Plan.

3. No Bioscience Tech Park Alternative

As part of its exploration of potential alternatives to the Master Plan Project, the County considered a Project alternative that would implement the Master Plan Project as proposed but without a Bioscience Tech Park component. All other aspects of the Project would be implemented on the Medical Center Campus under this Alternative, including (1) a New Hospital Tower; (2) new and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Existing Hospital Tower); (3) other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services (e.g., coffee stand, sundry shop); (4) long-term buildout of the LA BioMed Campus; and (5) Medical Center Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements.

However, while this alternative would achieve many of the Project objectives, including objectives 1, 2, 3, 4, 6, 7, and 8 discussed above, and would partially achieve objective 5 relative to expansion of existing LA BioMed uses on the Medical Center Campus, this Alternative would not achieve one of the County's key objectives for the Project, which is to provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities.

As stated in Chapter 2.0, Project Description, of this Draft EIR, the proposed Bioscience Tech Park represents an important opportunity to grow the bioscience industry in the County, and unique to the Harbor UCLA Campus location, to take advantage of existing and potential future relationships and research opportunities between a collocated Bioscience Tech Park, the on-site hospital and outpatient facilities, and the existing LA BioMed facility, a privately-operated program that itself has plans for growth on the Medical Center Campus during the course of Master Plan Project buildout. This is consistent with Harbor UCLA's long-standing status as a teaching hospital with an existing affiliation with the David Geffen School of Medicine at UCLA.

Moreover, the availability of a sizeable and currently undeveloped buildable area on the western side of the Medical Center Campus would support a facility of the necessary size, and would allow achievement of this objective without the need for costly acquisition of additional real estate or displacement of existing uses on the Medical Center Camps or at an off-site location. Finally, a facility in this location would also provide needed employment opportunities and, as noted in the Project Description in this Draft EIR, would further strengthen Harbor UCLA's role as a strategic part of the healthcare "safety net" in the South Bay portion of the County.

For these reasons, this development scenario, which would eliminate the Bioscience Tech Park, was not considered for further analysis in this Draft EIR.

E. ANALYSIS FORMAT

In accordance with State *CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether most of the Project objectives, identified in Chapter 2.0, Project Description, would be feasibly attained by the alternative.[6] The evaluation of each of the alternatives follows the format described below:

- A description of the alternative.
- The environmental impacts of the alternative before and after implementation of reasonable mitigation measures for each environmental issue area analyzed in the EIR are described. Where applicable, the evaluation is divided between temporary impacts that would occur during the Project's construction phase, and impacts that would occur during the Project's operational phase.
- Environmental impacts of the alternative and the Project are compared for each environmental issue area evaluated in Chapter 4.0 the Draft EIR. Where the impact of the alternative would be clearly less adverse than the impact of the Project, the comparative impact is said to be "less." Where the alternative's net impact would clearly be more adverse than the Project, the comparative impact is said to be "greater." Where the impacts of the alternative and Project would be roughly equivalent, the comparative impact is said to be "similar." The evaluation also documents whether compared to the Project an impact would be entirely avoided, whether a significant impact could be reduced to a less than significant level, or whether a significant unavoidable impact would be feasible to mitigate to a less than significant level.
- The comparative analysis of the impacts is followed by a general discussion of the extent to which the underlying purpose and Project objectives are attained by the alternative.

[6] *Ibid., Section 15126.6(c) .*

5.0 ALTERNATIVES
A. ALTERNATIVE 1: NO PROJECT/NO BUILD ALTERNATIVE

A. DESCRIPTION OF THE ALTERNATIVE

Under the No Project/No Build Alternative, the proposed Medical Center Campus Master Plan Project would not be implemented, and the site would remain in its current state. New Hospital Tower would not be constructed on the site, nor would the proposed outpatient care facilities, parking lots and other services facilities be developed. Because it would not meet new seismic requirements scheduled to be effective January 1, 2030 for acute care facilities, the Existing Hospital would not be licensed to operate as an acute care facility after December 31, 2029. The hospital could continue to operate providing non-acute care services. The buildout of the LA BioMed Campus would not occur, and the new Bioscience Tech Park, campus support and required infrastructure would not be constructed. Proposed new amenities on the Medical Center Campus, including the Medical Center Campus reorganization with its new network of pedestrian walkways and landscaped areas, would not be implemented.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

Under the No Project/No Build Alternative, no construction activities would take place, and the Medical Center Campus Master Plan Project would not be implemented. The existing configuration of the current Medical Center Campus would remain the same. The LA BioMed Campus would not be reconfigured, nor would the new Bioscience Tech Park be constructed. The New Hospital Tower, which is intended as the tallest, most-visible building on the Medical Center Campus, and therefore, its primary focal point, would not be constructed. The proposed Landscape Master Plan would not be implemented, thereby resulting in no new landscaping being planted, no garden installations, plazas, walkways, trails or public art. As such, current visual character, views and light and glare impacts associated with the Medical Center Campus would remain unchanged, and there would be no impact to aesthetics resulting from the No Project/No Build Alternative, including impacts related to visual character, views, and light and glare. In Section 4.A., Aesthetics, of this Draft EIR, it was determined that the Project would result in a less than significant impact with respect to aesthetics. All impacts would be avoided under the No Project/No Build Alternative, as no impacts would occur. As a result, potential impacts to Aesthetics under the No Project/No Build Alternative would be less than under the Project.

2. Air Quality

Under the No Project/No Build Alternative, no construction would occur, and no development would result. Therefore, the Project's less than significant construction emissions would not occur, as no impact would result from this Alternative. Under this Alternative, there would not be an increase in the number of employees, patients, visitors or other patrons on the Medical Center Campus, and there would be no additional vehicle trips resulting. As such, operational emissions under this Alternative would be equivalent to existing conditions. Operational emissions would also be less than those generated by the Project, which would have increased emissions from mobile, area, and stationary sources. Although Project-generated

construction and operational emissions would be less than significant, there would be no increase in emissions under this Alternative. Therefore, there would be no resulting impact under the No Project/No Build Alternative. As a result, construction and operational air quality impacts would be less under the No Project/No Build Alternative than under the Project.

3. Energy

Under the No Project/No Build Alternative, there would be no new additional development on the Medical Center Campus which would consume energy and natural resources, as compared to the current condition. Although energy consumption would be less under this Alternative than under the Project, older, inefficient facilities, practices and machinery would continue to use energy resources in this manner. The Project's sustainable development plan would introduce LEED Silver-level certification for new development, which would incorporate a number of requirements for more efficient facilities and practices throughout the Medical Center Campus. Implementation of the Project's Landscape Master Plan would help reduce dependency on natural resources by capturing and cleaning stormwater runoff and shading buildings to reduce cooling demands. Although this Alternative would not replace existing facilities with newer, more efficient ones, the continued use of such facilities would not represent an adverse impact with regard to energy consumption as no changes to energy demands or applications would occur relative to baseline conditions. Although the Project's energy impacts would be less than significant, the No Project/No Build Alternative would generate no new demand or associated impacts. As a result, energy impacts would be less under the No Project/No Build Alternative than under the Project.

4. Geology and Soils

The No Project/No Build Alternative would not increase the number of people at the Medical Center Campus that could potentially be exposed to seismic hazards compared to the Project. Furthermore this Alternative would not involve any construction that would occur under the Project, including grading and excavation to construct the Project components. Therefore, no impacts relative to seismic or other groundwater and soils geologic hazards would occur under this Alternative. As a result, geology and soils impacts under the No Project/No Build Alternative would be less than those that would occur under the Project.

5. Greenhouse Gas Emissions

The No Project/No Build Alternative would generate no increase in GHG emissions and thus would result in no impacts. Under the Project, GHG emissions would increase during construction and operation but would be less than significant. Therefore, impacts under the No Project/No Build Alternative would not occur, which would be less compared to the Project.

6. Hazards and Hazardous Materials

Under the No Project/No Build Alternative, existing Campus operations would continue unchanged except the existing hospital will no longer be licensed to provide acute care services beyond 2030 and will not provide those services. It is assumed for this analysis that the Existing Hospital will continue to provide non acute medical care. No new uses or activities would be introduced. Hazardous substances used on the Medical Center Campus would be limited to those currently used for medical treatment and research, cleaning and property and equipment maintenance, and landscaping, and would include cleaning agents, paints, pesticides, and other such materials. All hazardous substances would continue to be contained,

stored, and used in accordance with manufacturers' instructions and applicable standards and regulations. The existing buildings on the Site would remain intact, and the potential for release of asbestos-containing materials (ACMs), lead-based paints (LBPs), or polychlorinated biphenyls PCBs in fluorescent light ballasts as the result of building rehabilitation or demolition activities would not occur. In addition, there is no potential for encountering contaminated soil or underground features beneath the Medical Center Campus.

Therefore, no impacts related to hazardous materials would occur under the No Project/No Build Alternative, and impacts would be less than those of the Project. Although buildings on the Medical Center Campus would likely deteriorate and at some point could lead to the release of ACBM, LBPs, and PCBs if preventative maintenance, rehabilitation, or demolition is not undertaken. However, demolition activities for specific buildings or uses are not contemplated as part of this Alternative, and only maintenance is assumed.

7. Hydrology and Water Quality

Under the No Project/No Build Alternative, existing development would remain and no new development or activities would be introduced to the Medical Center Campus. There would be no modifications to the existing drainage patterns, directions, or type, quality and quantity of runoff generated from the Medical Center Campus. Accordingly, no new pollutants would be introduced into the stormwater system via stormwater runoff. Improvements that would be implemented under the Project, such as the Landscape Master Plan, SUSMP and LID BMP's that would result in improved water quality for on-site stormwater runoff, would not occur under the No Project/No Build Alternative. Nonetheless, since no new construction activities or development would occur under this Alternative, this No Project/No Build Alternative would have no construction-related or operational impacts on surface water quality and impacts would be less than those of the Project.

8. Land Use

Under the No Project/No Build Alternative, there would be no changes to land uses on the Medical Center Campus. No new uses or development would be introduced to the Medical Center Campus under this Alternative, and no General Plan amendment, zone change, or other entitlements would be requested. The No Project/No Build Alternative would therefore have no land use impacts related to land use policy consistency or physical compatibility. Therefore, overall impacts related to land use under the No Project/No Build Alternative would be less than those of the Project.

9. Noise

The No Project/No Build Alternative would not introduce new construction, operational noise sources, vibration or new traffic-related noise to the Medical Center Campus. Therefore, this Alternative would result on no construction or operational noise impacts. This Alternative would, therefore, avoid the Project's significant and unavoidable, short-term, construction noise and vibration impacts. Under this Alternative, existing Campus operations would continue as under current conditions, including helicopter operations. Therefore, this Alternative would have no operational noise and vibration impacts, and impacts would be less than those of the Project.

10. Population, Housing and Employment

Under the No Project/No Build Alternative, there would be no expansion of the Medical Center Campus as proposed under the Master Plan, and no new employment opportunities and resulting new employees. The Project involves future development of medical buildings and uses on-site as part of the proposed expansion, removal, replacement, and modification within the existing Campus, which would increase the visitor, patient, and employment population on the Medical Center Campus.The Project would cause a less than significant impact with regard to population, housing and employment. By comparison, the No Project/No Build Alternative would have no impact on population, housing and employment, and therefore impacts would be less than those of the Project.

11. Public Services

a. Fire Protection and Emergency Services

Fire protection and emergency medical services impacts under the Project would be less than significant with implementation of applicable mitigation measures. Under the No Project/No Build Alternative, no increased demand for fire protection and emergency medical services would occur and it would have no effect on emergency response times or emergency access, as could occur under the Project from construction activities, operational traffic, and Medical Center Campus design. Therefore, impacts related to fire protection and emergency services under the No Project/No Build Alternative would be less than those of the Project.

b. Sheriff Protection

Sheriff services impacts under the Project would be less than significant with implementation of applicable mitigation measures. The No Project/No Build Alternative would not change existing conditions or cause a net increase in the level of activity at the Medical Center Campus. Therefore, it would not alter demand for sheriff protection services or affect emergency response times. Impacts related to sheriff protection and emergency response times under the No Project/No Build Alternative would be less than those of the Project.

c. Parks and Recreation

Impacts to parks and recreational facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not increase the on-site residential population or generate related demand for off-site parks and recreational facilities or services. This Alternative would have no impacts on recreational facilities and services or parks, and impacts would be less than those of the Project.

d. Schools

Impacts to schools under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not introduce new development to the Medical Center Campus that would directly or indirectly generate students, and thus no impact would occur. This Alternative would have no impact on schools, and impacts would, therefore, be less than those of the Project.

e. Libraries

Impacts to library facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not increase the residential population on the Medical Center Campus or increase demand for library services, and thus no impact would occur in this regard. There would be no impacts on library services, and impacts would, therefore, be less than those of the Project.

12. Transportation and Parking

a. Construction

Construction activities under the Project would result in significant unavoidable traffic impacts, though such impacts would be temporary in nature. The No Project/No Build Alternative would not generate temporary increases in vehicle trips associated with hauling or workers. No construction traffic impacts would occur and, therefore, traffic impacts would be less than under the Project.

b. Operation

Long-term operation of the Project would result in significant unavoidable traffic impacts even with prescribed mitigation measures. The No Project/No Build Alternative would not generate any new trips or increase demand for parking, no transportation and parking impacts would occur, and all operational traffic and parking impacts would be less than the Project.

13. Utilities and Service Systems

a. Water Supply

Impacts to water supply and related infrastructure under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not change the existing facility or generate a net increase in employees and visitors, nor would it increase or alter landscaped areas. Although the Project would have a less than significant impact with respect to water supply, because the No Project/No Build Alternative would not cause any increase in water demand and thus would not result in any impacts, impacts with respect to water supply would be less than under the Project.

b. Wastewater

Impacts to wastewater conveyance and treatment facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not generate wastewater or require the potential upgrade of any on- or off-site wastewater conveyance systems. Although the Project would have a less than significant impact with respect to wastewater, because the No Project/No Build Alternative would not cause any increase in wastewater generation, impacts with respect to wastewater treatment and conveyance would be less than under the Project.

c. Solid Waste

Impacts to solid waste facilities under the Project would be less than significant without the need for mitigation measures. The No Project/No Build Alternative would not would not change the existing facility,

create a net increase in employees or visitors, or affect solid waste generation compared to existing conditions. Therefore, impacts on solid waste facilities would be less than under the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

The No Project/No Build Alternative would avoid the Project's significant and unavoidable construction-related traffic impacts, as well as long-term operational traffic impacts at three Caltrans freeway facilities and the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would avoid the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6, and would also avoid temporary operational helicopter noise impacts. The No Project/No Build Alternative would also avoid potentially significant impacts (mitigated to less than significant levels under the Project) associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

While the No Project/No Build Alternative would avoid the Project's significant impacts and would not result in any new environmental impacts, it would not achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

The No Project/No Build Alternative would also not achieve the Project's basic objectives to support the renovation of existing health facilities to meet the Affordable Care Act of 2010 and to modernize and integrate healthcare delivery. It would not update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. The No Project/No Build Alternative also would not provide opportunities for development up to 250,000 square feet of additional Bioscience Tech Park and support facilities and 225,000 square feet of expanded LA BioMed facilities. It would not meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would not allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction; encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. It would not achieve optimum public utilization of land and buildings under the ownership and control of the County. Lastly, the No Project/No Build Alternative would not create durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices.

5.0 ALTERNATIVES
B. ALTERNATIVE 2: REDUCED INTENSITY ALTERNATIVE A – ACUTE BED AND OTHER PLAN REDUCTIONS

A. DESCRIPTION OF THE ALTERNATIVE

Alternative 2, Reduced Intensity Alternative A – Acute Bed and Other Plan Reductions, would implement the Master Plan Project but at a lower overall intensity than proposed under the Project. Specifically, this Alternative would result in the construction of the New Hospital Tower, but with a reduction in the maximum number of licensed acute care beds from 446 to approximately 375, as well as construction of two outpatient buildings (compared to three under the Project), a reduced Central Plant, up to three parking structures with a maximum of 2,300 parking spaces, and partial renovation of the Existing Hospital tower (compared to complete renovation under the Project). This Alternative would also eliminate all retail uses from the development plan. In addition, Alternative 2 would be phased so that the New Hospital Tower would be constructed by 2025, which is prior to new outpatient buildings, with completion of construction activities anticipated in 2027. All development associated with LA BioMed build out and the proposed Bioscience Tech Park, as well as necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements, would be implemented as under the proposed Master Plan Project.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

a. Visual Character

(1) Construction

Construction activities typically result in site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures and other activities that generally contrast with the aesthetic character of an area. Under the Reduced Intensity Alternative A, construction activities would be visible at various times from Vermont Avenue, Carson Street, Normandie Avenue, and 220th Street. As with the Project, construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve Reduced Intensity Alternative A. As such, visual character impacts experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of Reduced Intensity Alternative A. As with the Project, construction impacts would be less than significant. However, because overall construction would be incrementally less and be completed in fewer years than under the Project (completed in approximately 2027 instead of approximately 2030), the impact of construction on visual character under Reduced Intensity Alternative A would be incrementally less under Reduced Intensity Alternative A.

(2) Operation

Reduced Intensity Alternative A would allow for a reduced intensity with respect to the New Hospital Tower and would not completely renovate the existing Hospital Tower. The reduction in beds in the New Hospital Tower could allow for an incrementally smaller building, either in height or profile. Because a complete renovation of the old Hospital Tower would not be implemented, the Reduced Intensity Alternative A may not result in the same aesthetic character of the old Hospital Tower as under the Project. New sidewalks and street scape, internal landscaping, public art and other aesthetic amenities would be the same as under the Project. As with the Project, the transition of the Medical Center Campus to greater density would be consistent with growth trends and buildout in the surrounding area and Reduced Intensity Alternative A would be contained within the existing Medical Center Campus, aside from temporary off-site improvements and would not directly adjoin any other existing neighborhood or community uses. New buildings under the Reduced Intensity Alternative A would be required to implement the Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community.

Reduced Intensity Alternative A, as with the Project, would enhance the existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street with landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. As with the Project, Reduced Intensity Alternative A would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Impacts with respect to visual character under Reduced Intensity Alternative A would be similar to the Project and less than significant.

b. Views

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources. The reduction in scale of the New Hospital Tower under Reduced Intensity Alternative A has the potential to, but may not necessarily reduce the New Hospital Tower's height or width as represented in the Project's stacking profile. Overall, however, stacking and building heights would be quite similar to that of the Project.

As with the Project, the new buildings of the Reduced Intensity Alternative A would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. However, development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets. The views of the Medical Center Campus from Carson Street, Vermont Avenue,

Normandie Avenue, and 220th Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program. Because no existing recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus, as with the Project, the Reduced Intensity Alternative A would not block views of existing scenic resources. In addition, the Reduced Intensity Alternative A would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. The impact of Reduced Intensity Alternative A with respect to views would, thus, be less than significant and similar to that of the Project.

c. Light and Glare

(1) Construction

Lighting during construction would potentially cause minor light spillover in the vicinity of the Medical Center Campus, including the residential neighborhoods to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. As with the Project, construction lighting under Reduced Intensity Alternative A would only be located in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would be limited and directed onto specific locations within construction sites to avoid impacts on-site medical patients. As with the Project, artificial light associated with construction activities would be limited to security lighting and specific construction tasks and would not adversely impact off-site sensitive receptors. Reduced Intensity Alternative A would also have a less than significant impact with respect to construction lighting. However, because overall construction would occur over a shorter timeframe (completed in approximately 2027 instead of approximately 2030 under the Project), construction lighting impacts under Reduced Intensity Alternative A would be incrementally less than those generated by the Project.

(2) Operation

(a) Artificial Light

As with the Project, the security and landscape lighting for Reduced Intensity Alternative A would be located near ground level, generally shielded from adjacent uses by landscaping, and low-intensity in character. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Light spillage from the Project's multi-story components would be similar to existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower. The removal of surface parking lots, including Parking Lot A, which is visible from residential uses to the east and the surface parking lot in the southwest corner of the Medical Center Campus, which is visible to uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. As with the Project, new lighting sources from Reduced Intensity Alternative A are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. As such, artificial light impacts under Reduced Intensity Alternative A would be similar to those of the Project and less than significant.

(b) Glare

Building surfaces associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim can reflect light. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. As with the Project, the Design Guidelines for Reduced Intensity Alternative A would require that building materials, massing, and styles are consistent with neighboring buildings, including the Existing Hospital tower, and to complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Medical Center Campus as a medical facility. As such, Reduced Intensity Alternative A, as with the Project, would not generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Therefore, glare impacts under Reduced Intensity Alternative A would be similar to the Project and less than significant.

2. Air Quality

a. Consistency with Air Quality Management Plan

(1) Construction

Reduced Intensity Alternative A would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under both Reduced Intensity Alternative A and the Project would not conflict with the long-term employment projections upon which the AQMP is based. Reduced Intensity Alternative would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment and, as such, would not conflict with implementation of AQMP strategies intended to reduce emissions from construction equipment and activities. Reduced Intensity Alternative A would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies. Although both the Project and Reduced Intensity Alternative A would result in less than significant impacts, since this Alternative would be smaller in terms of total development, it would have incrementally less impact than the Project.

(2) Operation

As with the Project, Reduced Intensity Alternative A would be consistent with growth projections set forth in the AQMP, and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips. Both the Project and Reduced Intensity Alternative A would have a less than significant impact relative to the AQMP; however, because Reduced Intensity Alternative A is smaller in total development, it would have incrementally less impact.

b. Violation of Air Quality Standards

(1) Construction

Construction of Reduced Intensity Alternative A has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Medical Center Campus. However, as with the Project, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Although emissions would be less than significant under both the Project

and Reduced Intensity Alternative A, because Reduced Intensity Alternative A would involve less construction, it would have incrementally less impact than the Project with respect to the SCAQMD regional thresholds.

(2) Operation

Operation of Reduced Intensity Alternative A has the potential to create air quality impacts based on daily trip generation and energy demand. As discussed in Section 4.B., Air Quality, of the Draft EIR, the Project's net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD regional thresholds for during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. As such both the Project and Reduced Intensity Alternative A would have a less than significant impact with respect to SCAQMD standards. However, because daily trips and the scope of development would be incrementally less under Reduced Intensity Alternative A, impacts relative to SCAQMD thresholds would be less than the Project.

c. Non-Attainment Pollutants

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would result in the emission of criteria pollutants for which the region is in nonattainment; however, the maximum daily emissions from construction of Reduced Intensity Alternative A would not exceed the numeric indicator of significance for criteria pollutants nor their precursors. As with the Project, compliance with CARB and SCAQMD control measures and the same design features implemented by the Project would minimize and reduce construction emissions. Neither Reduced Intensity Alternative A nor the Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would involve less construction, it would lower total emissions than the Project.

(2) Operation

Operation of Reduced Intensity Alternative A would result in the emission of criteria pollutants for which the region is in nonattainment; however, as with the Project, maximum daily emissions from operation would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of Reduced Intensity Alternative A would not exceed the applicable thresholds of significance. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in development scope, it would generate fewer total emissions than the Project.

d. Substantial Pollutant Concentrations

As with the Project, Reduced Intensity Alternative A would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the either Reduced Intensity Alternative A or the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Reduced Intensity

Alternative A at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of either the Project or Reduced Intensity Alternative A would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks which exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of either the Project or Reduced Intensity Alternative A would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in scale, it would generate fewer total emissions than the Project.

e. Odors

(1) Construction

As with the Project, Reduced Intensity Alternative A may emit odors during construction associated with the use of architectural coatings and solvents. However, SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Both the Project and Reduced Intensity Alternative A would result in a less than significant impact. Also, because SCAQMD Rule 1113 would be equally enforceable under both the Project and Reduced Intensity Alternative A, impact levels would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative A does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Reduced Intensity Alternative A would be covered and situated away from the property line and sensitive off-site uses. Under both the Project and Reduced Intensity Alternative A, medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant under both the Project and Reduced Intensity Alternative A and impact levels would be similar.

3. Energy

a. Construction

Construction would entail consumption of diesel for hauling and construction equipment, gasoline for some hauling and workers' transportation, and electricity to provide temporary power for lighting and electronic equipment and to power certain construction equipment. Some heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. As with the Project, Reduced Intensity Alternative A would utilize electric or alternatively fueled equipment as available and as feasible. It is estimated that the construction of the Project would require approximately 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy. As with the Project, Reduced Intensity Alternative A would also meet or exceed the County's waste diversion targets. Neither the Project nor Reduced Intensity Alternative A would result in the wasteful,

inefficient, and unnecessary consumption of energy during construction, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in development scope, it would generate less energy demand than the Project.

b. Operation

Operation of both Reduced Intensity Alternative A and the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project and Reduced Intensity Alternative A would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Neither the Project nor Reduced Intensity Alternative A would result in the wasteful, inefficient, and unnecessary consumption of energy during operation, or preempt future energy conservation during operation. Although both the Project and Reduced Intensity Alternative A would result in a less than significant impact, because Reduced Intensity Alternative A would be incrementally smaller in development scope, it would generate less overall energy demand than the Project.

4. Geology and Soils

a. Seismic Hazards

The Harbor-UCLA Campus is located within a seismically active region, with the potential for seismic ground shaking. The horizontal peak ground acceleration (PGA) for the site corresponds to the Targeted Maximum Considered Earthquake (MCE_R) of 0.65g. This would be the same under Reduced Intensity Alternative A and the Project. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus. Although seismic risk exists, Reduced Intensity Alternative A would implement MM-GEO-1, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-1, which requires adherence to the recommendations of an approved Geotechnical Evaluation, would reduce seismic impacts for Reduced Intensity Alternative A and the Project to a less than significant level. With the implementation of MM-GEO-1, the Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to seismic hazards.

b. Soil Erosion and Topsoil

Reduced Intensity Alternative A would require the same or potentially less grading, including clearing, excavation, stockpiling, than the Project. As with the Project, all work would be performed in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit, which incorporates a Storm Water Pollution Prevention Program (SWPPP) and Best Management Practices (BMPs) for erosion control. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Also, the relatively gentle topographic gradients at the Medical Center Campus would reduce the potential for soil erosion during construction. As with the Project, Reduced Intensity Alternative A would have a less than significant impact with respect to soil erosion and topsoil. However, because the potential exists that less area would be graded under Reduced Intensity Alternative A, Reduced Intensity Alternative A would have incrementally less impact with respect to soil erosion than the Project.

c. Geologic Stability

As with the Project, Reduced Intensity Alternative A could be exposed to differential soil settlement and liquefaction beneath proposed buildings because of the presence of alluvium, possible undocumented fill, and relatively shallow depths to groundwater. If wet or saturated soil conditions are encountered during excavation, instability could present a constraint to the construction of foundations. Because the risk of compressible/collapsible soils and shallow groundwater exists, as with the Project, Reduced Intensity Alternative A would implement MM-GEO-2, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-2, which provides several approaches to address settlement and shallow groundwater, would reduce the potential for these geologic hazards. With the implementation of MM-GEO-2, the Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to geologic stability.

d. Expansive and Corrosive Soils

The near-surface soils at the Medical Center Campus are generally sandy silt and clayey and typically expansive when wetted. In addition, on-site soils are potentially corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. The risk of expansive and corrosive soils would occur under both Reduced Intensity Alternative A and the Project. As with the Project, Reduced Intensity Alternative A would implement MM-GEO-3, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-3, which provides performance standards and required assessments to address expansive and corrosive soils would reduce the effects of these soils conditions. With the implementation of MM-GEO-3, the Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to expansive and corrosive soils.

5. Greenhouse Gas Emissions

a. Consistency with CCAP

As with the Project, Reduced Intensity Alternative A would be consistent with the County's CCAP, which provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. One the Project objectives to maintain critical trauma services in the South Bay service region of the County of Los Angeles by redeveloping the existing hospital site, would result in more GHG efficiency than developing a new hospital campus on a greenfield site. Therefore, while the Project and Reduced Intensity Alternative A results in a conservatively estimated minimal net increase in GHG emissions, both the Project and Reduced Intensity Alternative A would be consistent with applicable CCAP measure to minimize its GHG emissions. As such, both the Project and Reduced Intensity Alternative A would not be expected to conflict with the County's ability to achieve the CCAP target reduction. Both the Project and Reduced Intensity Alternative A would have a less than significant impact relative to the CCAP and because both the Project and Reduced Intensity Alternative A would be consistent, impact levels would be similar.

b. Greenhouse Gas Reduction Plans

Construction and operation of the Reduced Intensity Alternative A, as with the Project, would be consistent with applicable GHG emissions reductions plans, policies, or regulations. Design features, such as green

building measures would reduce GHG emissions by increasing energy-efficiency beyond regulatory requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate components to reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation. As with the Project, Reduced Intensity Alternative A would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. Both the Project and Reduced Intensity Alternative A would be designed to optimize energy performance. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in the quantitative analysis). The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards. As a result, construction and operation of the both the Project and Reduced Intensity Alternative A would not have a significant impact with respect to consistency with GHG reduction plans. Because both the Project and Reduced Intensity Alternative A would be consistent with applicable plans, impact levels would be similar.

6. Hazards and Hazardous Materials

a. Hazardous Materials Management

As with the Project, Reduced Intensity Alternative A would require the demolition of some buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LACFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Reduced Intensity Alternative A, as with the Project, has the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact. In addition, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, and construction activities have the potential to result in a significant hazard related to potential contaminated soil and groundwater. As with the Project, Mitigation Measures HAZ-1 through HAZ-4, which require abatement in accordance with the recommendation of the Hazardous Building Materials Survey, removal of USTs pursuant to the LACFD review and closure letter, preparation and adherence to a Soils Management Plan, and investigation of the purpose and potential abandonment of existing on-site groundwater monitoring wells, would be implemented. With the implementation of Mitigation Measures HAZ-1 through HAZ-4, hazardous materials impacts associated with Reduced Intensity Alternative A and the Project would be reduced to less than significant levels. Because Reduced Intensity Alternative A involves demolition and excavation and development in an area with potential groundwater contamination, as under the Project, with mitigation, impacts with respect to hazardous materials management would be similar and less than significant.

b. Airport Safety Provisions

Reduced Intensity Alternative A is located on the same property as the Project, which is not within the vicinity of an airport. The nearest airport is more than two miles away. Because of this distance, neither the

Project nor Reduced Intensity Alternative A would interfere with operations any local airports or airstrips. Impacts regarding airport safety under both Reduced Intensity Alternative A and the Project would, therefore, be similar and less than significant.

c. Emergency Response Plans

Reduced Intensity Alternative A, as with the Project, would not adversely affect existing emergency access routes. Medical Center Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures. Such occurrences would be implemented in accordance with a construction traffic management plan, which would allow for responses to emergency accessibility needs. The existing helistop, which would be temporarily relocated to one of two potential locations at the western end of the Medical Center Campus during construction of the new Hospital Tower, would remain operational. As with the Project, regulatory compliance and project features, such as improved access, would avoid the need to generate new emergency plans beyond those normally implemented to address on-site emergency situations. As with the Project, impacts related to emergency response plans would be less than significant. Impact levels would be similar under both the Reduced Intensity Alternative A and the Project.

7. Hydrology and Water Quality

a. Surface Water Hydrology

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative A would be subject to a Construction General Permit and associated NPDES requirements, which include development and implementation of a SWPPP with appropriate BMPs. BMPs to control stormwater runoff during construction could include, but are not limited to, the use of water bars, silt fences, and staked straw bales. Additional source-control BMPs might also be required to prevent runoff and eliminate non-stormwater discharges. Based on the depth to groundwater within the project site, dewatering and any related runoff are not anticipated. Compliance with NPDES requirements would reduce surface water runoff during construction to a less than significant level under both Reduced Intensity Alternative A and the Project. The level of impact related to surface water hydrology under both scenarios would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative A would convert more than three acres of existing pavement to turf area. Any proposed new storm drain connections to the reinforced concrete box channel or open channel owned by the Flood Control District would be conducted under a connection permit approved by the District. This permit would require a hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeded the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates. As with the Project, Reduced Intensity Alternative A would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious) based on LID Standards. Several dry wells were previously constructed to meet this

requirement. This approach is likely to be implemented for future areas to be redeveloped under both the Project and Reduced Intensity Alternative A. LID features include resource conservation, flatter wider swales, flatter slopes, turf depression, landscape island storage, rooftop detention/retention, catch basins/seepage pits, sidewalk storage, permeable pavement, and other measures. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. With implementation of LID measures and permitting from the District related to the reinforced concrete box channel and drainage ditch, surface water impacts associated with both Reduced Intensity Alternative A and the Project would be less than significant. Impacts related to surface water runoff would be similar under both Reduced Intensity Alternative A and the Project.

b. Surface and Groundwater Quality

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative A would be subject to existing regulations governing surface and groundwater quality. The required Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate BMPs to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Compliance with construction phase BMPs and other requirements are considered protective of water quality during construction and would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. The NPDES Construction General Permit and SWPPP establish procedures and action protocols for the handling of construction-related chemicals and encountered groundwater. Based on existing and historical depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Existing regulations would ensure that any potential dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Therefore, impacts related to surface and groundwater quality would be less than significant and similar under both Reduced Intensity Alternative A and the Project.

(2) Operation

Stormwater discharge may include pollutants of concern, such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash. This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff could degrade water quality in surface and waters and can affect drinking water, human health, and plant and animal habitats. Reduced Intensity Alternative A, as with the Project, would utilize landscaping in strategic ways to capture and clean stormwater runoff. Strategies include replacement of three acres of pavement with landscaping. The Project would avoid the use of pollutants, chemicals, or soil amendments that could enter surface water runoff. Organic maintenance methods or Integrated Pest Management may be used. Implementation of County LID features, including bioretention features, modifications to address the potential leaching of nutrients, and post-construction BMPs would ensure that operations would not degrade the quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies, or impair the beneficial uses of the receiving waters. With compliance with existing regulations, both Reduced Intensity Alternative A and

the Project would have a similar, less than significant impact, related to surface and groundwater water quality.

8. Land Use

a. Applicable Plans and Policies

As with the Project, Reduced Intensity Alternative A would be consistent with the policies of the SCAG 2008 Regional Comprehensive Plan and Compass Growth Visioning (including the Compass 2% Blueprint Strategy) to focus growth in existing and emerging centers, along major transportation corridors, and in proximity to transit. Reduced Intensity Alternative A would be consistent with SCAG's 2016-2040 Regional Transportation Plan and Sustainable Communities Strategy (2016 RTP/SCS) by enhancing the pedestrian environment within the Medical Center Campus and along Carson Street, and improving pedestrian connectivity between the Medical Center Campus, the surrounding community, and the Carson Street Metro Transit Station. Reduced Intensity Alternative A would be consistent with applicable policies of General Plan Update in that it would be compatible with the existing adjacent off-site land uses, incorporate sustainable design, facilitate multiple modes of transportation (including alternative modes), provide interconnected and safe pedestrian and bicycle circulation, provide required green space and landscaped setbacks, result in less than significant impacts to biological, aesthetic and cultural resources after mitigation, result in less than significant seismic/geotechnical and noise impacts after mitigation, be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Reduced Intensity Alternative A would also be consistent with the Los Angeles County General Plan's "P" GPLU land use designation, which permits a broad range of public and semi-public facilities and community-serving uses, and with the overall floor area ratio (FAR) not to exceed 3:1. The Project would have a maximum FAR of 0.78 and the Reduced Intensity Alternative A would be incrementally less. As with the Project, Reduced Intensity Alternative A would be consistent with the Los Angeles Planning and Zoning Code and would not exceed the development limits associated with the underlying C-3 zone. The Project and Reduced Intensity Alternative A would have a less than significant and similar impact with respect to applicable plans and policies.

b. Land Use Compatibility

As with the Project, Reduced Intensity Alternative A would alter the existing visual appearance of the Medical Center Campus through denser development than under existing conditions. However, the Site is located within a fully urbanized setting within the 110 Freeway/Carson Station TOD. The area is also undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. Reduced Intensity Alternative A, as with the Project, would provide landscaping and street trees along the street frontages where in some areas such landscaping and trees are lacking, and would be designed in compliance with unifying design guidelines which would improve the visual appearance of the Medical Center Campus. While the densification of land uses at the Medical Center Campus would be noticeable from adjacent off-site land uses, including the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Medical Center Campus and the residential neighborhood to the north), because of the urbanizing trend in the area and proposed streetscape/screening, the Reduced Intensity Alternative A, as with the Project, would result in less than

significant land use incompatibilities with adjacent off-site land uses. However, because Reduced Intensity Alternative A would have incrementally less density than under the Project, it would have less impact with respect to land use compatibility.

9. Noise

a. Construction Noise

As with the Project, construction of Reduced Intensity Alternative A would involve demolition, grading, building construction, and paving. Each stage would involve the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques. Construction noise would exceed the significance threshold at the several receptor locations during various development phases. As with the Project, Reduced Intensity Alternative A would implement mitigation measures, such as MM NOISE-1 and project design features to achieve a noise reduction in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise would exceed the noise threshold at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. Although both the Project and Reduced Intensity Alternative A would result in a significant and unavoidable noise impact, because Reduced Intensity Alternative A is reduced in development scope and duration of construction, construction noise impacts would be incrementally less.

b. Operational Noise

As under the Project, noise sources associated with operation of Reduced Intensity Alternative A, including mechanical equipment, loading dock activity, refuse collection, parking structure activity, and traffic, would increase the ambient noise level at the nearest noise-sensitive receptor, but by a less than the threshold of significance. Composite noise level increases at all other receptor locations are also expected to be less than significant, given their distance from the site and the presence of intervening structures. As such, the operational noise level impacts due to the future operation of Project and Reduced Intensity Alternative A would be less than significant. However, because Reduced Intensity Alternative A is incrementally smaller in development scope than the Project and would generate less traffic, operational noise impacts would be less.

With regard to helicopter-related noise, the Project would result in less than significant impacts at Project buildout once the permanent rooftop helistop on the New Hospital Tower is operational. However, operation of the temporary helistop at either interim location would exceed established noise thresholds at nearby sensitive receptors to the south of the Medical Center Campus, and no mitigation exists that could reduce noise levels to acceptable levels. Therefore, impacts under the Project would be considered significant and unavoidable. Because Reduced Intensity Alternative A would also require operation of the temporary helistop locations (though only one would be operational at any given time, as under the Project), impacts under this alternative would be significant and unavoidable and similar to the Project.

c. Construction Vibration

The construction of Reduced Intensity Alternative A, as with the Project, would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. Maximum vibration velocities to which receptors could be exposed range from 0.01 to 0.027 inches per second PPV. This value is considerably lower than the impact threshold of 0.5 inches per second PPV, and as such, construction vibration would be less than significant at the nearest residential building. Although construction vibration levels would be less than significant under both the Project and Reduced Intensity Alternative A would be less than significant, because the development scope and duration of Reduced Intensity Alternative A's construction activities would be incrementally less than under the Project, construction vibration impacts would be less.

d. Operational Vibration

As with the Project, operation of Reduced Intensity Alternative A would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the nearest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, under both the Project and Reduced Intensity Alternative A, vibration impacts associated with operation of the Project would be less than significant. However, because Reduced Intensity Alternative A would be incrementally smaller in development scope than the Project (would generate less traffic), operational vibration impacts would be less.

10. Population, Housing and Employment

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would employ a mobile regional construction work force. Given the mobility and short duration of work at a particular site, a construction labor pool that can be drawn upon in the region and workers are not expected to relocate as a result of such employment opportunities. The number of construction workers would vary from approximately 212 workers per day during less intensive construction activity up to a maximum of approximately 1,650 construction workers on a day during the peak construction period. Because of a large, regional construction pool and the mobility of construction workers, construction activities would not generate a notable demand for housing, or affect population patterns. Although the duration of construction would be incrementally less under Reduced Intensity Alternative A, as with the Project, construction of both Reduced Intensity Alternative A and the Project would have a less than significant impact relative to construction-related population, housing, and employment. However, because of an incrementally reduced scope of development, Reduced Intensity Alternative A would have slightly less impact than under the Project.

(2) Operation

Compared to the Project, Reduced Intensity Alternative A would reduce licensed hospital beds from 446 to approximately 375, construct two outpatient buildings (compared to three under the Project), reduce the

scale of the Central Plant, and only partially renovate of the Existing Hospital tower. There would be incrementally fewer annual patient visits than under the Project and Reduced Intensity Alternative A. Total employment at the site under the Project would represent a small percent of the projected growth in the South Bay Planning Area up to Year 2030 and very small percent of estimated growth in unincorporated Los Angeles County for this same period. Because the Project's employment increase would not exceed local and SCAG's growth projections for the period between 2016 and 2030, Reduced Intensity Alternative A, which would have incrementally fewer employees, would also not exceed growth projections. As with the Project, impacts regarding consistency with the projected employment growth would be less than significant. However, because of the reduced intensity, impacts under Reduced Intensity Alternative A would be incrementally less.

11. Public Services

a. Fire Protection and Emergency Services

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements; on-site fire suppression equipment specific to construction activities; compliance with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials would reduce demand for fire protection and EMS during construction to a less than significant level. Emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. While Reduced Intensity Alternative A and the Project would require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Medical Center Campus, Reduced Intensity Alternative A, as with the Project, would provide a construction traffic management plan to establish temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, and require various safety precautions such as alternate routing and protection barriers. With the implementation of the traffic management plan, impacts related to emergency access, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant under both Reduced Intensity Alternative A and the Project. Although impacts would be less than significant under both the Project and Reduced Intensity Alternative A, impacts would be less under the Reduced Intensity Alternative A because of the incrementally shorter construction time frame.

(2) Operation

As with the Project, Reduced Intensity Alternative A would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, and Utilities Code) for new construction that address structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. The LACFD would review and approve all plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the

risk of increased operation fire safety hazards. An LACFD-approved Emergency Response Plan would include mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because Reduced Intensity Alternative A would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Medical Center Campus would be improved.

As with the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. According to Section 4.L., Transportation and Traffic, of this Draft EIR, because implementation of mitigation measures is not entirely within the control of the County, significant and unavoidable impacts would occur at the several intersections in the area, which could affect LACFD emergency vehicle response times in the area. However, as under the Project, Reduced Intensity Alternative A would provide traffic design measures, including the installation roadway and traffic control improvements that would enable emergency access to the Medical Center Campus. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Medical Center Campus from Station 36 are currently within the LACFD's response time goals, operational impacts under the Project and Reduced Intensity Alternative A on emergency response times would less than significant. However, because visitation and hospital beds would be reduced by approximately 16 percent under Reduced Intensity Alternative A, impacts with relation to emergency response would be incrementally less.

As with the Project, Reduced Intensity Alternative A would require greater fire flows at the site than required under existing conditions. As discussed in Section 4.K.1, Fire Protection and Emergency Services of this Draft EIS, water service to the Medical Center Campus are adequate to meet Project requirements and, as such, would be adequate to meet Reduced Intensity Alternative A fire flow requirements. Impacts related to fire flow would be less than significant under both the Reduced Intensity Alternative A and the Project. However, because of the reduced scope of development under the Reduced Intensity Alternative A, fire flow demand would be incrementally less.

b. Sheriff Protection

(1) Construction

Construction activities associated with Reduced Intensity Alternative A, as under the Project, would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through buildout. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by PDF SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Medical Center Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during construction of Reduced Intensity Alternative A would not require new or altered police protection facilities to maintain service, and the impact would be less than significant but incrementally reduced compared to the Project due to the reduction in overall construction activities on the Medical Center Campus.

Regarding police access and response times during construction, as would be the case under the Project, construction staging and construction worker parking associated with Reduced Intensity Alternative A would be accommodated on the Medical Center Campus, limiting potential conflicts with traffic on local streets. In addition, as required by the PDF-SHER-2, emergency access would be provided and maintained for existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project and Reduced Intensity Alternative A would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site, with the implementation of various traffic- and law enforcement-related Project Design Features, as under the Project, impacts on police access and response times during construction would not require new or altered police protection facilities to maintain service, and thus would be less than significant. However, given the reduction in overall development intensity under this Alternative, construction-related impacts would be incrementally reduced.

(2) Operation

The Master Plan Project would result in a net increase of 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of 2,030 employees and 185,745 annual patient visits, respectively. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, Reduced Intensity Alternative A would result in an overall increase in development intensity compared to existing conditions, but this increase would be less than that of the Project. Therefore, as with the Project, operational impacts on police protection services would be less than significant, but would be incrementally reduced compared to the Project due to the reduction in overall development intensity.

c. Parks and Recreation

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Medical Center Campus. Also, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities to the extent that new recreational facilities would be required or that substantial physical deterioration of such facilities would occur. Construction effects on parks under either the Reduced Intensity Alternative A or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative A would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative A would generate incrementally fewer employees than the estimated 2,030 new employees under the Project. However, Reduced Intensity Alternative A represents a large percentage of the Project's development scale and would likely bring employees and their families to the area. As such, Reduced Intensity Alternative A could create a demand for public parks and recreational facilities. A portion of the new on-site employees would be expected to be derived from the existing local labor pool, and it is likely that these employees and their families likely already generate a demand for public parks and recreational facilities in the local area. Furthermore, any use of existing public parks and recreational

facilities by Project employees and their families would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities. As with the Project, Reduced Intensity Alternative A would have a less than significant impact on parks and recreational facilities. However, because Reduced Intensity Alternative A would have incrementally fewer new employees than under the Project, impacts would be incrementally less.

d. Schools

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would not physically affect existing public schools as no public schools are located on or directly adjacent to the Medical Center Campus. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction. Given the general accessibility of the Medical Center Campus and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards. Construction on schools, as with the Project, would be less than significant and similar under Reduced Intensity Alternative A.

(2) Operation

It is estimated that, under the Project, families of new employees would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students. Reduced Intensity Alternative A would generate incrementally fewer employees and students. It is likely that student attendance under both Reduced Intensity Alternative A and the Project would be split among the 11 elementary and high schools in the local area, and possibly beyond. If all new students were distributed among the nearest schools, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved. As with the Project, impacts on local schools under Reduced Intensity Alternative A and would be less than significant. However, because Reduced Intensity Alternative A is reduced in scale, impacts would be incrementally less.

e. Libraries

(1) Construction

As with the Project, construction of Reduced Intensity Alternative A would not physically affect existing libraries, none of which are located on or directly adjacent to the Medical Center Campus. In addition, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local libraries to the extent that new libraries would be required or that substantial physical deterioration of such facilities would occur. Construction effects on libraries under either the Reduced Intensity Alternative A or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative A would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative A would generate incrementally fewer employees than the Project's estimated net increase of 2,030 employees. Reduced Intensity Alternative A, however, represents a large percentage of the Project's development scope and would generate new employees, their families, and demand for library services. As with the Project, this increase in demand would not be expected to be substantial or result in the need for new or physically altered library facilities. A portion of new employees are expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. The existing on-site AF Parlow Library of Health Sciences would be retained under Reduced Intensity Alternative A to help meet the demand for library facilities. Patients and visitors of existing public library facilities would also likely be split among the four public libraries in the vicinity; thus, avoiding the concentration of demand at any one library. As with the Project, Reduced Intensity Alternative A would have a less than significant impact on library services. However, because Reduced Intensity Alternative A would have generate incrementally fewer new employees than under the Project, impacts would be incrementally less.

12. Transportation and Parking

a. Construction

As with the Project, the implementation of a Construction Traffic Management Plan and pedestrian safety program under Reduced Intensity Alternative A would reduce potential construction impacts associated with hauling, deliveries and worker vehicles. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance would minimize the potential disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the commercial zones and residential neighborhoods. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified. As such, construction traffic impacts, under both Project-specific and cumulative conditions, would be significant and unavoidable. However, because of a shorter construction duration, construction traffic impacts would be incrementally less than under the Project.

b. Operation

(1) Intersection Service Levels

As with the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. Significant traffic impacts are anticipated at the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. Compared to the Project, intersection traffic would be reduced by approximately 16 percent but are still anticipated to exceed threshold levels. Although implementation of proposed mitigation measures (MM TRAF-1 through MM TRAF-3) would reduce impacts

to less than significant levels for three of these intersections, because there is uncertainty whether other decision-making agencies will implement mitigation measures, impacts are considered significant and unavoidable under both Reduced Intensity Alternative A and the Project. However, because of the reduction in scale of Reduced Intensity Alternative A, impacts would be incrementally less than under the Project.

(2) CMP Transportation System

As with the Project, Reduced Intensity Alternative A would not exceed the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant under both the Reduced Intensity Alternative A and the Project. However, because Reduced Intensity Alternative A would have incrementally fewer new vehicle trips than under the Project, impact levels would be less.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections

As under the Project, development of Reduced Intensity Alternative A would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway. Potential mitigation measures, which include a contribution of a fair share to proposed Caltrans projects to address congestion in the study area (MM TRAF-4) relies on Caltrans cooperation and approval. Because this is out of the County's control, impacts at the three freeway segments are considered significant and unavoidable. However, because Reduced Intensity Alternative A would have incrementally fewer new vehicle trips than under the Project, impact levels would be less. Reduced Intensity Alternative A would also significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street because, as with the Project, it would add more than 50 vehicle trips to this intersection. Although incrementally less under Reduced Intensity Alternative A, the impact at this intersection would be considered significant and unavoidable.

(b) Freeway Off-Ramps

As with the Project, Reduced Intensity Alternative A would increase traffic at freeway off-ramps. However, because the off-ramp queue would not extend beyond the length of the ramp onto the mainline of the freeway during the peak arrival period, impacts at freeway off-ramps would be less than significant. Although both the Reduced Intensity Alternative A and the Project would have less than significant impacts, Reduced Intensity Alternative A would result in fewer new vehicle trips than under the Project and less impact at freeway off-ramps.

(4) Public Transit and Alternative Transportation

Reduced Intensity Alternative A would result in an incremental decrease in the Project's estimated ridership of approximately 22 morning and 22 afternoon transit person trips. As with the Project, transit ridership would represent a small percentage of the 1,840 persons-trip capacity within ¼-mile of the Medical Center Campus. Because this is not likely to exceed transit capacity, as with the Project, Reduced Intensity Alternative A would have a less than significant impact on transit and alternative transportation. Although both the Reduced Intensity Alternative A and the Project would have less than significant impacts, Reduced

Intensity Alternative A would result in fewer new transit riders than under the Project and less impact on transit facilities.

(5) Access and Circulation

As under the Project, access to the site under Reduced Intensity Alternative A would be provided via seven driveways. Driveways would be designed to County standards and would accommodate left and right ingress/egress turning movements. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. As with the Project, impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant. However, because Reduced Intensity Alternative A would generate less overall traffic, potential pedestrian/vehicle conflicts would be incrementally less.

(6) Parking Supply

Reduced Intensity Alternative A would provide approximately 2,300 new parking spaces, which would reduce total parking provided under the Project. As with the Project, total parking is anticipated to exceed County Code requirements. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. As with the Project, it is anticipated that Reduced Intensity Alternative A, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code. Because parking would exceed Code requirements, impacts related to parking supply under both the Project and Reduced Intensity Alternative A would be less than significant and similar.

13. Utilities and Service Systems

a. Water Supply

(1) Construction

Construction of Reduced Intensity Alternative A, as with the Project would include all necessary on- and off-site water system connections and improvements to tie into Cal Water's existing distribution system. All necessary improvements would be verified through the coordination with Cal Water and the LACFD regarding fire flow requirements. Impacts on water distribution systems would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have incrementally less overall development than under the Project, impacts on local distribution infrastructure and potential water supply pipeline construction, if necessary, would be less under this Alternative.

(2) Operation

Reduced Intensity Alternative A would result in an incremental decrease in the Project's estimated water demand of 458.6 AFY (or a net increase of 251 AFY over existing conditions), as there would be a reduction

in overall development intensity relative to the Project. As the projected water demand under this Alternative would be within the projected demand for the Project, which was determined in the Project WSA to be within Cal Water's projected supplies, impacts related to water supply would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have incrementally less overall development than under the Project, impacts on water supply would be less under this Alternative.

b. Wastewater

(1) Construction

Construction of the Reduced Intensity Alternative A, as with the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs. Impacts on conveyance systems would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have less overall development than under the Project, impacts on local conveyance systems and potential sewer line construction would be incrementally less.

(2) Operation

Reduced Intensity Alternative A would result in an incremental decrease in the Project's estimated 171,998 gpd. The Project's wastewater generation represents approximately 0.114 percent of JWPCP's total remaining capacity of 120 mgd. As with the Project, the increase the overall demand on wastewater conveyance and treatment facilities in the area would not exceed the available capacity of affected wastewater facilities and, thus, would not directly or indirectly result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Impacts related to wastewater conveyance and treatment would be less than significant under both the Project and Reduced Intensity Alternative A. However, because Reduced Intensity Alternative A would have less overall development than under the Project, impacts on treatment systems would be incrementally less.

c. Solid Waste

(1) Construction

Reduced Intensity Alternative A, as with the Project, would require demolition of some existing buildings and construction activities that would generate solid waste. Much of this would be accommodated at the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. There will be an additional approximately 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. Not taking into account C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code (Reduced Intensity Alternative A must recycle or reuse 50 percent of the debris generated), the estimated debris is expected to be similar (or slightly less) to waste

generated by Project construction. Neither the Project nor Reduced Intensity Alternative A would exceed landfill capacity for construction debris or soil waste. Impacts under both the Project and Reduced Intensity Alternative A would have a less than significant and similar impact relative to solid waste capacity.

(2) Operation

Not taking into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs, the Project would generate a net increase of total net increase in waste approximately 2,481 tons per year. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.011 percent of the residual daily capacity at the landfill, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent. With an approximately 16 percent reduction in the Project's new beds and elimination of the Project's retail uses, Reduced Intensity Alternative A would provide an incremental decrease in operational waste. Because the Project would have not exceed landfill capacity, Reduced Intensity Alternative A, which would generate incrementally less waste, would also not exceed landfill capacity. Under both the Project and Reduced Intensity Alternative A, impacts on landfill capacity would be less than significant. However, because the scope of development under Reduced Intensity Alternative A is reduced, it would have incrementally less impact than the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Reduced Intensity Alternative A would incrementally reduce the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6. However, these impacts, while reduced compared to the Project, would remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative A.

Because Reduced Intensity Alternative A would be incrementally reduced compared to the Project, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative A would have a relatively similar level of impact and require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative A would incrementally reduce the Project's significant and less than significant impacts, and would not result in any new environmental impacts, and would also provide adequate beds to achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles, although not to the extent the Project would. SB 1953 requires the

replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

Reduced Intensity Alternative A would support, but to a lesser extent, the Project's basic objectives to renovate existing health facilities to meet the Affordable Care Act of 2010 and to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would substantially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction. However, because retail uses would be eliminated and outpatient buildings would be reduced from three (under the Project) to two buildings, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings under the ownership and control of the County.

However, Reduced Intensity Alternative A would support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. Reduced Intensity Alternative A would also meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices. Reduced Intensity Alternative A would also would provide opportunities for development up to 250,000 square feet of additional bioscience and support facilities in the Bioscience Tech Park and 225,000 square feet of expanded LA BioMed facilities.

5.0 ALTERNATIVES
C. ALTERNATIVE 3: REDUCED INTENSITY ALTERNATIVE B – FURTHER ACUTE BED AND OTHER PLAN REDUCTIONS

A. DESCRIPTION OF THE ALTERNATIVE

Alternative 3, Reduced Intensity Alternative B – Further Acute Bed and Other Plan Reductions, would implement the Master Plan Project but at an even lower overall intensity than proposed under the Project or Alternative 2. The reductions are attributable to a reduction in new outpatient building space and parking spaces under Alternative 3. Specifically, this Alternative would result in the construction of the New Hospital Tower, but with a reduction in the maximum number of licensed acute care beds from 446 to 375, as well as construction of only one outpatient buildings (compared to three under the Project and up to two under Reduced Intensity Alternative A), a reduced Central Plant, two parking structures with up to 1,800 parking spaces (compared to up to three structures with up to 2,300 spaces under Alternative 2), and complete renovation of the Existing Hospital tower (compared to a partial renovation in Alternative 2) in order to accommodate the outpatient services previously planned for the additional two outpatient buildings under the Project. Similar to Alternative 2, this Alternative would also eliminate all retail uses from the development plan. In addition, Alternative 3 would be phased so that the New Hospital Tower would be constructed by 2025, prior to new outpatient uses, with completion of construction activities anticipated in 2028. All development associated with LA BioMed and the proposed Bioscience Tech Park, as well as necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements would be implemented as under the proposed Master Plan Project.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

a. Visual Character

(1) Construction

Construction activities typically result in site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures and other activities that generally contrast with the aesthetic character of an area. Under the Reduced Intensity Alternative B, construction activities would be visible at various times from Vermont Avenue, Carson Street, Normandie Avenue, and 220th Street. As with the Project, construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve Reduced Intensity Alternative B. As such, visual character impacts experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of Reduced Intensity Alternative B. As with the Project, construction impacts would be less than significant. However, because overall construction would be incrementally less and be completed in fewer years than under the Project (completed in

approximately 2028 instead of approximately 2030), the impact of construction on visual character would be incrementally less under Reduced Intensity Alternative B.

(2) Operation

Reduced Intensity Alternative B would allow for a reduced intensity with respect to the New Hospital Tower and would not completely renovate the existing Hospital Tower. The reduction in beds in the New Hospital Tower could allow for an incrementally smaller building, either in height or profile. Because a complete renovation of the old Hospital Tower would not be implemented, the Reduced Intensity Alternative B may not result in the same aesthetic character of the old Hospital Tower as under the Project. New sidewalks and street scape, internal landscaping, public art and other aesthetic amenities would be the same as under the Project. As with the Project, the transition of the Medical Center Campus to greater densification would be consistent with growth trends and buildout in the surrounding area and Reduced Intensity Alternative B would be contained within the existing Medical Center Campus, aside from temporary off-site improvements and would not directly adjoin any other existing neighborhood or community uses. New buildings under the Reduced Intensity Alternative B would be required to implement the Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community.

Reduced Intensity Alternative B, as with the Project, would enhance the existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street with landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. As with the Project, Reduced Intensity Alternative B would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Impacts with respect to visual character under Reduced Intensity Alternative B would be similar to the Project and less than significant.

b. Views

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources. The reduction in scale of the New Hospital Tower under Reduced Intensity Alternative B is likely to reduce the New Hospital Tower's height or width as represented in the Project's stacking profile. However, as with the Project, the new buildings of the Reduced Intensity Alternative B would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. However, development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets. The views of the Medical Center

Campus from Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program. Because no existing recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus, as with the Project, the Reduced Intensity Alternative B would not block views of existing scenic resources. In addition, the Reduced Intensity Alternative B would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. The impact of Reduced Intensity Alternative B with respect to views would, thus, be less than significant and similar to that of the Project.

c. Light and Glare

(1) Construction

Lighting during construction would potentially cause minor light spillover in the vicinity of the Medical Center Campus, including the residential neighborhoods to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. As with the Project, construction lighting under Reduced Intensity Alternative B would only be located in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would be limited and directed onto specific locations within construction sites to avoid impacts on-site medical patients. As with the Project, artificial light associated with construction activities would be limited to security lighting and specific construction tasks and would not adversely impact off-site sensitive receptors. Reduced Intensity Alternative B would also have a less than significant impact with respect to construction lighting. However, because overall construction would occur over a shorter timeframe (competed in approximately 2028 instead of approximately 2030 under the Project), construction lighting impacts under Reduced Intensity Alternative B would be incrementally less than those generated by the Project.

(2) Operation

(i) Artificial Light

As with the Project, the security and landscape lighting for Reduced Intensity Alternative B would be located near ground level, generally shielded from adjacent uses by landscaping, and low-intensity in character. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Light spillage from the Project's multi-story components would be similar to existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower. The removal of surface parking lots, including Parking Lot A, which is visible from residential uses to the east and the surface parking lot in the southwest corner of the Medical Center Campus, which is visible to uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. As with the Project, new lighting sources from Reduced Intensity Alternative B are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. As such, artificial light impacts under Reduced Intensity Alternative B would be similar to those of the Project and less than significant.

(ii) Glare

Building surfaces associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim, can reflect light. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. As with the Project, the Design Guidelines for Reduced Intensity Alternative B, would require that building materials, massing, and styles are consistent with neighboring buildings, including the Existing Hospital tower, and complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Medical Center Campus as a medical facility. As such, Reduced Intensity Alternative B, as with the Project, would not generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Therefore, glare impacts under Reduced Intensity Alternative B would be similar to the Project and less than significant.

2. Air Quality

a. Consistency with Air Quality Management Plan

(1) Construction

Reduced Intensity Alternative B would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under both Reduced Intensity Alternative B and the Project would not conflict with the long-term employment projections upon which the AQMP is based. Reduced Intensity Alternative would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment and, as such, would not conflict with implementation of AQMP strategies intended to reduce emissions from construction equipment and activities. Reduced Intensity Alternative B would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies. Although both the Project and Reduced Intensity Alternative B would be smaller in total development, it would have incrementally less impact.

(2) Operation

As with the Project, Reduced Intensity Alternative B would be consistent with growth projections set forth in the AQMP, and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips. Both the Project and Reduced Intensity Alternative B would have a less than significant impact relative to the AQMP; however, because Reduced Intensity Alternative B is smaller in total development, it would have incrementally less impact.

b. Violation of Air Quality Standards

(1) Construction

Construction of Reduced Intensity Alternative B has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Medical Center Campus. However, as with the Project, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Although emissions would be less than significant under both the Project

and Reduced Intensity Alternative B, because Reduced Intensity Alternative B would involve less construction, it would have incrementally less impact than the Project with respect to the SCAQMD regional thresholds.

(2) Operation

Operation of Reduced Intensity Alternative B has the potential to create air quality impacts based on daily trip generation and energy demand. As discussed in Section 4.B., Air Quality, of the Draft EIR, the Project's net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD regional thresholds for during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. As such both the Project and Reduced Intensity Alternative B would have a less than significant impact with respect to SCAQMD standards. However, because daily trips and the scope of development would be incrementally less under Reduced Intensity Alternative B, impacts relative to SCAQMD thresholds would be less than the Project.

c. Non-Attainment Pollutants

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would result in the emission of criteria pollutants for which the region is in nonattainment; however, the maximum daily emissions from construction of Reduced Intensity Alternative B would not exceed the numeric indicator of significance for criteria pollutants nor their precursors. As with the Project, compliance with CARB and SCAQMD control measures and the same design features implemented by the Project would minimize and reduce construction emissions. Neither Reduced Intensity Alternative B nor the Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would involve less construction, it would fewer total emissions than under the Project.

(2) Operation

Operation of Reduced Intensity Alternative B would result in the emission of criteria pollutants for which the region is in nonattainment; however, as with the Project, maximum daily emissions from operation would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of Reduced Intensity Alternative B would not exceed the applicable thresholds of significance. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate fewer total emissions than under the Project.

d. Substantial Pollutant Concentrations

As with the Project, Reduced Intensity Alternative B would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the either Reduced Intensity Alternative B or the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Reduced Intensity

Alternative B at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of either the Project or Reduced Intensity Alternative B would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks which exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of either the Project or Reduced Intensity Alternative B would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate fewer total emissions than under the Project.

e. Odors

(1) Construction

As with the Project, Reduced Intensity Alternative B may emit odors during construction associated with the use of architectural coatings and solvents. However, SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Both the Project and Reduced Intensity Alternative B would result in a less than significant impact. Also, because SCAQMD Rule 1113 would be equally enforceable under both the Project and Reduced Intensity Alternative B, impact levels would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative B does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Reduced Intensity Alternative B would be covered and situated away from the property line and sensitive off-site uses. Under both the Project and Reduced Intensity Alternative B, medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant under both the Project and Reduced Intensity Alternative B and impact levels would be similar.

3. Energy

a. Construction

Construction would entail consumption of diesel for hauling and construction equipment, gasoline for some hauling and workers' transportation, and electricity to provide temporary power for lighting and electronic equipment and to power certain construction equipment. Some heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. As with the Project, Reduced Intensity Alternative B would utilize electric or alternatively fueled equipment as available and as feasible. It is estimated that the construction of the Project would require approximately 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy. As with the Project, Reduced Intensity Alternative B would also meet or exceed the County's waste diversion targets. Neither the Project nor Reduced Intensity Alternative B would result in the wasteful,

inefficient, and unnecessary consumption of energy during construction, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate less energy demand than under the Project.

b. Operation

Operation of both Reduced Intensity Alternative B and the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project and Reduced Intensity Alternative B would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Neither the Project nor Reduced Intensity Alternative B would result in the wasteful, inefficient, and unnecessary consumption of energy during operation, or preempt future energy conservation during operation. Although both the Project and Reduced Intensity Alternative B would result in a less than significant impact, because Reduced Intensity Alternative B would be incrementally smaller in scale, it would generate less overall energy demand than under the Project.

4. Geology and Soils

a. Seismic Hazards

The Harbor-UCLA Campus is located within a seismically active region, with the potential for seismic ground shaking. The horizontal peak ground acceleration (PGA) for the site corresponds to the Targeted Maximum Considered Earthquake (MCE_R) of 0.65g. This would be the same under Reduced Intensity Alternative B and the Project. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus. Although seismic risk exists, Reduced Intensity Alternative B would implement MM-GEO-1, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-1, which requires adherence to the recommendations of an approved Geotechnical Evaluation, would reduce seismic impacts for Reduced Intensity Alternative B and the Project to a less than significant level. With the implementation of MM-GEO-1, the Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to seismic hazards.

b. Soil Erosion and Topsoil

Reduced Intensity Alternative B would require potentially less grading, including clearing, excavation, stockpiling, than the project. As with the Project, all work would be performed in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit, which incorporates a Storm Water Pollution Prevention Program (SWPPP) and Best Management Practices (BMPs) for erosion control. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Also, the relatively gentle topographic gradients at the Medical Center Campus would reduce the potential for soil erosion during construction. As with the Project, Reduced Intensity Alternative B would have a less than significant impact with respect to soil erosion and topsoil. However, because the potential exists that less area would be graded under Reduced Intensity Alternative B, Reduced Intensity Alternative B would have incrementally less impact with respect to soil erosion than under the Project.

c. Geologic Stability

As with the Project, Reduced Intensity Alternative B could be exposed to differential soil settlement and liquefaction beneath proposed buildings because of the presence of alluvium, possible undocumented fill, and relatively shallow depths to groundwater. If wet or saturated soil conditions are encountered during excavation, instability could present a constraint to the construction of foundations. Because the risk of compressible/collapsible soils and shallow groundwater exists, as with the Project, Reduced Intensity Alternative B would implement MM-GEO-2, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-2, which provides several approaches to address settlement and shallow groundwater, would reduce the potential for these geologic hazards. With the implementation of MM-GEO-2, the Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to geologic stability.

d. Expansive and Corrosive Soils

The near-surface soils at the Medical Center Campus are generally sandy silt and clayey and typically expansive when wetted. In addition, on-site soils are potentially corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. The risk of expansive and corrosive soils would occur under both Reduced Intensity Alternative B and the Project. As with the Project, Reduced Intensity Alternative B would implement MM-GEO-3, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-3, which provides performance standards and required assessments to address expansive and corrosive soils, would reduce the effects of these soils conditions. With the implementation of MM-GEO-3, the Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to expansive and corrosive soils.

5. Greenhouse Gas Emissions

Consistency with CCAP

As with the Project, Reduced Intensity Alternative B would be consistent with the County's CCAP, which provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. One the Project objectives to maintain critical trauma services in the South Bay service region of the County of Los Angeles by redeveloping the existing hospital site, would result in more GHG efficiency than developing a new hospital campus on a greenfield site. Therefore, while the Project and Reduced Intensity Alternative B results in a conservatively estimated minimal net increase in GHG emissions, both the Project and Reduced Intensity Alternative B would be consistent with applicable CCAP measure to minimize its GHG emissions. As such, both the Project and Reduced Intensity Alternative B would not be expected to conflict with the County's ability to achieve the CCAP target reduction. Both the Project and Reduced Intensity Alternative B would have a less than significant impact relative to the CCAP and because both the Project and Reduced Intensity Alternative B would be consistent, impact levels would be similar.

Greenhouse Gas Reduction Plans

Construction and operation of the Reduced Intensity Alternative B, as with the Project, would be consistent with applicable GHG emissions reductions plans, policies, or regulations. Design features, such as green

building measures would reduce GHG emissions by increasing energy-efficiency beyond regulatory requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate components to reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation. As with the Project, Reduced Intensity Alternative B would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. Both the Project and Reduced Intensity Alternative B would be designed to optimize energy performance. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in the quantitative analysis). The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards. As a result, construction and operation of the both the Project and Reduced Intensity Alternative B would not have a significance impact with respect to consistency with GHG reduction plans. Because both the Project and Reduced Intensity Alternative B would be consistent with applicable plans, impact levels would be similar.

6. Hazards and Hazardous Materials

a. Hazardous Materials Management

As with the Project, Reduced Intensity Alternative B would require the demolition of some buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LACFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Reduced Intensity Alternative B, as with the Project, has the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact. In addition, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, and construction activities have the potential to result in a significant hazard related to potential contaminated soil and groundwater. As with the Project, Mitigation Measures HAZ-1 through HAZ-4, which require abatement in accordance with the recommendation of the Hazardous Building Materials Survey, removal of USTs pursuant to the LACFD review and closure letter, preparation and adherence to a Soils Management Plan, and investigation of the purpose and potential abandonment of existing on-site groundwater monitoring wells, would be implemented. With the implementation of Mitigation Measures HAZ-1 through HAZ-4, hazardous materials impacts associated with Reduced Intensity Alternative B and the Project would be reduced to less than significant levels. Because Reduced Intensity Alternative B involves demolition and excavation and development in an area with potential groundwater contamination, as under the Project, with mitigation, impacts with respect to hazardous materials management would be similar and less than significant.

b. Airport Safety Provisions

Reduced Intensity Alternative B is located on the same property as the Project, which is not within the vicinity of an airport. The nearest airport is more than two miles away. Because of this distance, neither the

Project nor Reduced Intensity Alternative B would interfere with operations any local airports or airstrips. Impacts regarding airport safety under both Reduced Intensity Alternative B and the Project would, therefore, be similar and less than significant.

c. Emergency Response Plans

Reduced Intensity Alternative B, as with the Project, would not adversely affect existing emergency access routes. Medical Center Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures. Such occurrences would be implemented in accordance with a construction traffic management plan, which would allow for responses to emergency accessibility needs. The existing helistop, which would be temporarily relocated to one of two potential locations at the western end of the Medical Center Campus during construction of the new Hospital Tower, would remain operational. As with the Project, regulatory compliance and project features, such as improved access, would avoid the need to generate new emergency plans beyond those normally implemented to address on-site emergency situations. As with the Project, impacts related to emergency response plans would be less than significant. Impact levels would be similar under both the Reduced Intensity Alternative B and the Project.

7. Hydrology and Water Quality

a. Surface Water Hydrology

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative B would be subject to a Construction General Permit and associated NPDES requirements, which include development and implementation of a SWPPP with appropriate BMPs. BMPs to control stormwater runoff during construction could include, but are not limited to, the use of water bars, silt fences, and staked straw bales. Additional source-control BMPs might also be required to prevent runoff and eliminate non-stormwater discharges. Based on the depth to groundwater within the project site, dewatering and any related runoff are not anticipated. Compliance with NPDES requirements would reduce surface water runoff during construction to a less than significant level under both Reduced Intensity Alternative Band the Project. The level of impact related to surface water hydrology under both scenarios would be similar.

(2) Operation

As with the Project, Reduced Intensity Alternative B would convert more than three acres of existing pavement to turf area. Any proposed new storm drain connections to the reinforced concrete box channel or open channel owned by the Flood Control District would be conducted under a connection permit approved by the District. This permit would require a hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeded the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates. As with the Project, Reduced Intensity Alternative B would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious) based on LID Standards. Several dry wells were previously constructed to meet this

requirement. This approach is likely to be implemented for future areas to be redeveloped under both the Project and Reduced Intensity Alternative B. LID features include resource conservation, flatter wider swales, flatter slopes, turf depression, landscape island storage, rooftop detention/retention, catch basins/seepage pits, sidewalk storage, permeable pavement, and other measures. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. With implementation of LID measures and permitting from the District related to the reinforced concrete box channel and drainage ditch, surface water impacts associated with both Reduced Intensity Alternative B and the Project would be less than significant. Impacts related to surface water runoff would be similar under both Reduced Intensity Alternative B and the Project.

b. Surface and Groundwater Quality

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative B would be subject to existing regulations governing surface and groundwater quality. The required Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate BMPs to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Compliance with construction phase BMPs and other requirements are considered protective of water quality during construction and would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. The NPDES Construction General Permit and SWPPP establish procedures and action protocols for the handling of construction-related chemicals and encountered groundwater. Based on existing and historical depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Existing regulations would ensure that any potential dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Therefore, impacts related to surface and groundwater quality would be less than significant and similar under both Reduced Intensity Alternative B and the Project.

(2) Operation

Stormwater discharge may include pollutants of concern, such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash. This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff could degrade water quality in surface and waters and can affect drinking water, human health, and plant and animal habitats. Reduced Intensity Alternative B, as with the Project, would utilize landscaping in strategic ways to capture and clean stormwater runoff. Strategies include replacement of three acres of pavement with landscaping. The Project would avoid the use of pollutants, chemicals, or soil amendments that could enter surface water runoff. Organic maintenance methods or Integrated Pest Management may be used. Implementation of County LID features, including bioretention features, modifications to address the potential leaching of nutrients, and post-construction BMPs would ensure that operations would not degrade the quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies, or impair the beneficial uses of the receiving waters. With compliance with existing regulations, both Reduced Intensity Alternative B and

the Project would have a similar, less than significant impact, related to surface and groundwater water quality.

8. Land Use

a. Applicable Plans and Policies

As with the Project, Reduced Intensity Alternative B would be consistent with the policies of the SCAG 2008 Regional Comprehensive Plan and Compass Growth Visioning (including the Compass 2% Blueprint Strategy) to focus growth in existing and emerging centers, along major transportation corridors, and in proximity to transit. Reduced Intensity Alternative B would be consistent with SCAG's 2016 RTP/SCS by enhancing the pedestrian environment within the Medical Center Campus and along Carson Street, and improving pedestrian connectivity between the Medical Center Campus, the surrounding community, and the Carson Street Metro Transit Station. Reduced Intensity Alternative B would be consistent with applicable policies of General Plan Update in that it would be compatible with the existing adjacent off-site land uses, incorporate sustainable design, facilitate multiple modes of transportation (including alternative modes), provide interconnected and safe pedestrian and bicycle circulation, provide required green space and landscaped setbacks, result in less than significant impacts to biological, aesthetic and cultural resources after mitigation, result in less than significant seismic/geotechnical and noise impacts after mitigation, be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Reduced Intensity Alternative B would also be consistent with the Los Angeles County General Plan's "P" GPLU land use designation, which permits a broad range of public and semi-public facilities and community-serving uses, and with the overall floor area ratio (FAR) not to exceed 3:1. The Project would have a maximum FAR of 0.78 and the Reduced Intensity Alternative B would be incrementally less. As with the Project, Reduced Intensity Alternative B would be consistent with the Los Angeles Planning and Zoning Code and would not exceed the development limits associated with the underlying C-3 zone. The Project and Reduced Intensity Alternative B would have a less than significant and similar impact with respect to applicable plans and policies.

b. Land Use Compatibility

As with the Project, Reduced Intensity Alternative B would alter the existing visual appearance of the Medical Center Campus through denser development than under existing conditions. However, the Site is located within a fully urbanized setting within the 110 Freeway/Carson Station TOD. The area is also undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. Reduced Intensity Alternative B, as with the Project, would provide landscaping and street trees along the street frontages where in some areas such landscaping and trees are lacking, and would be designed in compliance with unifying design guidelines which would improve the visual appearance of the Medical Center Campus. While the densification of land uses at the Medical Center Campus would be noticeable from adjacent off-site land uses, including the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Medical Center Campus and the residential neighborhood to the north), because of the urbanizing trend in the area and proposed streetscape/screening, the Reduced Intensity Alternative B, as with the Project, would result in less than significant land use incompatibilities with adjacent off-site land uses. However, because Reduced Intensity

Alternative B would have incrementally less density than under the Project, it would have less impact with respect to land use compatibility.

9. Noise

a. Construction Noise

As with the Project, construction of Reduced Intensity Alternative B would involve demolition, grading, building construction, and paving. Each stage would involve the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques. Construction noise would exceed the significance threshold at the several receptor locations during various development phases. As with the Project, Reduced Intensity Alternative B would implement mitigation measures, such as MM NOISE-1 and project design features to achieve a noise reduction in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise would exceed the noise threshold a at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. Although both the Project and Reduced Intensity Alternative B would result in a significant and unavoidable noise impact, because Reduced Intensity Alternative B is reduced in scale and duration of construction, construction noise impacts would be incrementally less.

b. Operational Noise

As under the Project, noise sources associated with operation of Reduced Intensity Alternative B, including mechanical equipment, loading dock activity, refuse collection, parking structure activity, and traffic, would increase the ambient noise level at the nearest noise-sensitive receptor, but by a less than the threshold of significance. Composite noise level increases at all other receptor locations are also expected to be less than significant, given their distance from the site and the presence of intervening structures. As such, the operational noise level impacts due to the future operation of Project and Reduced Intensity Alternative B would be less than significant. However, because Reduced Intensity Alternative B is incrementally smaller in scale than the Project and would generate less traffic, operational noise impacts would be less.

With regard to helicopter-related noise, the Project would result in less than significant impacts at Project buildout once the permanent rooftop helistop on the New Hospital Tower is operational. However, operation of the temporary helistop at either interim location would exceed established noise thresholds at nearby sensitive receptors to the south of the Medical Center Campus, and no mitigation exists that could reduce noise levels to acceptable levels. Therefore, impacts under the Project would be considered significant and unavoidable. Because Reduced Intensity Alternative B would also require operation of the temporary helistop locations (though only one would be operational at any given time, as under the Project), impacts under this alternative would be significant and unavoidable and similar to the Project.

c. Construction Vibration

The construction of Reduced Intensity Alternative B, as with the Project, would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. Maximum vibration velocities to which receptors could be exposed range from 0.01 to 0.027 inches per second PPV. This value is considerably lower than the impact threshold of 0.5 inches per second PPV, and as such, construction vibration would be less than significant at the nearest residential building. Although construction vibration levels would be less than significant under both the Project and Reduced Intensity Alternative B would be less than significant, because the scope and duration of Reduced Intensity Alternative B's construction activities are incrementally less than under the Project, construction vibration impacts would be less.

d. Operational Vibration

As with the Project, operation of Reduced Intensity Alternative B would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the nearest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, under both the Project and Reduced Intensity Alternative B, vibration impacts associated with operation of the Project would be less than significant. However, because Reduced Intensity Alternative B would be incrementally smaller in scale than the Project (would generate less traffic), operational vibration impacts would be less.

10. Population, Housing and Employment

a. Construction

As with the Project, construction of Reduced Intensity Alternative B would employ a mobile regional construction work force. Given the mobility and short duration of work at a particular site, a construction labor pool that can be drawn upon in the region and workers are not expected to relocate as a result of such employment opportunities. The number of construction workers would vary from approximately 212 workers per day during less intensive construction activity up to a maximum of approximately 1,650 construction workers on a day during the peak construction period. Because of a large, regional construction pool and the mobility of construction workers, construction activities would not generate a notable demand for housing, or affect population patterns. Although the duration of construction would be incrementally less under Reduced Intensity Alternative B, as with the Project, construction of both Reduced Intensity Alternative B and the Project would have a less than significant impact relative to construction-related population, housing, and employment. However, because of an incrementally reduced scope of development, Reduced Intensity Alternative B would have slightly less impact than under the Project.

b. Operation

Compared to the Project, Reduced Intensity Alternative B would reduce hospital beds from 446 to 375, construct one outpatient buildings (compared to three under the Project), reduce the scale of the Central

Plant, and only partially renovate of the Existing Hospital tower. Overall intensity would be reduced compared to the Project and Reduced Intensity Alternative A. There would be incrementally fewer annual patient visits than under the Project and Reduced Intensity Alternative A. Compared to the Project, Reduced Intensity Alternative A would reduce hospital beds from 446 to 375, construct two outpatient buildings (compared to three under the Project), reduce the scale of the Central Plant, and only partially renovate of the Existing Hospital tower. Total employment at the site under the Project would represent a small percentage of the projected growth in the South Bay Planning Area up to Year 2030 and very small percentage of estimated growth in unincorporated Los Angeles County for this same period. Because the Project's employment increase would not exceed local and SCAG's growth projections for the period between 2016 and 2030, Reduced Intensity Alternative B, which would have incrementally fewer employees, would also not exceed growth projections. As with the Project, impacts regarding consistency with the projected employment growth would be less than significant. However, because of the reduced intensity, impacts under Reduced Intensity Alternative B would be incrementally less than the Project.

11. Public Services

a. Fire Protection and Emergency Services

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements; on-site fire suppression equipment specific to construction activities; compliance with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials would reduce demand for fire protection and EMS during construction to a less than significant level. Emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. While Reduced Intensity Alternative B and the Project would require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Medical Center Campus, Reduced Intensity Alternative B, as with the Project, would provide a construction traffic management plan to establish temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, and require various safety precautions such as alternate routing and protection barriers. With the implementation of the traffic management plan, impacts related to emergency access, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant under both Reduced Intensity Alternative B and the Project. Although impacts would be less than significant under both the Project and Reduced Intensity Alternative B, impacts would be less under the Reduced Intensity Alternative B because of the incrementally shorter construction time frame.

(2) Operation

As with the Project, Reduced Intensity Alternative B would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, Utilities Code, and Subdivision Code) for new construction that address

structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. The LACFD would review and approve all plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. An LACFD-approved Emergency Response Plan would include mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because Reduced Intensity Alternative B would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Medical Center Campus would be improved.

As with the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. According to Section 4.L., Transportation and Traffic, of this Draft EIR, because implementation of mitigation measures is not entirely within the control of the County, significant and unavoidable impacts would occur at the several intersections in the area, which could affect LACFD emergency vehicle response times in the area. However, as under the Project, Reduced Intensity Alternative B would provide traffic design measures, including the installation roadway and traffic control improvements that would enable emergency access to the Medical Center Campus. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Medical Center Campus from Station 36 are currently within the LACFD's response time goals, operational impacts under the Project and Reduced Intensity Alternative B on emergency response times would less than significant. However, because visitation and hospital beds would be reduced by approximately 16 percent under Reduced Intensity Alternative B, impacts with relation to emergency response would be incrementally less.

As with the Project, Reduced Intensity Alternative B would require greater fire flows at the site than required under existing conditions. As discussed in Section 4.K.1, Fire Protection and Emergency Services of this Draft EIR, water service to the Medical Center Campus are adequate to meet Project requirements and, as such, would be adequate to meet Reduced Intensity Alternative B fire flow requirements. Impacts related to fire flow would be less than significant under both the Reduced Intensity Alternative B and the Project. However, because of reduced scale under the Reduced Intensity Alternative B, fire flow demand would be incrementally less.

b. Sheriff Protection

(1) Construction

Construction activities associated with Reduced Intensity Alternative B, as under the Project, would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through buildout. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by PDF SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Medical Center Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during construction of Reduced Intensity

Alternative B would not require new or altered police protection facilities to maintain service, and the impact would be less than significant but incrementally reduced compared to the Project due to the reduction in overall construction activities on the Medical Center Campus.

Regarding police access and response times during construction, as would be the case under the Project, construction staging and construction worker parking associated with Reduced Intensity Alternative B would be accommodated on the Medical Center Campus, limiting potential conflicts with traffic on local streets. In addition, as required by the PDF-SHER-2, emergency access would be provided and maintained for existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project and Reduced Intensity Alternative B would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site, with the implementation of various traffic- and law enforcement-related Project Design Features, as under the Project, impacts on police access and response times during construction would not require new or altered police protection facilities to maintain service, and thus would be less than significant. However, given the reduction in overall development intensity under this Alternative, construction-related impacts would be incrementally reduced.

(2) Operation

The Master Plan Project would result in a net increase of 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of 2,030 employees and 185,745 annual patient visits, respectively. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, Reduced Intensity Alternative B would result in an overall increase in development intensity compared to existing conditions, but this increase would be less than that of the Project. Therefore, as with the Project, operational impacts on police protection services would be less than significant, but would be incrementally reduced compared to the Project due to the reduction in overall development intensity.

c. Parks and Recreation

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Medical Center Campus. Also, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities to the extent that new recreational facilities would be required or that substantial physical deterioration of such facilities would occur. Construction effects on parks under either the Reduced Intensity Alternative B or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative B would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative B would generate incrementally fewer employees than the estimated 2,030 new employees under the Project. However, Reduced Intensity Alternative B represents a large percentage of the Project's growth and would potentially bring employees and their families to the area. As such,

Reduced Intensity Alternative B could create a demand for public parks and recreational facilities. A portion of the new on-site employees would be expected to be derived from the existing local labor pool, and it is likely that these employees and their families likely already generate a demand for public parks and recreational facilities in the local area. Furthermore, any use of existing public parks and recreational facilities by Project employees and their families would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities. As with the Project, Reduced Intensity Alternative B would have a less than significant impact on parks and recreational facilities. However, because Reduced Intensity Alternative B would have incrementally fewer new employees than under the Project, impacts would be incrementally less.

d. Schools

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would not physically affect existing public schools as no public schools are located on or directly adjacent to the Medical Center Campus. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction. Given the general accessibility of the Medical Center Campus and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards. Construction on schools, as with the Project, would be less than significant and similar under Reduced Intensity Alternative B.

(2) Operation

It is estimated that, under the Project, families of new employees would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students. Reduced Intensity Alternative B would generate fewer employees fewer students than under the Project and Reduced Intensity Alternative A. It is likely that student attendance under both Reduced Intensity Alternative B and the Project would be split among the 11 elementary and high schools in the local area, and possibly beyond. If all new students were distributed among the nearest schools, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved. As with the Project, impacts on local schools would be less than significant under Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B is reduced in scale, impacts would be incrementally less.

e. Libraries

(1) Construction

As with the Project, construction of Reduced Intensity Alternative B would not physically affect existing libraries, none of which are located on or directly adjacent to the Medical Center Campus. In addition, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local libraries to the extent that new libraries would be required or that substantial physical deterioration of such facilities

would occur. Construction effects on libraries under either the Reduced Intensity Alternative B or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative B would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative B would generate incrementally fewer employees than the Project's estimated net increase of 2,030 employees. Reduced Intensity Alternative B, however, represents a large percentage of the Project's development scope and would generate new employees, their families, and demand for library services. As with the Project, this increase in demand would not be expected to be substantial or result in the need for new or physically altered library facilities. A portion of new employees are expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. The existing on-site AF Parlow Library of Health Sciences would be retained under Reduced Intensity Alternative B to help meet the demand for library facilities. Patients and visitors of existing public library facilities would also likely be split among the four public libraries in the vicinity; thus, avoiding the concentration of demand at any one library. As with the Project, Reduced Intensity Alternative B would have a less than significant impact on library services. However, because Reduced Intensity Alternative B would have generate incrementally fewer new employees than under the Project or Reduced Intensity Alternative A, impacts would be incrementally less.

12. Transportation and Parking

a. Construction

As with the Project, the implementation of a Construction Traffic Management Plan and pedestrian safety program under Reduced Intensity Alternative B would reduce potential construction impacts associated with hauling, deliveries and worker vehicles. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance would minimize the potential disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the commercial zones and residential neighborhoods. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified. As such, construction traffic impacts would be significant and unavoidable. However, because of a shorter construction duration, construction traffic impacts would be incrementally less than under the Project.

b. Operation

(1) Intersection Service Levels

As with the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic in the Project vicinity. Significant traffic impacts are anticipated at the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street

and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. Compared to the Project, intersection traffic would be reduced by approximately 16 percent but are anticipated to exceed threshold levels. Although implementation of proposed mitigation measures (MM TRAF-1 through MM TRAF-3) would reduce impacts to less than significant levels, because there is uncertainty whether other decision-making agencies will implement mitigation measures, impacts are considered significant and unavoidable under both Reduced Intensity Alternative B and the Project. However, because of the reduction in scale of Reduced Intensity Alternative B, impacts would be incrementally less than under the Project.

(2) CMP Transportation System

As with the Project, Reduced Intensity Alternative B would not exceed the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant under both the Reduced Intensity Alternative B and the Project. However, because Reduced Intensity Alternative B would have incrementally fewer new vehicle trips than under the Project, impact levels would be less.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections

As under the Project, development of Reduced Intensity Alternative B would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway. Potential mitigation measures, which include a contribution of a fair share to proposed Caltrans projects to address congestion in the study area (MM TRAF-4) relies on Caltrans cooperation and approval. Because this is out of the County's control, impacts at the three freeway segments are considered significant and unavoidable. However, because Reduced Intensity Alternative B would have incrementally fewer new vehicle trips than under the Project, impact levels would be less. Reduced Intensity Alternative B would also significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street because, as with the Project, it would add more than 50 vehicle trips to this intersection. Although incrementally less under Reduced Intensity Alternative B, the impact at this intersection would be considered significant and unavoidable.

(b) Freeway Off-Ramps

As with the Project, Reduced Intensity Alternative B would increase traffic at freeway off-ramps. However, because the off-ramp queue would not extend beyond the length of the ramp onto the mainline of the freeway during the peak arrival period, impacts at freeway off-ramps would be less than significant. Although both the Reduced Intensity Alternative B and the Project would have less than significant impacts, Reduced Intensity Alternative B would result in fewer new vehicle trips than under the Project and less impact at freeway off-ramps.

(4) Public Transit and Alternative Transportation

Reduced Intensity Alternative B would result in an incremental decrease in the Project's estimated ridership of approximately 22 morning and 22 afternoon transit person trips. As with the Project, transit ridership

would represent a small percentage of the 1,840 persons-trip capacity within ¼-mile of the Medical Center Campus. Because this is not likely to exceed transit capacity, as with the Project, Reduced Intensity Alternative A would have a less than significant impact on transit and alternative transportation. Although both the Reduced Intensity Alternative B and the Project would have less than significant impacts, Reduced Intensity Alternative B would result in fewer new transit riders than under the Project and less impact on transit facilities.

(5) Access and Circulation

As under the Project, access to the site under Reduced Intensity Alternative B would be provided via seven driveways. Driveways would be designed to County standards and would accommodate left and right ingress/egress turning movements. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. As with the Project, impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant. However, because Reduced Intensity Alternative B would generate less overall traffic, potential pedestrian/vehicle conflicts would be incrementally less.

(6) Parking Supply

Reduced Intensity Alternative B would provide approximately 1,800 new parking spaces, which would reduce total parking provided under the Project. As with the Project, total parking is anticipated to exceed County Code requirements. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. As with the Project, it is anticipated that Reduced Intensity Alternative B, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code. Because parking would exceed Code requirements, impacts related to parking supply under both the Project and Reduced Intensity Alternative B would be less than significant and similar.

13. Utilities and Service Systems

a. Water Supply

(1) Construction

Construction of Reduced Intensity Alternative B, as with the Project would include all necessary on- and off-site water system connections and improvements to tie into Cal Water's existing distribution system. All necessary improvements would be verified through the coordination with Cal Water and the LACFD regarding fire flow requirements. Impacts on water distribution systems would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have incrementally less overall development than under the Project, impacts on local distribution infrastructure and potential water supply pipeline construction, if necessary, would be less under this Alternative.

(2) Operation

Reduced Intensity Alternative B would result in an incremental decrease in the Project's estimated water demand of 458.6 AFY (or a net increase of 251 AFY over existing conditions), as there would be a reduction in overall development intensity relative to the Project. As the projected water demand under this Alternative would be within the projected demand for the Project, which was determined in the Project WSA to be within Cal Water's projected supplies, impacts related to water supply would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have incrementally less overall development than under the Project, impacts on water supply would be less under this Alternative.

b. Wastewater

(1) Construction

Construction of the Reduced Intensity Alternative B, as with the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs. Impacts on conveyance systems would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have less overall development than under the Project, impacts on local conveyance systems and potential sewer line construction would be incrementally less.

(2) Operation

Reduced Intensity Alternative B would result in an incremental decrease in the Project's estimated 171,998 gpd. The Project's wastewater generation represents approximately 0.114 percent of JWPCP's total remaining capacity of 120 mgd. As with the Project, the increase the overall demand on wastewater conveyance and treatment facilities in the area would not exceed the available capacity of affected wastewater facilities and, thus, would not directly or indirectly result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Impacts related to wastewater conveyance and treatment would be less than significant under both the Project and Reduced Intensity Alternative B. However, because Reduced Intensity Alternative B would have less overall development than under the Project, impacts on treatment systems would be incrementally less.

c. Solid Waste

(1) Construction

Reduced Intensity Alternative B, as with the Project, would require demolition of some existing buildings and construction activities that would generate solid waste. Much of this would be accommodated at the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. There will be an additional approximately 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found

near the Central Plant. Not taking into account C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code (Reduced Intensity Alternative B must recycle or reuse 50 percent of the debris generated), the estimated debris is expected to be similar (or slightly less) to waste generated by Project construction. Neither the Project nor Reduced Intensity Alternative B would exceed landfill capacity for construction debris or soil waste. Impacts under both the Project and Reduced Intensity Alternative B would have a less than significant and similar impact relative to solid waste capacity.

(2) Operation

Not taking into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs, the Project would generate a net increase of total net increase in waste approximately 2,481 tons per year. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.011`percent of the residual daily capacity at the landfill, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent. With an approximately 16 percent reduction in the Project's new beds and elimination of the Project's retail uses, Reduced Intensity Alternative B would provide an incremental decrease in operational waste. Because the Project would have not exceed landfill capacity, Reduced Intensity Alternative B, which would generate incrementally less waste, would also not exceed landfill capacity. Under both the Project and Reduced Intensity Alternative B, impacts on landfill capacity would be less than significant. However, because the scope of development under Reduced Intensity Alternative B is reduced, it would have incrementally less impact than under the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Reduced Intensity Alternative B would incrementally reduce the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during Phase C, Phase 5, and Phase 6. However, these impacts, while reduced compared to the Project, would remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative B.

Because Reduced Intensity Alternative B would be incrementally reduced compared to the Project, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative B would have a relatively similar level of impact and require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative B would incrementally reduce the Project's significant and less than significant impacts, and would not result in any new environmental impacts, and would also provide adequate beds to achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953

(Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles, although not to the extent the Project would. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

However, Reduced Intensity Alternative B would support, but to a lesser extent than under Reduced Intensity Alternative A, the Project's basic objectives to renovate existing health facilities to meet the intent of the Affordable Care Act of 2010 to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would substantially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would also allow for the fundamental reorganization, expansion and integration of outpatient services; renovate and appropriate new medical Campus construction. However, because retail uses would be eliminated and outpatient buildings would be reduced from three buildings (under the Project) to one building, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings under the ownership and control of the County.

Reduced Intensity Alternative B would support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus. Reduced Intensity Alternative A would also meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices. Reduced Intensity Alternative B would also would provide opportunities for development up to 250,000 square feet of Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.

5.0 ALTERNATIVES
D. ALTERNATIVE 4: REDUCED INTENSITY ALTERNATIVE C – NEW ACUTE BED HOSPITAL TOWER ONLY

A. DESCRIPTION OF THE ALTERNATIVE

Alternative 4, Reduced Intensity Alternative C – New Acute Bed Hospital Tower Only, would implement the Master Plan Project but would focus development on the replacement of hospital beds with the construction of the New Hospital Tower that meets seismic safety requirements, and reconstruction and replacement of outpatient/medical office, research, utilities, and other supporting uses at the same intensity as under existing conditions. Specifically, this Alternative would result in the construction of the New Hospital Tower with a maximum of 446 licensed acute care beds (the same number as under the Project), or up to 379 budgeted/staffed beds, as well as relocation of all existing outpatient services to renovated space within the Existing Hospital tower, a reduced Central Plant, and complete renovation of the Existing Hospital tower in order to accommodate the outpatient services and other administrative activities previously housed within existing modular buildings throughout the Medical Center Campus. These modular buildings would be removed from the Medical Center Campus. This Alternative would also eliminate all retail uses from the development plan, as would also occur under Alternatives 2 and 3. In addition, Alternative 4 would be phased so that the New Hospital Tower would be constructed by 2025, prior to relocation of outpatient uses to the renovated Existing Hospital tower, with completion of relocation activities anticipated in 2028. No additional development associated with LA BioMed or the proposed Bioscience Tech Park would occur under this Alternative. However, necessary infrastructure, landscaping, circulation, and other Medical Center Campus improvements would be implemented, to the extent necessary to serve proposed uses, as under the proposed Master Plan Project. As such, implementation of this Alternative would result in no net increase in development intensity on the Medical Center Campus relative to existing conditions, as it would maintain the existing capacity of outpatient services (housed in the renovated Existing Hospital tower or existing outpatient buildings) and would provide a comparable level of acute care beds and services as under the Project while meeting State-mandated seismic safety standards.

B. ENVIRONMENTAL IMPACTS

1. Aesthetics

a. Visual Character

(1) Construction

Construction activities typically result in site disturbance, movement of construction equipment, import and export of materials, views of incomplete structures and other activities that generally contrast with the aesthetic character of an area. Under Reduced Intensity Alternative C, construction activities would be visible at various times from Vermont Avenue, Carson Street, Normandie Avenue, and 220th Street. As with the Project, construction activities would occur over the course of several years and within specific areas of the half-mile-long Medical Center Campus, as well as in limited off-site areas related to infrastructure and utility improvements necessary to serve Reduced Intensity Alternative C. As such, visual character impacts

experienced at any single viewing location, for both on-site and off-site construction activities, would be intermittent and temporary. Because adverse visual effects would be temporary and would be confined to portions of the Medical Center Campus or distinct off-site areas at any one time, such effects would not be experienced by nearby viewers continually during the buildout of Reduced Intensity Alternative C. As with the Project, construction impacts would be less than significant. However, because overall construction would be incrementally less and be completed in fewer years than under the Project (completed in approximately 2028 instead of approximately 2030), the impact of construction on visual character would be incrementally less under Reduced Intensity Alternative C.

(2) Operation

Reduced Intensity Alternative C would allow for a reduced intensity overall with provision of the New Hospital Tower and complete renovation of the existing Hospital Tower to house outpatient and administrative functions, but no construction of new outpatient uses or Bioscience Tech Park uses or future expansion of LA BioMed uses. Given that the same number of proposed beds would be housed within the New Hospital Tower, it is anticipated that Reduced Intensity Alternative C would result in a nearly identical building in terms of height, architecture, and profile. Because a complete renovation of the Existing Hospital tower would be implemented, Reduced Intensity Alternative C would result in a similar aesthetic character of the Existing Hospital tower as under the Project. It is anticipated that existing modular buildings that have historically housed outpatient and other services in the north-central portion of the Medical Center Campus (i.e., where new outpatient buildings would be constructed under the Master Plan Project) would be removed. New sidewalks and street scape, internal landscaping, public art and other aesthetic amenities would be similar to under the Project. Unlike the Project, however, Reduced Intensity Alternative C would not result in an overall increase in development intensity on the Medical Center Campus relative to existing conditions, though it would still require temporary off-site improvements but not to the extent the Master Plan Project would. New construction under Reduced Intensity Alternative C, most notably the New Hospital Tower, would be required to implement the Design Guidelines, in which individual buildings must complement each other and the character of surrounding spaces, streets, and walks; maintain view corridors, both to and from buildings; and align axes, corner lines and features of neighboring buildings and spaces. Under the Design Guidelines, overall heights, massing, styles, and materials of newly constructed neighboring buildings within the Medical Center Campus must be compatible. Views of service areas and mechanical equipment located both on grade and on building roofs must be screened. With the implementation of the Design Guidelines, the massing of buildings within the site would create a visually pleasant skyline effect (cluster) that would contribute to the visual character of the community, but at a lower intensity than under the Master Plan Project.

Reduced Intensity Alternative C, as with the Project, would enhance the existing pedestrian experience along Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street with landscaping and streetscape, including the installation of canopy trees, provision of a landscaped parkway between the sidewalk and Carson Street, the removal of chain link fencing and walls along Vermont and Normandie Avenues and 220th Street, and other improvements in visual character and safety along 220th Street. As with the Project, Reduced Intensity Alternative C would create a more aesthetic public environment than under existing conditions. Because it would introduce elements that would enhance the public interface along all adjacent streets, as well as public access to gardens, public art, and other benefits, and maintain a high architectural standard, the Master Plan Project is not considered to substantially degrade the visual character of the Site or its surroundings because of height, bulk, pattern, scale, character, and other features. Similarly, because Reduced Intensity Alternative C would remove all but one of the remaining modular structures from the

property and would provide new, well designed visually compatible structures, landscaping, and other visual improvements on the Medical Center Campus, impacts with respect to visual character under Reduced Intensity Alternative C would be similar to the Project and less than significant.

b. Views

Other than original and newer buildings and existing landscaping associated with the Medical Center Campus, the local area is not distinguished by historical or architecturally notable buildings or natural areas, focal views of which would be considered visual resources. Despite the reduction in overall development intensity, Reduced Intensity Alternative C would construct the New Hospital Tower with a comparable height and bulk as represented in the Project's stacking profile. However, as with the Project, the new buildings of Reduced Intensity Alternative C would be minimally visible in panoramic views of the Los Angeles Basin and, as such, would not cause any adverse view effects. In addition, while development of the Project has the potential to affect existing views of the Medical Center Campus from adjacent public streets, the views of the Medical Center Campus from Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street would be improved by new, high quality construction, removal of hedging and fencing materials and surface parking lots, and installation of evergreen/semi-evergreen trees along the Medical Center Campus periphery that allow views into the Project's gardens, paths, buildings and public art. Views from Carson Street would also be upgraded by the streetscape program. Because no existing recognized valued publicly available views or scenic vistas are currently evident across the Medical Center Campus, as with the Project, Reduced Intensity Alternative C would not block views of existing scenic resources, and in fact given the absence of new outpatient buildings, Bioscience Tech Park buildings, or additional LA BioMed structures, the potential for view obstruction would be incrementally reduced. In addition, Reduced Intensity Alternative C would upgrade overall views of the Medical Center Campus, while providing for deeper views into the proposed garden areas. The impact of Reduced Intensity Alternative C with respect to views would, thus, be less than significant and less than that of the Project.

c. Light and Glare

(1) Construction

Lighting during construction would potentially cause minor light spillover in the vicinity of the Medical Center Campus, including the residential neighborhoods to the south, east, and west. However, construction activities would occur primarily during daylight hours and any construction-related illumination would be used for safety and security purposes only. As with the Project, construction lighting under Reduced Intensity Alternative C would only be located in specific locations within the approximately 72-acre site and would not be experienced by any sensitive, off-site receptors for a long duration. Any construction lighting would be limited and directed onto specific locations within construction sites to avoid impacts on-site medical patients. As with the Project, artificial light associated with construction activities would be limited to security lighting and specific construction tasks and would not adversely impact off-site sensitive receptors. Reduced Intensity Alternative C would also have a less than significant impact with respect to construction lighting. However, because overall construction would occur over a shorter timeframe (competed in approximately 2028 instead of approximately 2030 under the Project), with less overall intensity given the lack of new outpatient buildings or biomedical research uses (e.g., Bioscience Tech Park or LA BioMed), and within a smaller construction footprint on the Medical Center Campus, construction lighting impacts under Reduced Intensity Alternative C would be incrementally less than those generated by the Project.

(2) Operation

(i) Artificial Light

As with the Project, the security and landscape lighting for Reduced Intensity Alternative C would be located near ground level, generally shielded from adjacent uses by landscaping, and low-intensity in character. Lighting would be directed downward to avoid glare at on-site occupied hospital rooms and to maintain a calm ambience for on-site visitors and employees. Landscaping and rooftop garden lighting would be low-level consistent with the proposed hospital use. Light spillage from the Project's multi-story components would not be dissimilar from existing conditions and would not be disruptive of off-site residential uses, the nearest of which would be more than 200 feet to the south of the New Hospital Tower. The removal of surface parking lots, some of which are visible from residential uses to the east and from uses at the south side of 220th Street, would reduce vehicle light sources and security lights currently visible from these residential areas. As with the Project, new lighting sources from Reduced Intensity Alternative C are not expected to substantially increase ambient light or cause light spill onto adjacent light-sensitive receptors. In fact, due to the elimination of new outpatient buildings and new Bioscience Tech Park and LA BioMed structures, artificial light generation under Reduced Intensity Alternative C would be substantially reduced relative to the Master Plan Project. As such, artificial light impacts under Reduced Intensity Alternative C would be less than those of the Project and less than significant.

(ii) Glare

Building surfaces associated with window glass and polished surfaces, such as metallic or glass curtain walls and trim can reflect light. Glare can also occur between neighboring buildings when expanses of glass and metals are used for building sheathing. As with the Project, the Design Guidelines for Reduced Intensity Alternative C would require that building materials, massing, and styles must be consistent with neighboring buildings, including the Existing Hospital tower, and to complement the character of the surrounding Medical Center Campus buildings. Buildings using expanses of metals and reflective glass would not meet these criteria, nor would such materials be consistent with the overall use of the Medical Center Campus as a medical campus. As such, Reduced Intensity Alternative C, as with the Project, would not generate glare from reflected sunlight that would alter the character of the off-site areas surrounding the Medical Center Campus. Furthermore, based on the substantial reduction in development intensity under this Alternative, glare impacts under Reduced Intensity Alternative C would be reduced compared to the Project and would be less than significant.

2. Air Quality

a. Consistency with Air Quality Management Plan

(1) Construction

Reduced Intensity Alternative C would result in an increase in short-term employment compared to existing conditions. Being relatively small in number and temporary in nature, construction jobs under both Reduced Intensity Alternative C and the Project would not conflict with the long-term employment projections upon which the AQMP is based. Reduced Intensity Alternative C would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment and, as such, would not conflict with implementation of AQMP strategies intended to reduce emissions from construction equipment and activities. Reduced Intensity Alternative C would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403. Compliance with these requirements is consistent with and

meets or exceeds the AQMP requirements for control strategies. As such, given the substantial reduction in overall development intensity compared to the Project, impacts in this regard under Reduced Intensity Alternative C would be less than the Project and less than significant.

(2) Operation

As with the Project, Reduced Intensity Alternative C would be consistent with growth projections set forth in the AQMP, and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips. Both the Project and Reduced Intensity Alternative C would have a less than significant impact relative to the AQMP; however, because Reduced Intensity Alternative C is substantially reduced in terms of overall development intensity, it would have incrementally less impact.

b. Violation of Air Quality Standards

(1) Construction

Construction of Reduced Intensity Alternative C has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Medical Center Campus. However, as with the Project, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Although emissions would be less than significant under both the Project and Reduced Intensity Alternative C, because Reduced Intensity Alternative C would involve substantially less construction, it would have incrementally less impact with respect to the SCAQMD regional thresholds.

(2) Operation

Operation of Reduced Intensity Alternative C has the potential to create air quality impacts based on daily trip generation and energy demand. As discussed in Section 4.B., Air Quality, of the Draft EIR, the Project's net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD regional thresholds for during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. As such, both the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to SCAQMD standards. However, because daily trips and the scope of development would be substantially reduced under Reduced Intensity Alternative C, impacts relative to SCAQMD thresholds would be less.

c. Non-Attainment Pollutants

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would result in the emission of criteria pollutants for which the region is in nonattainment. However, maximum daily emissions from construction of Reduced Intensity Alternative C would not exceed the numeric indicator of significance for criteria pollutants nor their precursors. As with the Project, compliance with CARB and SCAQMD control measures and the same design features implemented by the Project would minimize and reduce construction emissions. Neither Reduced Intensity Alternative C nor the Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced

Intensity Alternative C would involve substantially less construction, it would result in fewer total emissions than under the Project and impacts would therefore be less.

(2) Operation

Operation of Reduced Intensity Alternative C would result in the emission of criteria pollutants for which the region is in nonattainment. As with the Project, however, such daily emissions from operation would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. Even during interim operations that could overlap with construction emissions and at full build-out, operation of Reduced Intensity Alternative C would not exceed the applicable thresholds of significance, though such overlap of operational and construction emissions would be substantially reduced given the lack of outpatient and biomedical research uses proposed under this Alternative. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be substantially reduced in terms of development intensity, it would generate fewer total emissions than under the Project and impacts would therefore be less.

d. Substantial Pollutant Concentrations

As with the Project, Reduced Intensity Alternative C would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the either Reduced Intensity Alternative C or the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$, though as noted above, the potential for combined emissions would be incrementally less than under the Project. Operation of Reduced Intensity Alternative C at full build-out, based on the reduced development intensity, would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of either the Project or Reduced Intensity Alternative C would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks which exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of either the Project or Reduced Intensity Alternative C would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be substantially reduced in terms of development intensity, it would generate fewer total emissions than under the Project and impacts would be incrementally less.

e. Odors

(1) Construction

As with the Project, Reduced Intensity Alternative C may emit odors during construction associated with the use of architectural coatings and solvents. However, SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Both the Project and Reduced Intensity Alternative C would result in a less than significant impact. Also, although SCAQMD Rule 1113 would be equally enforceable under both the Project and Reduced Intensity Alternative C, impact levels would be reduced under this Alternative given the substantial reduction in total construction activity on the Medical Center Campus.

(2) Operation

As with the Project, Reduced Intensity Alternative C does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for Reduced Intensity Alternative C would be covered and situated away from the property line and sensitive off-site uses. Under both the Project and Reduced Intensity Alternative C, medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less than significant under both the Project and Reduced Intensity Alternative C, though impact levels would be incrementally less based on the sizably reduced development intensity and associated potential for new or increased odor sources.

3. Energy

a. Construction

Construction would entail consumption of diesel for hauling and construction equipment, gasoline for some hauling and workers' transportation, and electricity to provide temporary power for lighting and electronic equipment and to power certain construction equipment. Some heavy-duty construction could be electric or alternatively fueled, such as tower cranes, based on commercial availability. As with the Project, Reduced Intensity Alternative C would utilize electric or alternatively fueled equipment as available and as feasible. It is estimated that the construction of the Project would require approximately 0.002 percent of the statewide annual gasoline consumption and 0.003 percent of the statewide annual diesel consumption. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy. As with the Project, Reduced Intensity Alternative C would also meet or exceed the County's waste diversion targets. Neither the Project nor Reduced Intensity Alternative C would result in the wasteful, inefficient, and unnecessary consumption of energy during construction, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be incrementally smaller in scale, it would generate less energy demand than under the Project and impacts would therefore be reduced.

b. Operation

Operation of both Reduced Intensity Alternative C and the Project would utilize energy for necessary on-site activities and off-site transportation associated with Campus employees, patients, and visitors traveling to and from the site. The amount of energy used would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels. Furthermore, the Project and Reduced Intensity Alternative C would meet or exceed energy standards by incorporating green building measures consistent with County policy that requires LEED Silver-level certification and the County's CCAP. The Project would also provide opportunities for future energy efficiency by promoting solar power and electric or alternatively-fueled vehicles. Neither the Project nor Reduced Intensity Alternative C would result in the wasteful, inefficient, and unnecessary consumption of energy during operation, or preempt future energy conservation during construction. Although both the Project and Reduced Intensity Alternative C would result in a less than significant impact, because Reduced Intensity Alternative C would be incrementally smaller in scale, it would generate less overall energy demand than under the Project and impacts would therefore be reduced.

4. Geology and Soils

a. Seismic Hazards

The Harbor-UCLA Campus is located within a seismically active region, with the potential for seismic ground shaking. The horizontal peak ground acceleration (PGA) for the site corresponds to the Targeted Maximum Considered Earthquake (MCE_R) of 0.65g. This would be the same under Reduced Intensity Alternative C and the Project. Based on these PGA estimates, ground shaking at the Harbor-UCLA Campus could have a potentially significant impact on people and proposed buildings on the Harbor-UCLA Campus. Although seismic risk exists, Reduced Intensity Alternative C would implement MM-GEO-1, discussed in Section 4.D, Geology and Soils, of this Draft EIR. MM-GEO-1, which requires adherence to the recommendations of an approved Geotechnical Evaluation, would reduce seismic impacts for Reduced Intensity Alternative C and the Project to a less than significant level. With the implementation of MM-GEO-1, the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to seismic hazards, but would be incrementally reduced compared to the Project given the substantial reduction in development intensity on the Medical Center Campus and associated potential to expose people or structures to adverse effects associated with seismic hazards.

b. Soil Erosion and Topsoil

Reduced Intensity Alternative C would require incrementally less grading, including clearing, excavation, stockpiling, than the Project. As with the Project, all work would be performed in accordance with a National Pollutant Discharge Elimination System (NPDES) Permit, which incorporates a Storm Water Pollution Prevention Program (SWPPP) and Best Management Practices (BMPs) for erosion control. Implementation of BMPs would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. Also, the relatively gentle topographic gradients at the Medical Center Campus would reduce the potential for soil erosion during construction. As with the Project, Reduced Intensity Alternative C would have a less than significant impact with respect to soil erosion and topsoil. However, because the potential exists that substantially less area could be graded under Reduced Intensity Alternative C, Reduced Intensity Alternative C would have incrementally less impact with respect to soil erosion than under the Project.

c. Geologic Stability

As with the Project, Reduced Intensity Alternative C could be exposed to differential soil settlement and liquefaction beneath proposed buildings because of the presence of alluvium, possible undocumented fill, and relatively shallow depths to groundwater. If wet or saturated soil conditions are encountered during excavation, instability could present a constraint to the construction of foundations. Because the risk of compressible/collapsible soils and shallow groundwater exists, as with the Project, Reduced Intensity Alternative C would implement MM-GEO-2, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-2, which provides several approaches to address settlement and shallow groundwater, would reduce the potential for these geologic hazards. With the implementation of MM-GEO-2, the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to geologic stability, but would be incrementally reduced compared to the Project given the substantial reduction in development intensity on the Medical Center Campus that could be affected by geologic instability.

d. Expansive and Corrosive Soils

The near-surface soils at the Medical Center Campus are generally sandy silt and clayey and typically expansive when wetted. In addition, on-site soils are potentially corrosive to concrete and metal, which could cause premature deterioration of underground structures or foundations. The risk of expansive and corrosive soils would occur under both Reduced Intensity Alternative C and the Project. As with the Project, Reduced Intensity Alternative C would implement MM-GEO-3, discussed in Section 4.D., Geology and Soils, of this Draft EIR. MM-GEO-3, which provides performance standards and required assessments to address expansive and corrosive soils, would reduce the effects of these soils conditions. With the implementation of MM-GEO-3, the Project and Reduced Intensity Alternative C would have a less than significant impact with respect to expansive and corrosive soils, but would be incrementally reduced compared to the Project given the substantial reduction in development intensity on the Medical Center Campus and associated potential for proposed structures to be adversely affected by such soil conditions.

5. Greenhouse Gas Emissions

Consistency with CCAP

As with the Project, Reduced Intensity Alternative C would be consistent with the County's CCAP, which provides goals and strategies that would achieve a reduction target of at least 11 percent below 2010 levels for unincorporated areas of the County. Based on the conservatively estimated GHG emissions, the Project would result in a net increase in GHG emissions from 2010 levels. However, the potential increase is extremely small compared to the County's total inventory. One the Project objectives to maintain critical trauma services in the South Bay service region of the County of Los Angeles by redeveloping the existing hospital site, would result in more GHG efficiency than developing a new hospital campus on a greenfield site. Therefore, while the Project and Reduced Intensity Alternative C results in a conservatively estimated minimal net increase in GHG emissions, both the Project and Reduced Intensity Alternative C would be consistent with applicable CCAP measure to minimize its GHG emissions. As such, both the Project and Reduced Intensity Alternative C would not be expected to conflict with the County's ability to achieve the CCAP target reduction. Both the Project and Reduced Intensity Alternative C would have a less than significant impact relative to the CCAP and because both the Project and Reduced Intensity Alternative C would be consistent, impact levels would be similar despite the substantial reduction in overall development intensity under this Alternative.

Greenhouse Gas Reduction Plans

Construction and operation of Reduced Intensity Alternative C, as with the Project, would be consistent with applicable GHG emissions reductions plans, policies, or regulations. Design features, such as green building measures would reduce GHG emissions by increasing energy-efficiency beyond regulatory requirements, reducing indoor and outdoor water demand, and incorporating waste reduction measures. The Project would also incorporate components to reduce transportation-related GHG emissions by providing bicycle and end-of-trip facilities, and by being located within one-quarter mile of transit, thereby encouraging alternative forms of transportation. As with the Project, Reduced Intensity Alternative C would be constructed and operated in a manner consistent with a Silver Certification from the USGBC's LEED program. The LEED features that would be incorporated in the Project would include building efficiency measures to reduce energy consumption, water-saving measures, and waste reduction measures. Both the Project and Reduced Intensity Alternative C would be designed to optimize energy performance. Trees planted on the Medical Center Campus as part of the planned landscaping would sequester CO_2 as they age (not included in

the quantitative analysis). The Project would reduce indoor water use by a minimum of 20 percent with water fixtures that exceed applicable standards. As a result, construction and operation of the both the Project and Reduced Intensity Alternative C would not have a significant impact with respect to consistency with GHG reduction plans. Because both the Project and Reduced Intensity Alternative C would be consistent with applicable plans, impact levels would be similar despite the substantial reduction in overall development intensity under this Alternative.

6. Hazards and Hazardous Materials

a. Hazardous Materials Management

As with the Project, Reduced Intensity Alternative C would require the demolition of some buildings and equipment identified as having ACMs, LPB, and PCBs; the removal and/or relocation of USTs and ASTs that presently contain, or have contained in the past, fuels and other potentially hazardous materials; and the disturbance of soil potentially contaminated with hazardous materials as the result of on-site or off-site LUSTs. Remediation of these materials would be conducted by qualified professionals in accordance with regulations governing these activities, including SCAQMD's Rule 1403 (ACBMs); Cal-OSHA rules (LBP); the federal Toxics Substances Control Act (PCBs); and, for USTs, RCRA Subtitle I, the State Health and Safety Code, and LACFD's enforcement of the State's applicable CCR regulations, with oversight by the RWQCB where groundwater may be affected. Reduced Intensity Alternative C, as with the Project, has the potential to result in accidental upset and release of hazardous materials into the environment, which is a potentially significant impact. In addition, the potential extent of possible contamination of underlying groundwater with petroleum hydrocarbons originating with nearby off-site LUSTs is not known, and construction activities have the potential to result in a significant hazard related to potential contaminated soil and groundwater. As with the Project, Mitigation Measures HAZ-1 through HAZ-4, which require abatement in accordance with the recommendation of the Hazardous Building Materials Survey, removal of USTs pursuant to the LACFD review and closure letter, preparation and adherence to a Soils Management Plan, and investigation of the purpose and potential abandonment of existing on-site groundwater monitoring wells, would be implemented. With the implementation of Mitigation Measures HAZ-1 through HAZ-4, hazardous materials impacts associated with Reduced Intensity Alternative C and the Project would be reduced to less than significant levels. Because Reduced Intensity Alternative C involves demolition and excavation and development in an area with potential groundwater contamination, as under the Project, with mitigation, impacts with respect to hazardous materials management would be less than significant. However, based on the substantial reduction in development intensity on the Medical Center Campus and associated potential to encounter or otherwise expose people to risks associated with hazardous materials conditions, impacts under Reduced Intensity Alternative C would be less than under the Project.

b. Airport Safety Provisions

Reduced Intensity Alternative C is located on the same property as the Project, which is not within the vicinity of an airport. The nearest airport is more than two miles away. Because of this distance, neither the Project nor Reduced Intensity Alternative C would interfere with operations any local airports or airstrips. Impacts regarding airport safety under both Reduced Intensity Alternative C and the Project would, therefore, be similar and less than significant.

c. Emergency Response Plans

Reduced Intensity Alternative C, as with the Project, would not adversely affect existing emergency access routes. Campus ingress and egress would be modified to create distinctions between access and parking for the general public and staff, including a new signalized public entrance on Carson Street. Vehicular access and circulation would avoid conflicts with traffic movements on local roadways and would facilitate the provision on-site emergency services. During construction, adjacent streets may be temporarily affected due to construction activity, such as temporary lane closures, though the need for such closures would be incrementally reduced under this Alternative given the reduction in development intensity. Such occurrences would be implemented in accordance with a construction traffic management plan, which would allow for responses to emergency accessibility needs. The existing helistop, which would be temporarily relocated to the western end of the Medical Center Campus during construction of the new Hospital Tower, would remain operational. As with the Project, regulatory compliance and project features, such as improved access, would avoid the need to generate new emergency plans beyond those normally implemented to address on-site emergency situations. As with the Project, impacts related to emergency response plans would be less than significant, but would be reduced under Reduced Intensity Alternative C compared to the Project.

7. Hydrology and Water Quality

a. Surface Water Hydrology

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative C would be subject to a Construction General Permit and associated NPDES requirements, which include development and implementation of a SWPPP with appropriate BMPs. BMPs to control stormwater runoff during construction could include, but are not limited to, the use of water bars, silt fences, and staked straw bales. Additional source-control BMPs might also be required to prevent runoff and eliminate non-stormwater discharges. Based on the depth to groundwater within the project site, dewatering and any related runoff are not anticipated. Compliance with NPDES requirements would reduce surface water runoff during construction to a less than significant level under both Reduced Intensity Alternative C and the Project. The level of impact related to surface water hydrology under Reduced Intensity Alternative C, however, would be incrementally reduced given the reduction in development intensity and associated extent of impervious surfaces on the Medical Center Campus.

(2) Operation

As with the Project, Reduced Intensity Alternative C would convert more than three acres of existing pavement to turf area. Any proposed new storm drain connections to the reinforced concrete box channel or open channel owned by the Flood Control District would be conducted under a connection permit approved by the District. This permit would require a hydrology analysis and a comparison with the design peak flow rate of the facility. If the calculated peak flow rate exceeded the facility's design peak flow rate, the District will generally require detention to mitigate the increase in peak flow rates. As with the Project, Reduced Intensity Alternative C would be required to capture and infiltrate or reuse the difference in volume during the 0.75-inch storm event between a developed site and the site in an undeveloped condition (0 percent impervious) based on LID Standards. Several dry wells were previously constructed to meet this requirement. This approach is likely to be implemented for future areas to be redeveloped under both the

Project and Reduced Intensity Alternative C. LID features include resource conservation, flatter wider swales, flatter slopes, turf depression, landscape island storage, rooftop detention/retention, catch basins/seepage pits, sidewalk storage, permeable pavement, and other measures. With the increase in pervious area, the calculated peak flow of the future development will generally be less than under existing conditions; in addition, any future site development will require compliance with County of Los Angeles and LID standards for stormwater management. With implementation of LID measures and permitting from the District related to the reinforced concrete box channel and drainage ditch, surface water impacts associated with both Reduced Intensity Alternative C and the Project would be less than significant. Impacts related to surface water runoff, however, would be less under Reduced Intensity Alternative C given the incremental reduction in development intensity and associated impervious surface area compared to the Project.

b. Surface and Groundwater Quality

(1) Construction

As with the Project, construction activities under Reduced Intensity Alternative C would be subject to existing regulations governing surface and groundwater quality. The required Construction General Permit and associated NPDES requirements include development and implementation of a SWPPP with appropriate BMPs to limit erosion, minimize sedimentation, and control stormwater runoff water quality during construction activities. Compliance with construction phase BMPs and other requirements are considered protective of water quality during construction and would ensure that water- and wind-related erosion would be confined to the construction area and not transported off-site. The NPDES Construction General Permit and SWPPP establish procedures and action protocols for the handling of construction-related chemicals and encountered groundwater. Based on existing and historical depths to groundwater within the project site, construction dewatering is not anticipated to be required. However, should groundwater be encountered that would require dewatering, the County would require contractors for individual Project components to apply for coverage and adhere to the monitoring and reporting program under RWQCB Order No. R8-2009-0003. Existing regulations would ensure that any potential dewatering activities would not result in the exceedance of water quality standards during construction, including TMDL limits applicable to Dominguez Channel. Therefore, impacts related to surface and groundwater quality would be less than significant under both Reduced Intensity Alternative C and the Project, but would be reduced under this Alternative given the reduced duration and intensity of construction activities and potential for introduction of pollutants into stormwater flows.

(2) Operation

Stormwater discharge may include pollutants of concern, such as sediment, hydrocarbons, oil, grease, heavy metals, nutrients, herbicides, pesticides, fecal coliform bacteria, and trash. This runoff can flow directly into storm drains and continue through pipes until it is released, untreated, into the Dominguez Channel. Untreated stormwater runoff could degrade water quality in surface and waters and can affect drinking water, human health, and plant and animal habitats. Reduced Intensity Alternative C, as with the Project, would utilize landscaping in strategic ways to capture and clean stormwater runoff. Strategies include replacement of three acres of pavement with landscaping. The Project would avoid the use of pollutants, chemicals, or soil amendments that could enter surface water runoff. Organic maintenance methods or Integrated Pest Management may be used. Implementation of County LID features, including bioretention features, modifications to address the potential leaching of nutrients, and post-construction BMPs would ensure that operations would not degrade the quality of receiving waters to levels below standards considered acceptable by the Los Angles RWQCB or other regulatory agencies, or impair the beneficial uses

of the receiving waters. With compliance with existing regulations, both Reduced Intensity Alternative C and the Project would have a less than significant impact related to surface and groundwater water quality, though impacts under this Alternative would be incrementally reduced.

8. Land Use

a. Applicable Plans and Policies

As with the Project, Reduced Intensity Alternative C would be consistent with the policies of the SCAG 2008 Regional Comprehensive Plan and Compass Growth Visioning (including the Compass 2% Blueprint Strategy) to focus growth in existing and emerging centers, along major transportation corridors, and in proximity to transit. Reduced Intensity Alternative C would be consistent with SCAG's 2016 RTP/SCS by enhancing the pedestrian environment within the Medical Center Campus and along Carson Street, and improving pedestrian connectivity between the Medical Center Campus, the surrounding community, and the Carson Street Metro Transit Station. Reduced Intensity Alternative C would be consistent with applicable policies of General Plan Update in that it would be compatible with the existing adjacent off-site land uses, incorporate sustainable design, facilitate multiple modes of transportation (including alternative modes), provide interconnected and safe pedestrian and bicycle circulation, provide required green space and landscaped setbacks, result in less than significant impacts to biological, aesthetic and cultural resources after mitigation, result in less than significant seismic/geotechnical and noise impacts after mitigation, be developed with adequate public service and water, wastewater, and solid waste disposal capacity to serve the Project; and foster regional economic development.

Reduced Intensity Alternative C would also be consistent with the Los Angeles County General Plan's "P" GPLU land use designation, which permits a broad range of public and semi-public facilities and community-serving uses. The Project would have a maximum FAR of 0.78 and Reduced Intensity Alternative C would be incrementally less with an FAR of approximately 0.5:1. As with the Project, Reduced Intensity Alternative C would be consistent with the Los Angeles Planning and Zoning Code and would not exceed the maximum density or other development standards associated with the underlying C-3 zone. The Project and Reduced Intensity Alternative C would have a less than significant and similar impact with respect to applicable plans and policies.

b. Land Use Compatibility

As with the Project, Reduced Intensity Alternative C would alter the existing visual appearance of the Medical Center Campus through denser development than under existing conditions. However, the Site is located within a fully urbanized setting within the 110 Freeway/Carson Station TOD. The area is also undergoing a transition to greater urbanization, characterized in part by the recent development of higher density multi-family uses to the west and the construction of the Carson Street/Normandie Avenue Mall to the north. Reduced Intensity Alternative C, as with the Project, would provide landscaping and street trees along the street frontages where in some areas such landscaping and trees are lacking, and would be designed in compliance with unifying design guidelines which would improve the visual appearance of the Medical Center Campus. While the densification of land uses at the Medical Center Campus would be noticeable from adjacent off-site land uses, including the residential neighborhoods to the south east and west (commercial uses along the north side of Carson Street intervene between the Medical Center Campus and the residential neighborhood to the north), because of the urbanizing trend in the area and proposed streetscape/screening, Reduced Intensity Alternative C, as with the Project, would result in less than significant land use

incompatibilities with adjacent off-site land uses. However, because Reduced Intensity Alternative C would have substantially less development intensity than under the Project, it would have less impact with respect to land use compatibility.

9. Noise

a. Construction Noise

As with the Project, construction of Reduced Intensity Alternative C would involve demolition, grading, building construction, and paving. Each stage would involve the use of different kinds of construction equipment and, therefore, has its own distinct noise characteristics. Demolition typically involves the use of excavator, tractor/loader/backhoe, concrete saw, dozer, water truck, and loader. Grading typically involves the use of drill water truck, dozer, tractor/loader/backhoe, and grader. Building construction typically involves the use of crane, forklift, welder, tractor/loader/backhoe, air compressor, and water truck. Paving typically involves the use of tractor/loader/backhoe, concrete mixer truck, roller, paver, and trencher. The Project would be constructed using typical construction techniques. Construction noise would exceed the significance threshold at the several receptor locations during various development phases. As with the Project, Reduced Intensity Alternative C would implement mitigation measures, such as MM NOISE-1 and project design features to achieve a noise reduction in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. However, even with implementation of the mitigation measure, construction-related noise could still exceed the noise threshold at the multi-family residential uses across 220th Street during some phases of construction. Although both the Project and Reduced Intensity Alternative C would result in a significant and unavoidable noise impact, because Reduced Intensity Alternative C in an overall reduced scale and duration of construction, construction noise impacts would be incrementally less.

b. Operation Noise

As under the Project, noise sources associated with operation of Reduced Intensity Alternative C, including mechanical equipment, loading dock activity, refuse collection, parking structure activity, and traffic, would increase the ambient noise level at the nearest noise-sensitive receptor, but by a less than the threshold of significance. Composite noise level increases at all other receptor locations are also expected to be less than significant, given their distance from the site and the presence of intervening structures. As such, the operational noise level impacts due to the future operation of Project and Reduced Intensity Alternative C would be less than significant. However, because Reduced Intensity Alternative C is incrementally smaller in scale than the Project and would generate substantially less traffic, operational noise impacts would be less than under the Project.

With regard to helicopter-related noise, the Project would result in less than significant impacts at Project buildout once the permanent rooftop helistop on the New Hospital Tower is operational. However, operation of the temporary helistop at either interim location would exceed established noise thresholds at nearby sensitive receptors to the south of the Medical Center Campus, and no mitigation exists that could reduce noise levels to acceptable levels. Therefore, impacts under the Project would be considered significant and unavoidable. Because Reduced Intensity Alternative C would also require operation of the temporary helistop locations (though only one would be operational at any given time, as under the Project), impacts under this alternative would be significant and unavoidable and similar to the Project.

c. Construction Vibration

The construction of Reduced Intensity Alternative C, as with the Project, would generate ground-borne construction vibration during demolition, shoring and excavation, and large bulldozer operation. Vibration velocities from operation of construction equipment would range from approximately 0.076 to 0.089 inches per second PPV at 25 feet from the source of activity. Maximum vibration velocities to which receptors could be exposed range from 0.01 to 0.027 inches per second PPV. This value is considerably lower than the impact threshold of 0.5 inches per second PPV, and as such, construction vibration would be less than significant at the nearest residential building. Although construction vibration levels would be less than significant under both the Project and Reduced Intensity Alternative C, because the scope and duration of Reduced Intensity Alternative C's construction activities are substantially less than under the Project, construction vibration impacts would also be incrementally less than those of the Project.

d. Operation Vibration

As with the Project, operation of Reduced Intensity Alternative C would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, condenser units, and exhaust fans, which would produce vibration. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the parking area activity. Ground-borne vibration would be similar to existing sources (i.e., traffic on adjacent roadways) adjacent to the Medical Center Campus. Maximum potential vibration levels from all Project operational sources at the nearest off-site buildings would be up to 0.01 inches per second PPV and would be less than the significance threshold of 0.04 inches per second PPV for perceptibility. As such, under both the Project and Reduced Intensity Alternative C, vibration impacts associated with operation of the Project would be less than significant. However, because Reduced Intensity Alternative C would be substantially smaller in scale than the Project (and thus would generate much less traffic), operational vibration impacts would be reduced.

10. Population, Housing and Employment

a. Construction

As with the Project, construction of Reduced Intensity Alternative C would employ a mobile regional construction work force. Given the mobility and short duration of work at a particular site, a construction labor pool that can be drawn upon in the region and workers are not expected to relocate as a result of such employment opportunities. The number of construction workers would vary from approximately 212 workers per day during less intensive construction activity up to a maximum of approximately 1,650 construction workers on a day during the peak construction period. It should be noted that although this level of employment may not be necessary depending on the specific phasing of construction activities, it has been assumed to represent a worst-case condition for the purposes of this analysis. Because of a large, regional construction pool and the mobility of construction workers, construction activities would not generate a notable demand for housing, or affect population patterns. Although the duration and overall intensity of construction would be incrementally less under Reduced Intensity Alternative C, as with the Project, construction of both Reduced Intensity Alternative C and the Project would have a less than significant impact relative to construction-related population, housing, and employment. However, because of an incrementally reduced scope of development, Reduced Intensity Alternative C would have less impact than under the Project.

b. Operation

Compared to the Project, Reduced Intensity Alternative C would result in the same number of licensed hospital beds (446 beds) but would not construct any new outpatient buildings (compared to three under the Project), would reduce the scale of the Central Plant, and would fully renovate of the Existing Hospital tower. Overall intensity would be substantially reduced compared to the Project and Reduced Intensity Alternatives A and B, most notably due to the lack of new construction associated with the Bioscience Tech Park and future expansion of LA BioMed uses. There would be incrementally fewer annual outpatient visits than under the Project and Reduced Intensity Alternatives A and B. Total employment at the site under the Project would represent a small percentage of the projected growth in the South Bay Planning Area up to Year 2030 and very small percentage of estimated growth in unincorporated Los Angeles County for this same period. Because the Project's employment increase would not exceed local and SCAG's growth projections for the period between 2016 and 2030, Reduced Intensity Alternative C, which would have incrementally fewer employees, would also not exceed growth projections. As with the Project, impacts regarding consistency with the projected employment growth would be less than significant. However, because of the reduced intensity, impacts under Reduced Intensity Alternative C would be incrementally less.

11. Public Services

a. Fire Protection and Emergency Services

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases. These periodic construction activities could temporarily increase demand for fire protection and EMS, and may cause the occasional exposure of combustible materials such as wood, plastics, sawdust, coverings and coatings, heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, compliance with California Division of Occupational Safety and Health Administration (Cal/OSHA) and Fire Code requirements; on-site fire suppression equipment specific to construction activities; compliance with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials would reduce demand for fire protection and EMS during construction to a less than significant level. Emergency access would be provided and maintained throughout construction to existing uses, new uses, and fire hydrants. While Reduced Intensity Alternative C and the Project would both require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Medical Center Campus, Reduced Intensity Alternative C, as with the Project, would provide a construction traffic management plan to establish temporary traffic controls, prohibit construction vehicle activities and parking in surrounding off-site areas, and require various safety precautions such as alternate routing and protection barriers. With the implementation of the traffic management plan, impacts related to emergency access, vehicular access, pedestrian and bicycle access and safety, public transit, and construction parking would be less than significant under both Reduced Intensity Alternative C and the Project. Although impacts would be less than significant under both the Project and Reduced Intensity Alternative C, impacts would be less under Reduced Intensity Alternative C because of the substantially shorter construction time frame.

(2) Operation

As with the Project, Reduced Intensity Alternative C would be subject to the requirements of the County Code (e.g., Building Code, Fire Code, and Utilities Code) for new construction that address structural design, building materials, site access, fire lanes, fire flow requirements, automatic sprinkler systems, alarms, and smoke detectors. The LACFD would review and approve all plans at the building permit and plan check phases of the Project to ensure compliance with applicable Fire Code requirements, thereby minimizing the risk of increased operation fire safety hazards. An LACFD-approved Emergency Response Plan would include mapping of site access and emergency exits, evacuation routes for vehicles and pedestrians, and locations of the nearest hospitals and fire stations. Finally, because Reduced Intensity Alternative C would replace many aging on-site buildings that have not been constructed to current Fire Code standards with new buildings constructed to such standards, fire safety at the Medical Center Campus would be improved.

Unlike the Project, development of Reduced Intensity Alternative C would not measurably increase existing employee population and annual patient visits at the Medical Center Campus, and similarly would not increase operational traffic in the Project vicinity. According to Section 4.L., Transportation and Traffic, of this Draft EIR, because implementation of mitigation measures is not entirely within the control of the County, significant and unavoidable impacts would occur at the several intersections in the area, which could affect LACFD emergency vehicle response times in the area. However, although its implementation would not increase traffic in the area, Reduced Intensity Alternative C would still provide traffic design measures, including the installation roadway and traffic control improvements that would enable emergency access to the Medical Center Campus. In addition, emergency response is routinely facilitated, particularly for high priority calls, through use of sirens to clear a path of travel, driving in the lanes of opposing traffic, use of alternate routes, and multiple station response. In light of the above, and the fact that emergency response times to the Medical Center Campus from Station 36 are currently within the LACFD's response time goals, operational impacts under the Project and Reduced Intensity Alternative C on emergency response times would less than significant. However, given the lack of expanded outpatient services and new or expanded biomedical research uses, overall traffic impacts and associated potential to affect emergency vehicle response times under Reduced Intensity Alternative C would be incrementally less than under the Project.

As with the Project, Reduced Intensity Alternative C would require greater fire flows at the site than required under existing conditions. As discussed in Section 4.K.1, Fire Protection and Emergency Services of this Draft EIR, water service to the Medical Center Campus are adequate to meet Project requirements and, as such, would be adequate to meet Reduced Intensity Alternative C fire flow requirements. Impacts related to fire flow would be less than significant under both Reduced Intensity Alternative C and the Project. However, because of reduced scale under Reduced Intensity Alternative C, fire flow demand would be incrementally less.

b. Sheriff Protection

(1) Construction

Construction activities associated with Reduced Intensity Alternative C, as under the Project, would include demolition, site preparation including trenching for utilities, and construction of new buildings and street/sidewalk improvements in various phases through buildout. These periodic construction activities could temporarily increase demand for police protection associated with patrolling the construction site. However, as required by PDF SHER-1, the construction sites would be fully fenced, lighted with security lighting, and patrolled either by on-site LACSD personnel from the on-site LACSD satellite station or by private security hired by DHS. Furthermore, an LACSD satellite station is located on-site, and the Medical

Center Campus has a 24-hour a day LACSD presence, which would both discourage construction site crimes and provide for almost immediate response to any observed or reported construction site crimes that are in process. Therefore, the demand for police protection services during construction of Reduced Intensity Alternative C would not require new or altered police protection facilities to maintain service, and the impact would be less than significant but incrementally reduced compared to the Project due to the reduction in overall construction activities on the Medical Center Campus.

Regarding police access and response times during construction, as would be the case under the Project, construction staging and construction worker parking associated with Reduced Intensity Alternative C would be accommodated on the Medical Center Campus, limiting potential conflicts with traffic on local streets. In addition, as required by the PDF-SHER-2, emergency access would be provided and maintained to existing and new on-site uses, and to off-site uses, throughout construction. Furthermore, while the Project and Reduced Intensity Alternative C would generate construction traffic, require the construction of off-site utility and roadway improvements, and potentially require temporary lane closures along one or more of the four streets bordering the Project Site. However, with the implementation of various traffic- and law enforcement-related Project Design Features, as under the Project, impacts on police access and response times during construction would not require new or altered police protection facilities to maintain service, and the impact would be less than significant. However, given the reduction in overall development intensity under this Alternative, construction-related impacts would be incrementally reduced.

(2) Operation

The Master Plan Project would result in a net increase of 1,178,071 square feet of building floor area on-site, and net increases in total Campus-wide employees and annual patient visits of 2,030 employees and 185,745 annual patient visits, respectively. This, in turn, would create the need for additional space at LACSD's on-site satellite station to accommodate the additional officers. However, Reduced Intensity Alternative C would result in the in-kind replacement and/or relocation of existing inpatient hospital beds and outpatient services within the Medical Center Campus and would not result in an overall increase in development intensity compared to existing conditions. Therefore, no new operational impacts on police protection services would occur under Reduced Intensity Alternative C and thus impacts in this regard would be reduced compared to the Project.

c. Parks and Recreation

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would not physically affect existing public parks and recreational facilities as no such facilities are located on or directly adjacent to the Medical Center Campus. Also, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local parks and recreational facilities to the extent that new recreational facilities would be required or that substantial physical deterioration of such facilities would occur. Construction effects on parks under either Reduced Intensity Alternative C or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative C would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative C would generate incrementally fewer employees than the estimated 2,030 new employees under the Project. However, Reduced Intensity Alternative C would not increase the overall intensity of development (square footage of outpatient and support services and number of inpatient hospital beds), and thus it would not have a notable potential to bring additional employees and their families to the area. As such, Reduced Intensity Alternative C would not create a demand, either directly or indirectly, for public parks and recreational facilities. Furthermore, any use of existing public parks and recreational facilities by employees and their families under Reduced Intensity Alternative C, as under existing conditions, would likely be dispersed over a wide geographic area rather than concentrated at any one of the eleven local public parks and recreational facilities. As with the Project, Reduced Intensity Alternative C would have a less than significant impact on parks and recreational facilities. However, because Reduced Intensity Alternative C would have substantially fewer employees than under the Project, impacts would be incrementally less.

d. Schools

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would not physically affect existing public schools as no public schools are located on or directly adjacent to the Medical Center Campus. Furthermore, the staging of Project construction activities would occur on-site, and access to off-site uses during construction would be maintained as required by the County Code, such that access to and parking at existing public schools would be maintained during Project construction. Given the general accessibility of the Medical Center Campus and the availability of construction workers in the Los Angeles area, it is unlikely that a substantial number of construction workers would relocate to the Project area and have children that would use local public schools. Hence, new or physically altered local public schools would not be required to provide service to the children of Project construction workers and maintain acceptable service ratios and other performance standards. Construction impacts on schools, as with the Project, would be less than significant but incrementally reduced under Reduced Intensity Alternative C.

(2) Operation

It is estimated that, under the Project, families of new employees would generate an estimated 29 grade K-5 students, 14 grade 6-8 students, and 18 grade 9-12 students. Reduced Intensity Alternative C would generate fewer employees fewer students than under the Project and Reduced Intensity Alternatives A and B. It is likely that student attendance under both Reduced Intensity Alternative C and the Project would be split among the 11 elementary and high schools in the local area, and possibly beyond. If all new students were distributed among the nearest schools, it is unlikely that these students alone would necessitate the need to construct new or physically altered school facilities given the small numbers of students involved. As with the Project, impacts on local schools would be less than significant under Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C is substantially reduced in development intensity, impacts would be incrementally less.

e. Libraries

(1) Construction

As with the Project, construction of Reduced Intensity Alternative C would not physically affect existing

libraries, none of which are located on or directly adjacent to the Medical Center Campus. In addition, the staging of Project construction activities would occur on-site, and access to off-site uses would be maintained during construction. Given the mobility and short duration of work at a particular site, it is unlikely that a substantial number of construction workers would relocate to the Project area and use local libraries to the extent that new libraries would be required or that substantial physical deterioration of such facilities would occur. Construction effects on libraries under either Reduced Intensity Alternative C or the Project would be less than significant; however, because of an incrementally reduced scale of development, Reduced Intensity Alternative C would have less impact than under the Project.

(2) Operation

Reduced Intensity Alternative C would generate incrementally fewer employees than the Project's estimated net increase of 2,030 employees. However, Reduced Intensity Alternative C would not increase the overall intensity of development (square footage of outpatient and support services and number of inpatient hospital beds), and thus it would not have a notable potential to bring additional employees and their families to the area such that there would be an increase in demand for library services. Thus this Alternative would not result in the need for new or physically altered library facilities. Employees working at the Medical Center Campus under Reduced Intensity Alternative C are expected to be derived from the existing local labor pool and thus already generate a demand for public libraries. As under the Project, the existing on-site AF Parlow Library of Health Sciences would be relocated to new space within the New Hospital Tower under Reduced Intensity Alternative C to help meet the demand for library facilities. Patients and visitors of existing public library facilities would also likely be split among the four public libraries in the vicinity; thus, avoiding the concentration of demand at any one library. As with the Project, Reduced Intensity Alternative C would have a less than significant impact on library services. However, because Reduced Intensity Alternative C would generate substantially fewer employees than the Project or Reduced Intensity Alternatives A or B, impacts would be incrementally less.

12. Transportation and Parking

a. Construction

As with the Project, the implementation of a Construction Traffic Management Plan and pedestrian safety program under Reduced Intensity Alternative C would reduce potential construction impacts associated with hauling, deliveries and worker vehicles. Scheduling of construction-related traffic to avoid peak hours, prohibited on-street parking, temporary traffic controls, and the use of safety precautions, such as alternate routing and protection barriers in accordance would minimize the potential disruption of traffic flow, intersection operational impacts, conflicts with pedestrians and/or bicyclists, or loss of on-street parking in the commercial zones and residential neighborhoods. However, given the amount of development in the Project area, the uncertainty in terms of timing for each related Project and the potential for overlap of development, the Project could contribute to a cumulatively significant construction impact. Beyond compliance with County requirements regarding haul routes and implementation of traffic controls and safety procedures, no other feasible mitigation measures have been identified. As such, construction traffic impacts would be significant and unavoidable. However, because of a shorter construction duration, construction traffic impacts would be incrementally less than under the Project.

b. Operation

(1) Intersection Service Levels

Unlike the Project, development of Reduced Intensity Alternative C is not expected to result in a net increase in existing employment, population, or annual patient visits at the Medical Center Campus, and thus would not increase operational traffic in the Project vicinity. Significant traffic impacts are anticipated at the following twelve (12) intersections: Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110 Southbound Ramps & 223rd Street. As Reduced Intensity Alternative C would not increase vehicle trips compared to existing conditions, based on the in-kind replacement of existing inpatient and outpatient facilities, impacts to these intersections are not anticipated. As such, implementation of proposed mitigation measures (MM TRAF-1 through MM TRAF-3) would not be necessary. As such, because of the reduction in development intensity under Reduced Intensity Alternative C, and associated lack of net new vehicle trips generated at the Medical Center Campus, impacts would be incrementally less than under the Project and less than significant. Thus, this Alternative would eliminate the significant unavoidable impact to intersections that would occur under the Master Plan Project.

(2) CMP Transportation System

As with the Project, Reduced Intensity Alternative C would not exceed the minimum peak hour trip numbers at CMP arterial stations or freeway monitoring stations to require further analysis and, therefore, would not result in a change in the V/C ratio of 0.02 or greater. Impacts to regional CMP transportation systems are considered to be less than significant under both Reduced Intensity Alternative C and the Project. However, because Reduced Intensity Alternative C would result in no net increase in vehicle trips, impact levels would be less compared to the Project.

(3) Caltrans Facilities

(a) Freeway Mainlines and Intersections

Development under the Master Plan Project would increase existing employee population and annual patient visits at the Medical Center Campus, and would increase operational traffic at the northbound I-110 Freeway at 228th Street, the southbound 110 Freeway at El Segundo Boulevard, and the northbound I-405 Freeway at the I-710 Freeway, and due to uncertainties regarding implementation of applicable mitigation measures, impacts are considered significant and unavoidable. However, because Reduced Intensity Alternative C would not result in any net new vehicle trips, impact levels would be less than significant without the need for mitigation measures. Reduced Intensity Alternative C would also not significantly impact the arterial intersection of Western Avenue (State Route 213) and Carson Street, as would occur under the Project, because it would not add more than 50 vehicle trips to this intersection. Given the lack of new vehicle trips under Reduced Intensity Alternative C, this Alternative would avoid a significant and unavoidable impact that would occur at this location under the Project.

(b) Freeway Off-Ramps

Unlike the Project, Reduced Intensity Alternative C would not increase traffic at freeway off-ramps. As such, the off-ramp queue would not be expected to extend beyond the length of the ramp onto the mainline of the

freeway during the peak arrival period, and thus impacts at freeway off-ramps would be less than significant. Although both Reduced Intensity Alternative C and the Project would have less than significant impacts, Reduced Intensity Alternative C would result in no new vehicle trips and thus would have an incrementally reduced impact at freeway off-ramps.

(4) Public Transit and Alternative Transportation

Reduced Intensity Alternative C would not result in an increase in transit person trips since the overall intensity of development would be comparable to existing conditions. Because implementation of this Alternative would not increase transit ridership, and thus would not have the potential to exceed transit capacity, Reduced Intensity Alternative C would have a less than significant impact on transit and alternative transportation. Although both Reduced Intensity Alternative C and the Project would have less than significant impacts, Reduced Intensity Alternative C would result in fewer transit riders than under the Project and therefore would have less impact on transit facilities and services.

(5) Access and Circulation

As under the Project, access to the site under Reduced Intensity Alternative C would be provided via seven driveways. Driveways would be designed to County standards and would accommodate left and right ingress/egress turning movements. Vehicular access would be improved by the addition of a new signalized public entrance on Carson Street and one additional unsignalized staff entrance on Vermont Avenue. The existing network of traffic lanes, public sidewalks and pedestrian crosswalks would be maintained or improved and the Project would not mix pedestrian and automobile traffic in such a manner that a safety hazard for vehicles or pedestrians would occur or that access would be limited. In addition, no safety or operational impact relative to bicycle traffic is anticipated. As with the Project, impacts with respect to vehicular, pedestrian, and bicycle access would be less than significant. However, because Reduced Intensity Alternative C would generate less overall traffic, potential pedestrian/vehicle conflicts would be incrementally less.

(6) Parking Supply

Reduced Intensity Alternative C would not provide any net new parking spaces, but rather would consolidate existing parking spaces on the Medical Center Campus within new surface and structured parking facilities. Nonetheless, as with the Project, total parking is anticipated to exceed County Code requirements. A comprehensive signage and wayfinding plan would be developed to aid visitors and patients in finding ultimate destinations and parking intended for those uses. As with the Project, it is anticipated that Reduced Intensity Alternative C, in accordance with existing and proposed TDM measures or potential LEED requirements for future buildings, would provide additional bicycle parking facilities on the Medical Center Campus beyond what is required by the County Code. Because parking would exceed Code requirements, impacts related to parking supply under both the Project and Reduced Intensity Alternative C would be less than significant and similar.

13. Utilities and Service Systems

a. Water Supply

(1) Construction

Construction of Reduced Intensity Alternative C, as with the Project would include all necessary on- and off-site water system connections and improvements to tie into Cal Water's existing distribution system. All necessary improvements would be verified through the coordination with Cal Water and the LACFD regarding fire flow requirements. Impacts on water distribution systems would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have substantially less overall development than under the Project, impacts on local distribution infrastructure and potential water supply pipeline construction, if necessary, would be incrementally less under this Alternative.

(2) Operation

Reduced Intensity Alternative C would result in an incremental decrease in the Project's estimated water demand of 458.6 AFY (or a net increase of 251 AFY over existing conditions), as there would be no net increase in overall development intensity relative to existing conditions. As such, Reduced Intensity Alternative C would be expected to have a water demand comparable to existing conditions, or approximately 208 AFY. As no increase in water demand is anticipated under this Alternative, impacts related to water supply would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have substantially less overall development than under the Project, impacts on water supply would be incrementally less.

b. Wastewater

(1) Construction

Construction of Reduced Intensity Alternative C, as with the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the LACSDs' existing sewer system. In the event that, during development, wastewater lines were found to be substandard or in deteriorated condition, the County would be required to make necessary improvements to achieve adequate service pursuant to applicable County requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer capacity and connection permit from the LACSDs. Impacts on conveyance systems would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have substantially less overall development than under the Project, impacts on local conveyance systems and potential sewer line construction would be incrementally less.

(2) Operation

Reduced Intensity Alternative C would not result in any notable increase in wastewater generation, compared to the Project's estimated wastewater generation of 171,998 gpd, which represents approximately 0.114 percent of JWPCP's total remaining capacity of 120 mgd. Given the lack of a measurable increase in wastewater generation on-site, Reduced Intensity Alternative C would not exceed the available capacity of affected wastewater facilities and, thus, would not directly or indirectly result in an exceedance of wastewater treatment requirements, require or result in the construction of new wastewater treatment

facilities or expansion of existing facilities, or result in a determination by the LACSDs that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. Impacts related to wastewater conveyance and treatment would be less than significant under both the Project and Reduced Intensity Alternative C. However, because Reduced Intensity Alternative C would have less overall development than under the Project, impacts on treatment systems would be incrementally less.

c. Solid Waste

(1) Construction

Reduced Intensity Alternative C, as with the Project, would require demolition of some existing buildings and construction activities that would generate solid waste. Much of this would be accommodated at the County's inert landfill site (Azusa Land Reclamation) or one of a number on inert debris engineered fill operations that are located throughout Los Angeles County. There will be an additional approximately 40 cubic yards of soil removed for soil remediation due to the four Leaking Underground Storage Tanks found near the Central Plant. Not taking into account C&D Debris Recycling and Reuse Program and the Los Angeles County Green Buildings Standard Code (Reduced Intensity Alternative C must recycle or reuse 50 percent of the debris generated), the estimated debris is expected to be considerably less than the waste generated by Project construction given the substantial reduction in development intensity. Neither the Project nor Reduced Intensity Alternative C would exceed landfill capacity for construction debris or soil waste. Impacts under both the Project and Reduced Intensity Alternative C would have a less than significant impact relative to solid waste capacity, but impacts under Reduced Intensity Alternative C would be substantially reduced.

(2) Operation

Not taking into account the amount of solid waste that could potentially be diverted via source reduction and recycling programs, the Project would generate a net increase of total net increase in waste approximately 2,481 tons per year. If all of the Project's waste were taken to Sunshine Canyon Landfill, the Project's respective additions to the daily disposal, 1.4 tons, would be approximately 0.011 percent of the residual daily capacity at the landfill, assuming no diversion. With 60 percent diversion it would be approximately 0.004 percent. With the same number of inpatient beds and elimination of the Project's outpatient buildings and proposed Bioscience Tech Park and expanded LA BioMed research uses, Reduced Intensity Alternative C would provide a substantial decrease in operational solid waste generation. Because the Project would have not exceed landfill capacity, Reduced Intensity Alternative C, which would generate incrementally less waste, would also not exceed landfill capacity. Under both the Project and Reduced Intensity Alternative C, impacts on landfill capacity would be less than significant. However, because the scope of development under Reduced Intensity Alternative C is reduced, it would have incrementally less impact than under the Project.

C. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Unlike Reduced Intensity Alternatives A and B, Reduced Intensity Alternative C would eliminate the Project's significant and unavoidable traffic impacts at the intersections of Normandie Avenue & Torrance Boulevard, Vermont Avenue & Torrance Boulevard, Normandie Avenue & Carson Street, Berendo Avenue & Carson Street, Medical Center Drive & Carson Street, Vermont Avenue & Carson Street, I-110 Southbound Ramps & Carson Street, Vermont Avenue & 220th Street, Figueroa Street and 220th Street/I-110 Northbound Ramps, Normandie Avenue & 223rd Street, Vermont Avenue & 223rd Street, and I-110

Southbound Ramps & 223rd Street. It would also incrementally reduce the Project's significant and unavoidable construction noise at sensitive receptor sites along 220th Street during future construction phases, though impacts in this regard are conservatively considered to remain significant and unavoidable. The significant unavoidable temporary operational helicopter noise impact that would occur under the Project would also occur under Reduced Intensity Alternative C.

Because Reduced Intensity Alternative C would be substantially reduced compared to the Project and Reduced Intensity Alternatives A and B, demand for public services and utilities would be incrementally reduced. However, Reduced Intensity Alternative C would have a relatively similar or incrementally reduced level of impact that would still require the implementation of mitigation measures, as under the Project, for potentially significant impacts associated with seismic safety, geologic stability, expansive soils, hazardous materials management, fire protection and emergency medical services, and sheriff protection.

Reduced Intensity Alternative C would incrementally reduce the Project's other significant and less than significant impacts, would eliminate the significant traffic impacts of the Project, and would not result in any new or increased environmental impacts, and further, it would achieve the primary underlying purpose of the Project, which is secure timely compliance with SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles. SB 1953 requires the replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

Reduced Intensity Alternative C would support, albeit to a lesser extent than under Reduced Intensity Alternatives A and B, the Project's basic objectives to renovate existing health facilities to meet the intent of the Affordable Care Act of 2010 to modernize and integrate healthcare delivery. It would update most facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings. It would partially meet the objective to resolve existing deferred maintenance issues and optimize the quality of care and operational effectiveness, while reducing administrative, operational and maintenance costs. It would also, to a limited degree, allow for the fundamental reorganization, expansion and integration of outpatient services, and would also renovate and appropriate new Medical Center Campus construction. However, because retail uses and new outpatient buildings would be eliminated, it would not encourage the same vibrant, mixed-use setting as under the Project and would not achieve optimum public utilization of land and buildings under the ownership and control of the County.

Reduced Intensity Alternative C would not support the continuing Harbor-UCLA mission of clinical care, education, and research, as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus, as all Bioscience Tech Park and expanded LA BioMed uses would be eliminated. However, this Alternative would still meet the objective of creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, or accommodate changing sustainable design practices, though not to the extent the Master Plan Project would. However, Reduced Intensity Alternative C would not provide any opportunities for development up to 250,000 square feet of additional bioscience and support facilities or 225,000 square feet of expanded LA BioMed facilities.

5.0 ALTERNATIVES
E. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6(e)(2) of the State *CEQA Guidelines* indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR and that if the "no project" alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an Environmentally Superior Alternative among those analyzed in this Draft EIR, the range of feasible Alternatives includes the No Project/No Build Alternative, Reduced Intensity Alternative A, Reduced Intensity Alternative B, and Reduced Intensity Alternative C.

A comparative summary of the environmental impacts anticipated under each Alternative to the environmental impacts associated with the Project is provided in **Table 5-1**, *Comparison of Impacts Associated with the Alternatives and Impacts of the Project*, below, based on the detailed evaluation of the potential impacts associated with each Alternative provided in the previous sections. Pursuant to Section 15126.6(c) of the State *CEQA Guidelines*, the analysis below addresses the ability of the Alternatives to "avoid or substantially lessen one or more of the significant effects" of the Project.

As discussed above, and as depicted in Table 5-1, the No Project/No Build Alternative is considered the overall environmentally superior Alternative as it would avoid nearly all of the impacts that would occur under the Project. Although adverse impacts would be avoided under the No Project/No Build Alternative, it would not achieve the primary beneficial aspects of the Project to implement SB 1953 (Alquist Hospital Facilities Seismic Safety Act) to maintain critical trauma services in the South Bay market area of the County of Los Angeles and to replacement of the current tertiary acute care hospital and other essential supporting facilities with upgrades/replacement before January 1, 2030.

The No Project/No Build Alternative would also not achieve the aesthetic benefits of the Project or achieve optimum public utilization of land and buildings under the ownership and control of the County. As indicated above, without development of Project, the No Project/No Build Alternative would not meet any of the Project objectives. A comparative summary of the extent to which the Project Alternatives would meet the Project's Objectives is summarized in **Table 5-2**, *Comparison of Alternatives - Ability to Meet Project Objectives*. However, note that although Reduced Intensity Alternative A would partially meet the objectives of the Project in the same categories as Reduced Intensity Alternative B, the latter would meet the same objectives to a lesser degree. Furthermore, Reduced Intensity Alternative C would not achieve two of the Project objectives, only partially achieve five of the objectives, and fully achieve only one of the objectives. Nevertheless, in accordance with the State *CEQA Guidelines* requirement to identify an environmentally superior Alternative other than the No Project/No Action Alternative, a comparative evaluation of the remaining Alternatives indicates that Reduced Intensity Alternative C, the New Acute Bed Hospital Tower Only Alternative, would be the environmentally superior Alternative.

Table 5-1

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
A. Aesthetics					
Visual Character					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Views	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Light and Glare					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation					
Artificial Light	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Glare	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
B. Air Quality					
Consistency with Air Quality Management Plan					

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Violation of Air Quality Standards					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Non-Attainment Pollutants					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Substantial Pollutant Concentrations	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Odors					
Construction	Less than Significant	Less Impact (No Impact)	Similar (Less than Significant)	Similar (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
C. Energy					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
D. Geology and Soils					
Seismic Hazards	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)
Soil Erosion and Topsoil	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Geologic Stability	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)
Expansive and Corrosive Soils	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
E. Greenhouse Gas Emissions					
Consistency with CCAP	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Consistency with Greenhouse Gas Reduction Plans	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
F. Hazards and Hazardous Materials					
Hazardous Materials Management	Less than Significant with Mitigation	Less Impact (No Impact)	Similar Impact (Less than Significant with Mitigation)	Similar Impact (Less than Significant with Mitigation)	Less Impact (Less than Significant with Mitigation)
Airport Safety Provisions	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Emergency Response Plans	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
G. Hydrology and Water Quality					
Surface Water Hydrology					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Surface and Groundwater Water Quality					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
H. Land Use					
Applicable Plans and Policies	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)
Land Use Compatibility	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
I. Noise					
Construction Noise	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)
Operation Noise	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Construction Vibration	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation Vibration	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
J. Population, Housing and Employment					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
K. Public Services					
Fire Protection and Emergency Services					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Operation	Less than Significant With Mitigation	Less Impact (No Impact)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)
Sheriff Protection					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant With Mitigation	Less Impact (No Impact)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)	Less Impact (Less than Significant With Mitigation)
Schools					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Parks and Recreation					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Libraries					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
L. Transportation and Parking					
Construction	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)
Operation					
Intersection Service Levels	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (No Impact)
CMP Transportation System	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
Caltrans Facilities					
Freeway Mainlines and Intersections	Significant and Unavoidable	Less Impact (No Impact)	Less Impact (Significant and Unavoidable)	Less Impact (Significant and Unavoidable)	Less Impact (No Impact)
Freeway Off-Ramps	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
Public Transit and Alternative Transportation	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Access and Circulation	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
Parking Supply	Less than Significant	Less Impact (No Impact)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)	Less Impact (Less Than Significant)
M. Utilities and Service Systems					
Water Supply					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Wastewater					
Construction	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)
Solid Waste					
Construction	Less than Significant	Less Impact (No Impact)	Similar Impact (Less than Significant)	Similar (Less than Significant)	Less Impact (Less than Significant)
Operation	Less than Significant	Less Impact (No Impact)	Less Impact (Less than Significant)	Less Impact (Less than Significant)	Less Impact (Less than Significant)

Table 5-1(Continued)

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project/No Build	Alternative 2 Reduced Intensity Alternative A	Alternative 3 Reduced Intensity Alternative B	Alternative 4 Reduced Intensity Alternative C
Source: ESA PCR, 2016					

Table 5-2

Comparison of Alternatives - Ability to Meet Project Objectives

PROJECT OBJECTIVES & CRITERIA	Alternative 1 No Project/No Build			Alternative 2 Reduced Intensity A			Alternative 3 Reduced Intensity B			Alternative 4 Reduced Intensity Alternative C		
	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes
1. Secure timely compliance with the Alquist Hospital Facilities Seismic Safety Act (also known as Senate Bill [SB] 1953) to maintain critical trauma services in the South Bay service region of the County of Los Angeles, which requires replacement of the current tertiary acute care Existing Hospital tower and other essential supporting facilities with upgrades/replacement before January 1, 2030.	X					X			X			X
2. Support the renovation of existing healthcare facilities to implement the County's strategy to respond to the Affordable Care Act of 2010 and modernize and integrate healthcare delivery and update facilities to modern standards by constructing new buildings and repurposing/remodeling existing buildings on the campus to improve operational efficiencies, resolve existing deferred maintenance issues, and consolidate inpatient and outpatient services in dedicated buildings, to optimize the quality of care and operational effectiveness while reducing administrative, operational and maintenance costs.	X				X			X			X	
3. Provide for a fundamental reorganization, expansion, and integration of outpatient services with the specific goals of being a) more community-based and patient-centered, b) more efficient, and c) configured to include clear wayfinding and pedestrian walkways.	X				X			X			X	
4. Plan renovation and appropriate new medical campus construction for a mix of inpatient, outpatient, and supporting facilities to respond to healthcare needs in the South Bay service region, based on the Harbor-UCLA Medical Center Master Plan Project's current services and market projections for the planning horizon.	X				X			X			X	
5. Provide opportunities for development up to 250,000 square feet of new Bioscience Tech Park uses and support facilities, as well as 225,000 square feet of expanded LA BioMed facilities.	X				X			X		X		

Table 5-2(Continued)

Comparison of Alternatives - Ability to Meet Project Objectives

PROJECT OBJECTIVES & CRITERIA	Alternative 1 No Project/No Build			Alternative 2 Reduced Intensity A			Alternative 3 Reduced Intensity B			Alternative 4 Reduced Intensity Alternative C		
	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes	No	Partial	Yes
6. Encourage a vibrant, mixed-use setting that supports the continuing Harbor-UCLA mission of clinical care, education, and research as well as the provision of modernized facilities for existing and future tenants of the Medical Center Campus.	X					X			X		X	
7. Achieve optimum public utilization of land and buildings under the ownership and control of the County and maintain flexibility to respond to future shifts in medical care and technology.	X				X			X			X	
8. Develop the campus in ways that do not compromise environmental quality, social equity, or economic opportunity for future generations by: a) creating durable, adaptable green infrastructure and buildings, promoting resource-efficient transportation solutions, and seeking climate-positive outcomes, b) establishing goals to reduce net greenhouse gas emissions, including: energy, buildings and land use, transportation, water and waste, and c) accommodating changing sustainable design practices, from current standards to a future vision for a "Regenerative Campus."	X				X			X			X	
TOTAL OBJECTIVES SCORE	**8**	**0**	**0**	**0**	**6**	**2**	**0**	**6**	**2**	**1**	**6**	**1**

Source: ESA PCR, 2016.

6.0 OTHER CEQA CONSIDERATIONS

1. INTRODUCTION

This section addresses specific topics including significant unavoidable environmental impacts; reasons why the project is being proposed, notwithstanding its significant unavoidable impacts; growth inducing impacts; potential secondary effects; and less than significant impacts of the proposed Project.

2. SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the *CEQA Guidelines* requires that an EIR describe significant environmental impacts that cannot be avoided, including those effects that can be mitigated but not reduced to a less than significant level. Following is a summary of the impacts associated with the proposed Master Plan Project that were concluded to be significant and unavoidable in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

(a) Noise

(1) Construction

The temporary sound barrier prescribed in Mitigation Measure NOISE-1 and project design feature PDF-NOISE-1, can achieve a noise reduction of 15 dBA or more in areas where the line-of-sight between construction-period noise sources and off-site receptor locations is obstructed. Therefore, the construction-period L_{eq} would be reduced to below the 60 dBA significance threshold at the south of the Medical Center Campus, Location R3 and the east of the Medical Center Campus, Location R5 and the 65 dBA significance threshold at north of the Medical Center Campus, Location R4. However, even with implementation of the mitigation measure, construction related noise would be a maximum of 83 dBA at the multi-family residential uses across 220th Street during Phase C, Phase 5, and Phase 6. As this would exceed the significance threshold of 60 dBA, the construction noise impacts would be significant and unavoidable at the single- and multi-residential uses across 220th Street, during Phase C, Phase 5, and Phase 6.

(2) Operation

Operation of the temporary helistop at either potential location (the Interim 1 Helistop location or Interim 2 Helistop location) would exceed noise thresholds at one nearby sensitive receptor location (i.e., residential uses to the south of the Medical Center Campus across 220th Street). While this impact would be temporary, as significant noise impacts would no longer occur at this or any other location once the permanent helistop on the roof of the New Hospital Tower is operational, no feasible mitigation is available to reduce the significance of impacts due to the proximity of both feasible interim locations to noise-sensitive uses. Thus, this impact is considered significant and unavoidable.

(b) Transportation and Traffic

(1) Construction

Despite the incorporation of Project Design Feature PDF TRAF-1, Construction Traffic Management Plan, construction traffic impacts from construction worker vehicles and truck trips, for both Project-level and

cumulative conditions, are conservatively concluded to be significant and unavoidable. However, with implementation of PDF TRAF-1 and PDF TRAF-2, impacts related to construction-related vehicle access, pedestrian and bicycle access and safety, public transit service, and construction parking would be less than significant.

(2) Operation

(a) Intersection Levels of Service

Normandie Avenue & Torrance Boulevard (Intersection #1) - The Project would result in a significant impact at this intersection in the Interim Existing plus 2023 Project plus Cumulative (2023) and Existing plus 2030 Project plus Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as the addition of separate right- turn lanes at the eastbound or westbound approaches, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Torrance Boulevard (Intersection #2) - The Project would result in a significant impact at this intersection in the Existing plus 2023 Project plus Cumulative and Existing plus 2030 Project plus Cumulative Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as additional northbound or southbound through lanes, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

Normandie Avenue & Carson Street (Intersection #4) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Berendo Avenue & Carson Street (Intersection #6) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Medical Center Drive & Carson Street (Intersection #7) - The Project would result in a significant impact at this intersection in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & Carson Street (Intersection #8) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & Carson Street (Intersection #9) – The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios. The implementation of this mitigation measure would reduce the Project-related impact to a less than significant level and would reduce the cumulative impact to a less than significant level in the AM peak hour. The impact during the PM peak hour would also be reduced, but not below a significant level. This improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, and because the improvement would not fully mitigate the identified impacts in all scenarios, this impact would be considered significant and unavoidable.

Vermont Avenue & 220th Street (Intersection #14) – The Project would result in a significant impact at this intersection under the Existing and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound approaches to provide a dedicated left turn-lane but were determined to conflict with the Los Angeles County Transit Oriented Districts Access Study. The Study calls for curb extensions at all four crossings to shorten the pedestrian crossing distance. The intersection approaches do not have sufficient space to accommodate both curb extensions and additional lanes. Thus, this impact would remain significant and unavoidable.

220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) - As shown in Tables 4.L-24 and 4.L-25, the implementation of Mitigation Measure TRAF-2 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Normandie Avenue & 223rd Street (Intersection #17) - The Project would result in a significant impact at this intersection in the Cumulative (2030) Existing plus 2030 Project and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

Vermont Avenue & 223rd Street (Intersection #19) - The Project would result in a significant impact at this intersection under the Existing, Interim (2023) and Cumulative (2030) scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were determined to conflict with preliminary concepts from the West Carson Transit Oriented Development Specific Plan. Thus, this impact would remain significant and unavoidable.

I-110 Southbound Ramps & 223rd Street (Intersection #20) - As shown in Tables 4.L-22 and 4.L-23, the implementation of Mitigation Measure TRAF-3 would reduce the Project-related impact at this intersection to a less than significant level. However, this improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, this impact is considered significant and unavoidable.

Overall, the Project would result in twelve (12) significant and unavoidable impacts to study area intersections, even though Tables 4.L-22 through 4.L-25 show that proposed improvements, if implemented, would reduce impacts at these intersections, because implementation of the proposed improvements is not entirely within the control of the lead agency.

(b) Freeway Mainlines and Intersections

Mitigation Measure TRAF-4 requires that the developer make a fair-share contribution to address potentially significant impacts on freeway mainline segments, intersections under Caltrans jurisdiction, and off-ramps. Caltrans generally considers fair share contributions to constitute full mitigation of a significant impact. In addition, under CEQA Guidelines Section 15130(a)(3) fair share contribution could be considered adequate mitigation for cumulative traffic impacts. Options for addressing the impacts were identified, but because there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold, the significant impacts identified above to Caltrans facilities are conservatively determined to be significant and unavoidable.

3. REASONS WHY THE PROJECT IS BEING PROPOSED, NOTWITHSTANDING ITS SIGNIFICANT UNAVOIDABLE IMPACTS

In addition to identification of the Project's significant unavoidable impacts, Section 15126.2(b) of the CEQA Guidelines also requires a description of the reasons why the Project is being proposed, notwithstanding significant unavoidable impacts associated with the Project. The reasons why the Harbor-UCLA Medical

Center Campus Master Plan Project has been proposed are identified in the Statement of Project Objectives subsection in Chapter 2.0, *Project Description*, of this Draft EIR. The underlying goal or purpose of the Project is to redevelop the County-owned facility to support a modern, integrated healthcare delivery system. The primary objective of the Project is to provide a new hospital tower to replace the acute care functions of the existing hospital before the state law (Alquist Hospital Facilities Seismic Safety Act, also known as Senate Bill 1953) deadline to meet seismic standards for critical trauma/tertiary acute care so that the South Bay service region and the County seamlessly retain the key link in the County-wide trauma hospital safety net. The Project would feature biomedical research and development facilities, and would integrate inpatient and outpatient services in a renovated and expanded setting. The project benefits which are balanced against the remaining significant unavoidable impacts will also be addressed in the Statement of Overriding Considerations that will be made by the Board of Supervisors if they approve the project.

Four Alternatives to the proposed Project were evaluated in Chapter 5.0, *Alternatives*, of this Draft EIR. These include the No Project/No Build Alternative, Reduced Intensity Alternative A, Reduced Intensity Alternative B, and Reduced Intensity Alternative C. Among these alternatives, only the No Project/No Build Alternative would avoid all of the significant unavoidable effects of the proposed Project. However, the No Project/No Build Alternative would result in eventual closure of the existing Hospital, the layoff of a large number of high paid medical sector workers, and lack of achievement of any of the Project objectives, while the three reduced intensity alternatives would result in only partial achievement of the Project objectives. Furthermore, none of the three reduced intensity alternatives would reduce all of the significant unavoidable impacts of the Project (e.g., significant unavoidable construction noise, construction traffic, and operational traffic impacts), though Reduced Intensity Alternative C would eliminate the significant operational traffic impact that would occur under the Project. Finally, since the No Project/No Build Alternative would not meet the underlying purpose of the Project, it is not considered a feasible Project alternative.

In addition to the regulatory and environmental reasons why the Project has been proposed as cited above, there are safety- and licensing-related reasons in support of the proposed development. Such reasons include seismic safety risks associated with older hospital facilities and licensing requirements for acute care facilities such as the Harbor-UCLA Medical Center, which are regulated by OSHPD. As required by OSHPD, all acute care facilities must meet the minimum requirements for seismic safety and other design features in order to remain operational. Aside from the need to update and expand the existing Harbor-UCLA Medical Center facilities to meet current and future health care demands, the ongoing operation of the existing Hospital could not continue in the long-term without significant retrofitting and other physical improvements, which would require closure of the Hospital for the duration of construction activities and the temporary loss of all emergency and acute medical care services in the South Bay community.

4. GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the *CEQA Guidelines* requires an EIR to discuss the ways the proposed Project could foster economic or population growth or the construction of additional housing, directly or indirectly, in the surrounding environment. Growth-inducing impacts include the removal of obstacles to population growth (e.g., the expansion of a wastewater treatment plant allowing more development in a service area) and the development and construction of new service facilities that could significantly affect the environment individually or cumulatively. In addition, growth must not be assumed as beneficial, detrimental, or of little significance to the environment.

The Project would address the future needs of the communities served by the Harbor-UCLA Medical Center Campus. The existing Campus contains 1,279,284 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project), 5,464 existing employees, and an estimated 545,079 annual patient visits. The Project encompasses construction of a New Hospital Tower that meets current seismic building codes, renovation of the existing Hospital tower to house non-acute care support uses, replacement of aging facilities (including approximately a dozen WWII barracks), reconfigured vehicular and pedestrian access to and circulation within the Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors. This would result in a small net decrease in inpatient hospital beds (from 453 to 446 beds), a net increase of 1,178,071 square feet of building floor area, and net increases in total Campus-wide employees and annual patient visits of 37 percent (2,030 employees) and 34 percent (185,745 annual visits or 714 daily visits), respectively.

The Project would not cause a progression of growth beyond the Project Site. The Project Site is located in an area surrounded by urbanized land, is already fully development, and is already served by existing infrastructure (e.g., roads and utilities) and community service facilities (e.g., police, fire, schools, parks, and libraries). The Project's only infrastructure improvements would consist of tie-ins to, and extensions of, the existing utility main-lines already serving the Project area. No extension of roadways, utilities or community services to currently un-served areas would occur. Furthermore, the Project would not include residential development and thus would not directly generate a residential population, and although the Project would increase employment on the Campus, adequate existing and future housing stock is available in the area to accommodate these employees (see Section 4.J., *Population and Housing*, of this Draft EIR for analysis). Furthermore, this increase in employees would not exceed the 2035 SCAG projections for the area identified in the 2012 RTP/SCS. Therefore, the Project would not result in significant growth inducing impacts.

5. POTENTIAL SECONDARY EFFECTS

Section 15126.4(a)(1)(D) of the *CEQA Guidelines* requires a discussion of the potential impacts of mitigation measures only if the mitigation measure(s) would cause one or more significant effects in addition to those that would be caused by the Project as proposed. If so, these effects may be discussed in less detail than the significant effects of the Project. With regard to this section of the *CEQA Guidelines*, the Project's proposed mitigation measures that could cause potential impacts were evaluated to determine if any would cause one or more significant effects. The following provides a discussion of the potential significant adverse secondary effects that could occur as a result of the implementation of the Project mitigation measures, listed by environmental issue area. None of the mitigation measures are found to have adverse secondary significant effects.

(a) Biological Resources

Mitigation Measure BIO-1 (from Initial Study) requires the provision of breeding season avoidance buffers around passerine and raptor nest sites during Project construction and vegetation removal activities, and the implementation of a CDFW-reviewed Nesting Bird Management Plan that includes biologist monitoring of nesting sites and identification of nest-specific mitigation measures to project the birds and their young. This mitigation measure would minimize or avoid overall losses of sensitive resources, and would not result in any significant adverse secondary effects.

(b) Cultural Resources

Mitigation Measure CULT-1 through CULT-4 (from Initial Study) require monitoring, recovery, and documentation of any archaeological and paleontological resources discovered during Project construction. These measures are intended to preserve on-site archaeological and paleontological resources, and would not result in any significant adverse secondary effects.

(c) Geology and Soils

Mitigation Measures GEO-1 through GEO-3 require implementation of all the recommendations in the Preliminary Geotechnical Evaluation (provided in Appendix C of this Draft EIR) regarding seismicity, liquefaction, compressible/collapsible soils and settlement, shallow groundwater, expansive soils, and corrosive soils, including the performance of detailed subsurface geotechnical evaluations of the planned improvement sites and the provision of detailed construction-site specific recommendations for pile/footing foundations and building design and construction. These measures would include the drilling of exploratory borings and the cutting of exploratory excavations at the planned improvement sites, and potentially dewatering and the removal of liquefiable and other adverse soil layers and replacement with compacted fill. While these activities would generate some dust and constructed equipment related air emissions, noise and traffic, these localized impacts have already been incorporated into the Project construction-related air, hydrology and water quality, noise and traffic analyses in Chapter 4.0 of the Draft EIR, and no additional significant adverse secondary effects would occur.

(d) Hazards and Hazardous Materials

Mitigation Measure HAZ-1 requires the abatement of ACMs, LBP, and PCBs in existing on-site buildings in accordance with the recommendations of the Hazardous Buildings Materials Survey prior to renovation or demolition activities. This would include the extraction, removal and disposal of these materials in accordance with the special handling and disposal requirements of applicable federal, state and local regulations. Because this measure would reduce impacts on the environment through characterizing and removing dangerous materials, and because the referenced requirements have been formulated to avoid significant environmental impacts (such as significant health impacts), no significant adverse secondary effects would occur.

Mitigation Measure HAZ-2 requires the implementation of a Los Angeles County Fire Department-approved comprehensive Soils Management Plan for areas of the Project Site identified in the Phase I ESA (included in Appendix E of this Draft EIR) as containing potential soil contamination for which site closure has not been confirmed to be implemented during excavation and grading activities. This measure would include excavation monitoring, laboratory testing of potentially contaminated soils, and the proper removal, handling, transportation, and disposal of any identified contaminated soils at a licensed facility in accordance with applicable federal, state and local laws and regulations. Because this measure would reduce impacts on the environment through characterizing and removing dangerous materials, and because the referenced requirements have been formulated to avoid significant environmental impacts (such as significant health impacts), no significant adverse secondary effects would occur.

Also, while the two mitigation measures above would generate some dust and constructed equipment-related air emissions, noise and traffic associated with required excavations and removal of contaminated

materials and USTs, these localized impacts have already been incorporated into the Project construction-related air, noise and traffic analyses in Chapter 4.0 of the Draft EIR. Therefore, no additional significant adverse secondary effects would occur.

(e) Noise

Mitigation Measure NOISE-1 requires the installation of temporary noise barriers during construction on the Project Site to block the line-of-site between on-site construction equipment and off-site noise-sensitive receptors. The installation of such temporary noise barriers during the construction period could potentially require construction equipment which could generate some temporary air emissions and noise. However, any such impacts are addressed within the construction-related air and noise analyses in Chapter 4.0 of this Draft EIR.

(f) Public Services

Impacts regarding some public services (e.g., parks and recreation, schools, and libraries) would be less than significant and no mitigation measures are required. Therefore, no significant adverse secondary effects would occur due to the implementation of mitigation measures for these environmental topics. However, with regard to fire protection and emergency services, Mitigation Measure FIRE-1 requires that the County Department of Public Works and/or their contractors regularly notify and coordinate with the LACFD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access and emergency response times. Mitigation Measure FIRE-2 requires that prior to the issuance of building permits, the applicants for development under the Project will pay the prevailing LACFD Developer Fee. With regard to Sheriff protection, Mitigation Measure SHER-1 requires that security features and personnel be provided throughout construction, Mitigation Measure SHER-2 requires that emergency access be provided during construction, while Mitigation Measure SHER-3 requires that the Project construction contractors regularly notify and coordinate with the LACSD concerning Project construction activities, including any on- and off-Campus lane closures and other construction activities that could affect emergency access or emergency response times. Thus, implementation of these mitigation measures would not result in additional physical impacts to the environment beyond those already anticipated for the Project as discussed in Chapter 4.0 of this Draft EIR.

(g) Transportation and Parking

Mitigation Measures TRAF-1 through TRAF-3 would require restriping at the following existing intersections: I-110 Southbound Ramps & Carson Street; 220th Street/I-110 Northbound Ramps & Figueroa Street; and the I-110 Southbound Ramps & 223rd Street. Other than short disruptions of traffic at these intersections during the restriping, which would occur in accordance with County, City, and/or Caltrans requirements, no physical impacts would occur. Therefore, no significant adverse secondary effects would occur.

Mitigation Measure TRAF-4 requires the developer to contribute fair share funding to Caltrans toward an analysis or improvements on I-110 (Harbor Freeway) in the Project vicinity to offset the additional Project-generated trips that would result on the freeway mainline segments that pass through the affected Caltrans intersection. No physical impacts would occur under this mitigation measure (any future improvement of the I-110 and associated intersections would be subject to separate CEQA review and would be too

speculative to evaluate in the current Draft EIR). Therefore, no significant adverse secondary effects would occur.

6. ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT (BEFORE MITIGATION) IN THE INITIAL STUDY

Section 15128 of the *CEQA Guidelines* states that an EIR shall contain a brief statement indicating reasons that various possible significant effects of a Project were determined not to be significant and not discussed in detail in the Draft EIR. An Initial Study was prepared for the Project and is included in Appendix A-1 of the Draft EIR. The analysis in the Initial Study determined that the Project would result in less than significant impacts related to Agriculture and Forestry Resources, Biological Resources, Cultural Resources (Historical Resources and Human Remains), Geology and Soils (Fault Rupture, Landslide, and Soils Incapable of Supporting Septic Systems), Hazards and Hazardous Materials (Wildfires), Hydrology and Water Quality (Flooding from 100-Year Floods, and Inundation by Seisch, Tsunami and Mudflows), Land Use (Physically Divide an Established Community, and Conflict with an Applicable Habitat Conservation Plan or Natural Community Conservation Plan), Mineral Resources, and Population and Housing (Displace Substantial Numbers of Existing People or Housing, Necessitating Replacement Housing Elsewhere), and that these issues would thus not be evaluated further in the Draft EIR in accordance with *CEQA Guidelines* Section 15063(c)(3)(A). The basis for the less than significant conclusion regarding these issues is discussed below.

(a) Agriculture and Forestry Resources

The Project Site is not located on or in proximity to any land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and no farmland or agricultural operations occur in the Project area. The Project would not conflict with the existing zoning for an agricultural use, as the site is currently zoned for and contains urban uses. Additionally, no portion of the Project Site is enrolled in a Williamson Act Contract. Project implementation would not result in changes to or cause rezoning of forest land, timber land or timberland zoned for Timberland Production. In addition, the Project area does not include areas zoned or utilized for timberland production. No forest land exists in the Project area; as such, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. As the Project would not have the potential to affect farmland, forest land, or agricultural or forestry operations, no impacts would occur in this regard.

(b) Biological Resources (Riparian Habitat, Wetlands, Conflicts with Local Biological Resources Plans/Ordinances/Policies or Adopted Habitat Conservation Plans)

The Project Site is located in an urbanized area and does not contain riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands, other sensitive natural communities, or federally protected wetlands. Also, the Project Site does not contain biological resources, such as large oak trees, protected by local plans, ordinances or policies (including habitat conservation plans and natural community conservation plans). Furthermore, the Project would include a landscape plan that would provide plantings as required by the County Municipal Code. As the Project would not have the potential to affect these biological resources or conflict with local biological resources plans, ordinances or policies regarding these resources, no impact would occur in this regard.

(c) Cultural Resources (Historical Resources and Human Remains)

With respect to historical resources, a comprehensive Historic Resources Report was prepared by for the Project Site and is included in Appendix A of the Initial Study. According the report, the Project Site does not contain listed historic resources, and while the property as a whole was evaluated in the report as a potential historic district, the report concluded that while the property is significant in the context of World War II military history in Los Angeles, it lacks integrity because there are not enough buildings remaining from the period and the remaining buildings have been substantially altered. As such, the report determined that the property is not eligible for listing in the National Register or California Register as an historic district, and further that none of the individual structures themselves are eligible for listing.

With respect to human remains, the Project Site has been previously graded and developed, and no known traditional burial sites or cemeteries occur on-site. Nevertheless, human remains, if present, could potentially be unearthed during Project construction activities. However, compliance with state law (I.e., Public Resources Code Section 5097.98, State Health and Safety Code Section 7050.5, and California Code of Regulations Section 15064.5(e) would avoid significant impacts to any unanticipated human remains that are unearthed.

(d) Geology and Soils (Fault Rupture, Landslide, and Soils Incapable of Supporting Septic Systems)

According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's General Plan 2035, the Project Site is not located within a seismic or geotechnical hazard zone. Further, the Project Site is not located within a designated Alquist-Priolo Earthquake Fault Zone. As no known earthquake faults or Alquist-Priolo Earthquake Fault Zones existing on or near the site, there would be no potential for surface fault rupture to affect future uses at the site.

With respect to landslides, the terrain of the Project Site is relatively flat as is the terrain of the surroundings. Furthermore, as indicated in Figure 12.1 of the County's General Plan 2035, the Project Site is not located within a seismically induced landslide zone and no sloped areas existing in the immediate vicinity. As such, no landslide impacts would occur.

With respect to the ability of on-site soils to supporting septic systems, the Project would connect to the municipal wastewater system rather than use septic systems or other alternative wastewater disposal systems. Therefore, no impact would occur in this regard.

(e) Hazards and Hazardous Materials (Wildfires)

The Project Site is located within a highly urbanized area surrounded by urban uses, and the site is not located within an identified wildland fire hazard areas or very high fire hazard severity zone based on Figure 12.6, Fire Hazard Severity Zones Policy Map, of the County's General Plan 2035. Therefore, no wildland fire impact would occur.

(f) Hydrology and Water Quality (Flooding from 100-Year Floods, and Inundation by Seisch, Tsunami and Mudflows)

According to Figure 12.2, Flood Hazard Zones Policy Map, of the County's General Plan 2035, the Project Site is not located within a 100-year flood hazard area. The Project Site is also not located within a FEMA-designated 100-year floodplain. Therefore, the Project would not be subject to flooding from 100-year floods, and thus no impact would occur in this regard

With respect to inundation by seisch, tsunamis or mudflows, the Project Site is not located adjacent to a large body of water, is located over five miles from the Pacific Ocean, and is not located adjacent to any hillsides. Therefore, the Project would not be subject to inundation by seisch, tsunamis or mudflows, and no impact would occur.

(g) Land Use (Physically Divide an Established Community, and Conflict with an Applicable Habitat Conservation Plan or Natural Community Conservation Plan)

The Project would involve the renovation and expansion of existing medical uses, and the development of new medical uses, within an already fully developed urbanized campus surrounded on all sides by urban development. Furthermore, none of the four streets bordering the Project Site would be closed, and access to adjacent land uses would be maintained. Therefore, the Project would not physically divide an established community.

With respect to conflicting with a habitat conservation plan or natural community conservation plan, no such plans are applicable to the Project Site.

(h) Mineral Resources

The Project Site is not located within a known mineral resource area and no mineral resources are known to exist at the Project Site or in the surrounding area, as shown in Figure 9.6, Natural Resource Areas, of the County's General Plan 2035. Furthermore, the Project Site is not located within a Mineral Resource Zone and there are no known designated locally-important mineral resources located on the Project Site or in the vicinity, as illustrated in Figure 9.6 of the County General Plan 2035. Therefore, no impact to mineral resources would occur.

(i) Population and Housing (Displace Substantial Numbers of Existing People or Housing, Necessitating Replacement Housing Elsewhere)

The Project Site does not contain existing housing, and the Project would thus not displace existing housing or residents that would necessitate the development of replacement housing elsewhere. Furthermore, the Project would retain the existing on-site jobs and create new on-site jobs, so that existing employees would not be displaced. Thus, no impact would occur.

7. ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT (BEFORE MITIGATION) IN THE DRAFT EIR

The Environmental impact analysis presented in Chapter 4.0, *Environmental Impact Analysis*, of this Draft EIR concludes that the Project would result in no impacts or less than significant impacts (before mitigation) for the following environmental issues. See the applicable sections of Chapter 4.0 of the Draft EIR for the reasons supporting these conclusions for each environmental issue.

- Aesthetics
    - Visual Character
    - Views
    - Light and Glare
- Air Quality
    - Consistency with Air Quality Management Plan
    - Violation of Air Quality Standards
    - Non-Attainment Pollutants
    - Substantial Pollutant Concentrations
    - Odors.
- Energy
    - Energy Consumption
- Geology and Soils
    - Soil Erosion/Loss of Topsoil
- Greenhouse Gas Emissions
    - Greenhouse Gas Emissions
    - Greenhouse Gas Reduction Plans
- Hazards and Hazardous Materials
    - Airport Safety Provisions
    - Emergency Response Plans
- Hydrology and Water Quality
    - Violation of Water Quality Standards
    - Depletion Groundwater Supplies
    - Alteration of Drainage Patterns Resulting in Substantial Erosion or Siltation
    - Flooding
    - Runoff that Would Exceed Drainage System Capacity
    - Degradation Water Quality

- Land Use and Planning
    - Consistency with Applicable Land Use Plans, Polices, and Regulations
    - Land Use Compatibility
- Noise
    - Off-Site Construction Traffic Noise
    - Operational Traffic Noise
    - Operational Non-Roadway Noise
    - Operational Parking Structure Noise
    - Construction Vibration
    - Operational Vibration
- Population and Housing
    - Project-Related Growth
    - Introduction of Unplanned Infrastructure
- Public Services
    - Fire Protection and Emergency Services
    - Sheriff Protection
    - Parks and Recreation
    - Schools
    - Libraries
- Transportation and Parking
    - CMP Transportation System
    - Public Transit and Alternative Transportation
    - Access and Circulation
    - Parking Supply
- Utilities and Service Systems
    - Water
    - Wastewater
    - Solid Waste

7.0 REFERENCES

8 CCR Section 1532.1.

14 CCR Section 15000 et seq, State CEQA Guidelines.

17 CCR Sections 95100-95158.

17 CCR Sections 95800 to 96023.

17 CCR Sections 95811, 95812(d).

17 CCR Sections 95811, 95812.

20 CCR Division 3, Chapter 16 and 18

20 CCR, Sections 1605.1(h) and 1605.1(i)

22 CCR sec. 12000 et seq., Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

22 CCR Section 66201.1 et seq.

29 CFR Section 1910, et. seq., Federal Occupational Safety and Health Act of 1970.

40 CFR 131.38, California Toxics Rule.

40 CFR 761, Toxic Substances Control Act (TSCA)

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9.0 STANDARD PROJECT TERMS, DEFINITIONS, AND ACRONYMS

STANDARD TERMS AND DEFINITIONS

- ***Bioscience Tech Park:*** The proposed 250,000-square foot facility proposed for the western end of the Harbor-UCLA Medical Center Campus. It would house biomedical research facilities that would operate independently of LA BioMed, and is anticipated to be constructed between 2020 and Master Plan Project Buildout.
- ***CII:*** Children's Institute International, a tenant on the Harbor-UCLA Medical Center Campus, occupying the Burton E. Green Campus, a 23,435-square foot building in the northwest corner of the Campus.
- ***Existing Hospital Tower:*** Refers to the main seven-story, 446-bed County hospital building on the Harbor-UCLA Medical Center Campus. Constructed in 1962, the Hospital underwent expansion between 2010 and 2013 (see ***Replacement Project***).
- ***Harbor General Hospital:*** Los Angeles County Harbor General Hospital, the current Harbor-UCLA Medical Center hospital's predecessor, founded in 1946 following the purchase of the property from the federal government. It originally occupied the administration building and barracks built in the 1940s, which were replaced in 1962 by construction of a new hospital building. See ***Existing Hospital Tower***.
- ***Harbor-UCLA Medical Center:*** Generally refers to the entire 72-acre Medical Center Campus, including the County Hospital and Clinics as well as other tenants including LA BioMed, MFI, and the Children's Institute (see ***CII***).
- ***LA BioMed:*** Los Angeles Biomedical Research Institute, a not-for profit biomedical research institute and the second-largest leasehold tenant on the Harbor-UCLA Medical Center Campus.
- ***LA BioMed Campus:*** The 11.4-acre campus, located within the south-central Medical Center Campus and fronting on 220th Street, which houses the consolidated facilities of LA BioMed.
- ***Master Plan:*** Harbor-UCLA Medical Center Campus Master Plan
- ***Medical Center Campus:*** The 72-acre Harbor-UCLA Medical Campus, bounded by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west.
- ***MFI:*** Harbor-UCLA Medical Foundation, Inc.
- ***New Hospital Tower:*** The proposed new hospital tower, to be built as a replacement for the existing Hospital, which will be decommissioned for inpatient acute care functions by 2030 in accordance with the requirements of SB 1953, the Alquist Hospital Seismic Safety Act of 1983.
- ***PCDC:*** Primary Care and Diagnostics Center, a facility within the Hospital
- ***Project:*** Harbor-UCLA Medical Center Campus Master Plan Project
- ***Project Site:*** See ***Medical Center Campus***.

- ***Replacement Project:*** The Emergency Room and Surgery Building Replacement Project, an expansion of the Existing Hospital Tower building undertaken between 2010 and 2013. This project expanded the existing emergency room from 25,000 square feet/42 emergency bays to 75,000 square feet/80 emergency bays and added 190,000 square feet of space containing surgery suites, adult and pediatric triage, and a new entrance lobby, and waiting area. A new heliport and 544-space parking structure were also constructed.

ACRONYMS AND ABBREVIATIONS

Acronym	Description
2016 RCP/SCS	2016 – 2040 Regional Transportation Plan/Sustainable Communities Strategy
µg	microgram
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ACM	asbestos-containing material
ADA	American with Disabilities Act
AF	acre-feet
AFY	acre-feet per year
Air Basin	South Coast Air Basin
Alquist-Priolo Act	The Alquist-Priolo Fault Zoning Act of 1972
ANSI	American National Standard Institute
APRMI	ArchaeoPaleo Resource Management, Inc.
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
ASCE Bulletin 7	American Society of Civil Engineer Bulletin 7
AST	aboveground storage tank
ASTM	American Society of Testing and Materials
ATCM	airborne toxic control measure
BACT	Best Available Control Technology
Basin	Los Angeles Basin
Basin Plan	Water Quality Control Plan
BAU	Business-As-Usual
BEP	Business Emergency Plan
BMPs	Best Management Practices
BTEX	benzene, toluene, ethylbenzene, and xylenes
C&D	Construction and Demolition
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
California Register	California Register of Historical Resources
CALINE	California Line Source
Cal/OSHA	California Division of Occupational Safety and Health
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board

Acronym	Description
CAT	Climate Action Team
CCAR	California Climate Action Registry
CCR	California Code of Regulations
cd/m^2	candelas per square meter
Central Basin	Central Basin of the Coastal Plain of the Los Angeles Groundwater Basin
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
Cfs	cubic feet per second
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
CHMIRS	California Hazardous Material Incident Report System
CHRIS	California Historical Resources Information System
CHR Status Code	California Historic Resources Status Code
CWIMB	California Integrated Waste Management Board
CIWMP	Countywide Integrated Waste Management Program
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	equivalent mass of carbon dioxide
Compass Report	Southern California CBGV Compass Blueprint Growth Visioning Report
COMPSTAT	Crime Control Model Computer Statistics
Conservation Element	City of Los Angeles General Plan Conservation Element
Construction General Permit	General Permit for Storm Water Discharges from Construction Activities, NPDES Permit No. CAS000002
County	County of Los Angeles
County Department of Public Works	Los Angeles County Department of Public Works
County Flood Control	Los Angele County Flood Control District
CUP	Conditional Use Permit
dB	decibel
dBA	A-weighted dB scale
dBC	C-weighted dB scale
DDT	dichloro-diphenyl-trichloroethane
Design Guidelines	Citywide Design Guidelines
DHS	Los Angeles County Department of Health Services
DNL	Day-Night Average Level
DOGGR	California Department of Conservation, Division of Oil, Gas, and Geothermal Resources
DOSH	Department of Occupational Safety and Health
DPR	California Department of Parks and Recreation

Acronym	Description
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
Earthquake Fault Zones	Regulatory zones established by the State Geologist around the surface traces of active faults
EIR	Environmental Impact Report
EMFAC	emission factors
ERNS	Emergency Response Notification System
ETO	ethylene oxide
FAA	Federal Aviation Administration
FAR	floor:area ratio
FHWA	Federal Highway Administration
FIND	Facility INformation Detail
FTA	Federal Transit Administration
General Permit	SWRCB Order No. 2009-0009-DWQ
GHG	greenhouse gas
gpm	gallons per minute
Growth Vision	SCAG's Compass Blueprint Growth Visioning Program
GWP	global warming potential
H_2S	hydrogen sulfide
HABS	Historic American Buildings Survey
HAZNET	Hazardous Waste Information System
HAZUS	Federal Emergency Management Agency's HAZARDS U.S. Assessment Program
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HHWE	Household Hazardous Waste Element
HPOZ	Historic Preservation Overlay Zone
HRA	Health Risk Assessment
HVAC	Heating, ventilation, and air conditioning
HWCL	Hazardous Waste Control Law
IIPP	Injury and Illness Prevention Program
IPCC	Intergovernmental Panel on Climate Change
IT	Information Technology
kVA	kilovolt amperes
kWh	kilowatt hours
LADOT	City of Los Angeles Department of Transportation
LAFD	City of Los Angeles Fire Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LBP	lead-based paint
LCD	liquid crystal display

Acronym	Description
LCS	lead-containing surface
L_{dn}	Day-Night Average Level
LEED	Leadership in Energy and Environmental Design
LEL	Lower Exposure Limit
L_{eq}	Equivalent Sound Level
LID	Low Impact Development
L_{max}	Maximum Sound Level
LOS	Level of Service
LQG	Large-Quantity Generator
LUST	Leaking Underground Storage Tank
MATES	Multiple Air Toxics Exposure Study
Metro	Los Angeles County Metropolitan Transportation Authority
MMT	million metric tons
$MTCO_2e$	Metric Ton Carbon Dioxide Equivalent
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
National Register	National Register of Historic Places
NDFE	Nondisposal Facility Elements
NHPA	National Historic Preservation Act
NO	nitric oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NOC	Network Operations Center
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O_3	ozone
OHP	State Office of Historic Preservation
O&M	Operations and Maintenance
OSHA	Federal Occupational Safety and Health Administration
OSHPD	California Office of Statewide Health Planning and Development
Pb	lead
PCBs	Polychlorinated Biphenyls
PEL	Permissable Exposure Limits
PFCs	Perfluorocarbons
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
Police Department	Los Angeles Police Department
ppm	parts per million

Acronym	Description
ppmv	parts per million by volume
PPV	peak particle velocity
PRC	Public Resources Code
psi	pounds per square inch
PST	Pacific Standard Time
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RD	Reporting District
REC	Recognized Environmental Condition
REL	reference exposure level
RTIP	Regional Transportation Improvement Program
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCEC	Southern California Earthquake Center
Seismic Hazards Mapping Act	Seismic Hazards Mapping Act of 1970
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLM	Sound Level Meter
SO_2	sulfur dioxide
SO_4	sulfates
SQG	Small-Quantity Generator
SSC	suspended sediment concentration
SRRE	Source Reduction and Recycling Element
Standards	Secretary of the Interior's Standards or Secretary of the Interior's Standards for Rehabilitation
Status Code	California Historic Resources Status Code
STEL	Short Term Exposure Limit
SUSMP	Standard Urban Stormwater Mitigation Plan
SWEEPS	Statewide Environmental Evaluation and Planning System
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TER	Technology Equipment Room
TMDL	Total Maximum Daily Load
TOD	Transit Overlay District
TPH	Total Petroleum Hydrocarbons

Acronym	Description
TRPH	Total Recoverable Petroleum Hydrocarbons
Transportation Element	City of Los Angeles General Plan Transportation Element
TSCA	Toxic Substances Control Act of 1976 (15 United States Code, Section 2601)
TSS	total suspended solids
UEL	Upper Exposure Limit
UPS	Uninterruptible Power Supplies
URBEMIS	Urban Emissions
USC	United States Code
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
UST	underground storage tank
V/C	volume to capacity
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDR	Waste Discharge Requirements
WWII	World War II

Appendix A

Notice of Preparation (NOP), Initial Study, Scoping Meeting Materials, and NOP and Scoping Meeting Comments

A-1 NOVEMBER 2014 IS-NOP

A-1.A NOP NOVEMBER 2014

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND NOTICE OF PUBLIC SCOPING MEETING

Date: November 3, 2014

To: State Clearinghouse, Responsible and Trustee Agencies, and Interested Individuals

From: County of Los Angeles c/o Department of Public Works

900 S. Fremont Ave, Alhambra, California 91803

Subject: Notice of Preparation of an Environmental Impact Report, Harbor-UCLA Medical Center Campus Master Plan Project and Notice of Public Scoping Meeting Date and Location

The County of Los Angeles (County), as the lead agency, has prepared an Initial Study and will be preparing an Environmental Impact Report (EIR) for the proposed project described below. The County of Los Angeles Department of Public Works (DPW), on behalf of the County, is soliciting input from responsible and trustee agencies, other agencies required to receive this notice, and the State Office of Planning and Research, and is also extending the outreach for early public consultation to other interested parties, members of the public, and organizations, on the scope and content of the information to be included and analyzed in the EIR. Agencies should comment on the elements of the environmental information that are relevant to their statutory responsibilities in connection with the proposed project. The EIR will be the environmental document for responsible and trustee agencies when considering any discretionary approvals.

The project description, location, and potential environmental effects of the proposed project are described in this Notice of Preparation and attached Initial Study.

The County requests that any potential responsible or trustee agencies responding to this NOP reply in a manner consistent with Section 15082(b) of the CEQA Guidelines, which allows for the submittal of any comments and/or inputs in response to this notice no later than 30 days after receipt of the NOP. The County will accept written comments from these agencies and others regarding this NOP through the close of business on **Tuesday, December 2, 2014**. Please send all written comments, including e-mailed comments, to Clarice Nash at the address below. Comments should include the name of a contact person.

Project Location: The Harbor-UCLA Medical Center Campus ("Medical Campus") is located at 1000 West Carson Street on approximately 72 acres of land owned by the County of Los Angeles and is surrounded by the City of Torrance, City of Carson, and the Harbor-Gateway community of the City of Los Angeles, in Los Angeles County. Specifically, the Medical Campus is bounded by Carson Street, Vermont Avenue, 220th Street, and Normandie Avenue. The Medical Campus is located west of the I-110 (Harbor) Freeway and south of the I-405 (San Diego) Freeway. Refer to **Figure 1**, *Regional and Vicinity Map*.

Project Description: Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project ("Project") to consider current conditions and future needs of the Harbor-UCLA Medical Center Hospital and Clinics, the LA Biomed Research Foundation ("LA Biomed") and the Department of Health Services at the Medical Campus. The purpose of the Project is to enhance the interactive relationship between the clinical, educational, and research components of the Medical Campus and to update it concurrent with growth in the region. The County-owned Medical Campus is a 72-acre property, located in unincorporated south Los Angeles County. The Project would incorporate the expansion of current services, the upgrading of aging facilities and buildings, redesign of the Medical Campus to improve access and internal circulation, and provide a cohesive design that would enhance the experience of staff, patients, and visitors to the Medical Campus. Implementation of the Project is expected to meet short-term needs as well as long-term needs beyond 2030. The Surgery and Emergency Building Replacement Project, totaling approximately 190,000 square feet, was recently completed on the Medical Campus and has been considered in the proposed Project.

The Project includes construction of additional new facilities, including a New Hospital Tower, outpatient facilities, other services, and Medical Campus support. These new facilities would increase the existing floor area of the Medical Campus from approximately 1,050,000 square feet to approximately 1,900,000 square feet of floor area. The New Hospital Tower, which would be connected to the Surgery and Emergency Room Replacement Project building, is proposed to be the primary focal point of the Medical Campus. Outpatient facilities would be consolidated to allow proximity of these services to each other and the New Hospital Tower. LA BioMed would also develop new facilities, which would represent approximately 200,000 square feet of the overall proposed Project development program and which would be consolidated into an interior sub-campus near the proposed outpatient facilities and the New Hospital Tower. Open plazas, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Medical Campus and join the New Hospital Tower, LA BioMed, and outpatient facilities. The west side of the Medical Campus would remain vacant in the proposed Project.

Potential Environmental Effects: The Initial Study contains a preliminary analysis of the environmental impacts of the proposed Project in accordance with the CEQA Guidelines that identify 16 areas where impacts could occur. These impacts, which will be analyzed in detail in the EIR, include: aesthetics, air quality, energy, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, utilities and service systems, transportation/traffic, utilities and service systems, and mandatory findings of significance. The topical areas for which the Initial Study determined there would be no potentially significant impacts and which are therefore proposed not to be addressed in the EIR include: agriculture and forestry resources, biological resources, cultural resources, and mineral resources.

Copies of the Notice of Preparation/Initial Study are available for electronic download at http://dpw.lacounty.gov/landing/publicBuildings.cfm and for public review of hard copies at the following Public Library locations:

Carson Library 151 E. Carson Street Carson, CA 90745 (310) 830-0901	Harbor Gateway City Library 1555 Sepulveda Boulevard Torrance, CA 90501 (310) 548-7791	Southeast Branch Library 23115 Arlington Avenue Torrance, CA 90501 (310) 530-5044
Harbor Gateway Library 24000 S. Western Avenue Harbor City, CA 90710 (310) 534-9520	Lomita Library 24200 Narbonne Avenue Lomita, CA 90717 (310) 539-4515	Dr. Martin Luther King, Jr. Library 17906 S. Avalon Boulevard Carson, CA 90746 (310) 327-4830
Katy Geissert Civic Center Library 3301 Torrance Boulevard Torrance, CA 90503 (310) 618-5959	Wilmington Library 1300 N. Avalon Boulevard Wilmington, CA 90744 (310) 834-1082	Harbor-UCLA Medical Center Inpatient Tower Information Desk 1000 Carson Street Torrance, CA 90509-2910 (323) 409-1000

Interested parties may submit their written comments to:

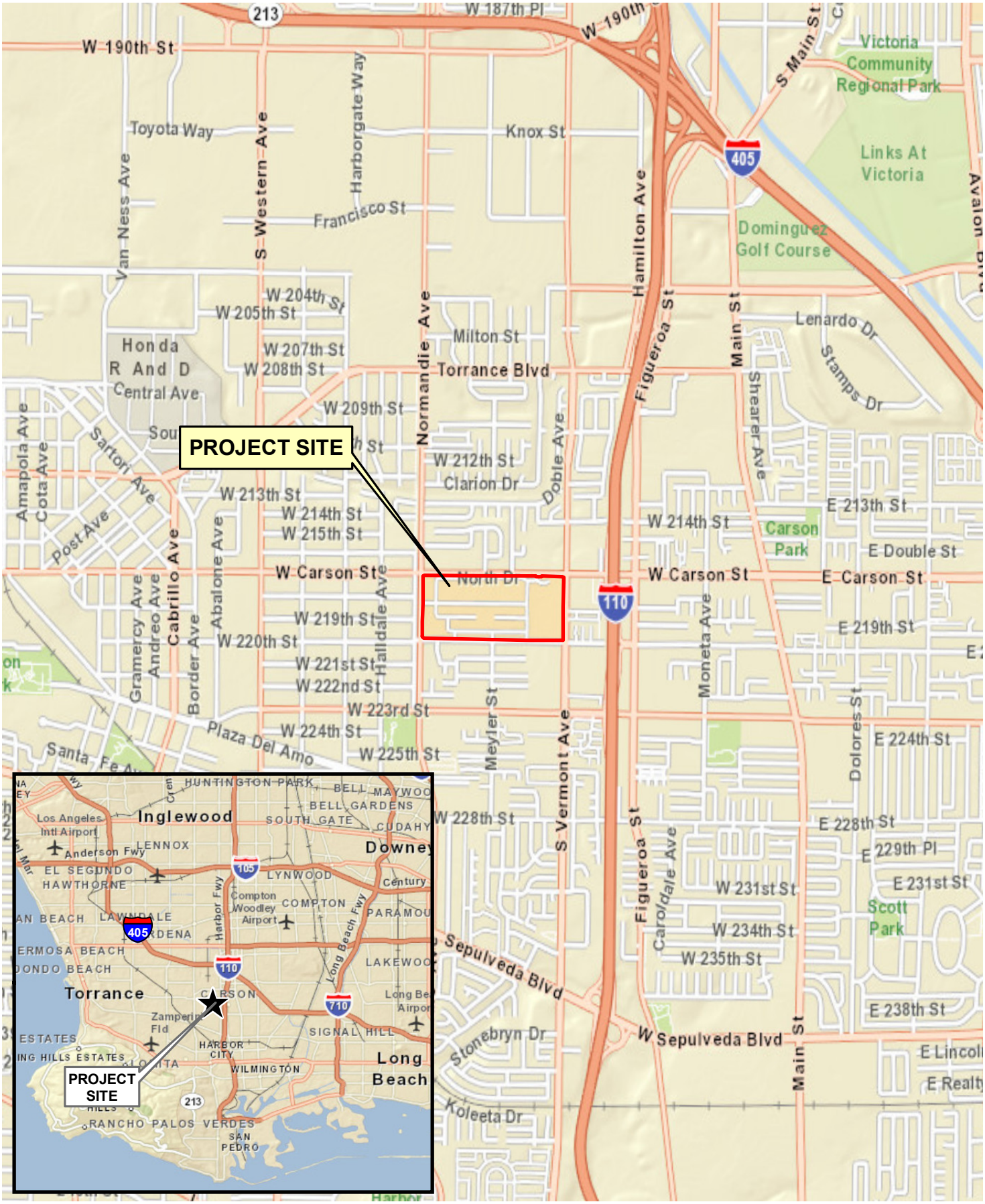
Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803-1331
E-mail: cnash@dpw.lacounty.gov

Questions regarding this notice should be directed to Clarice Nash at (626) 300-2363 or at the e-mail shown above, Monday through Thursday, between 7:30 a.m. and 6:00 p.m. All parties that are interested in receiving information in the future related to the Project may submit their name and mailing address with that request to the Project Manager listed above.

Public Scoping Meeting: A public scoping meeting will be held on November 12, 2014, from 5:30 p.m. to 7:30 p.m., to solicit input from the public, trustee and responsible agencies and other interested parties on the scope and

content of the Environmental Impact Report in conformance with Section 21083.9 of the Public Resources Code on scoping meetings. You may send a written response by the deadline date of December 2, 2014, without attending the scoping meeting, which provides an additional opportunity to discuss the EIR to be prepared for the proposed Project.

Location: Harbor-UCLA Medical Center
Parlow Library (to the north and east of the existing Hospital building)
1000 West Carson Street
Torrance, California 90509-2910
Free Parking in Lots A, B, and C (Refer to **Figure 2**, *Existing Medical Campus Map*)
(Please note that all visitors are subject to screening prior to entry)



PCR

N

0 2,000 4,000 Feet

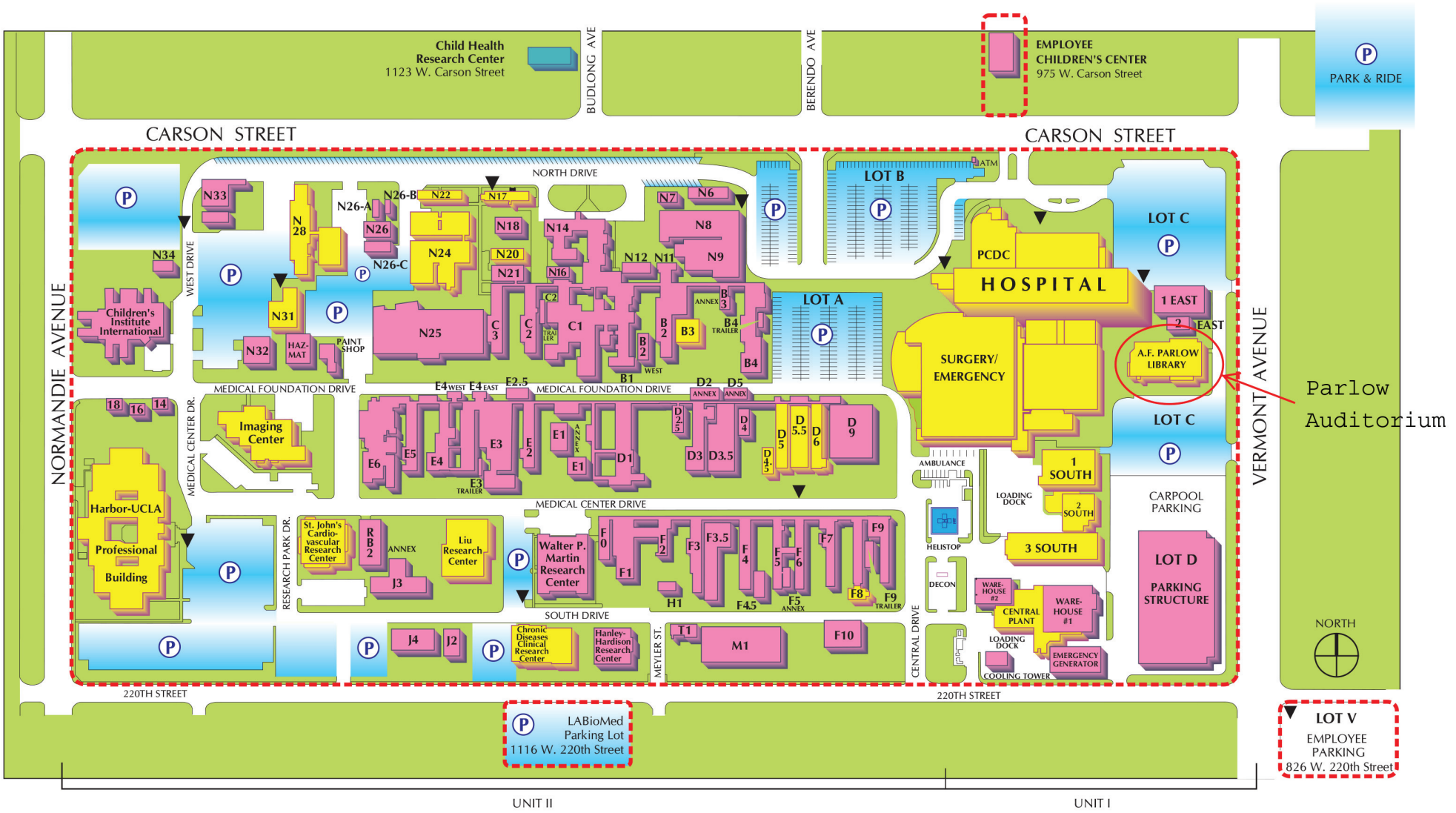
Regional and Vicinity Map

Harbor-UCLA Medical Center Campus Master Plan Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2014.

FIGURE

1



PCR

Existing Medical Campus Map

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Harbor-UCLA Medical Center, 2014.

FIGURE 2

A-1.B INITIAL STUDY NOVEMBER 2014

INITIAL STUDY

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

CITY OF TORRANCE, CALIFORNIA



NOVEMBER 2014

INITIAL STUDY

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

CITY OF TORRANCE, CALIFORNIA

Prepared For:

County of Los Angeles
c/o Los Angeles County Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803
Tel: 626-300-2363
Contact: Clarice Nash, Project Manager, Project Management Division I

Prepared By:

PCR Services Corporation
2121 Alton Parkway, Suite 100
Irvine, California 92606

NOVEMBER 2014

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Environmental Checklist

ENVIRONMENTAL CHECKLIST FORM

1. **Project title**

   Harbor-UCLA Medical Center Campus Master Plan Project

2. **Lead agency name and address:**

   County of Los Angeles

   c/o Los Angeles County Department of Public Works

   900 S. Fremont Avenue

   Alhambra, CA 91803

3. **Contact person and phone number:**

   Clarice Nash, Project Manager, Project Management Division I

   Phone: (626) 300-2363

4. **Project location:**

   1000 W. Carson Street

   Torrance, CA 90502

5. **Project sponsor's name and address:**

   County of Los Angeles

   900 S. Fremont Avenue

   Alhambra, CA 91803

6. **General plan designation:**

   Public and Semi Public

7. **Zoning:**

   C-3 Unlimited Commercial/TOD

8. **Description of project:**

   The proposed Harbor-UCLA Medical Center Campus Master Plan Project ("Project") involves the multi-phased development of hospital, outpatient, research, and support facilities through the year 2030 and beyond. The proposed Project would expand development on the existing Harbor-UCLA Medical Center Campus ("Medical Campus") from the current developed 1,050,000 square feet to approximately 1,900,000 square feet, which would involve the demolition of some existing buildings, rehabilitation/reuse of a number of existing buildings, and construction of new buildings.

9. **Surrounding land uses and setting:**

   The 72-acre County-owned Medical Campus is located in the unincorporated Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block east of the Medical Campus and the San Diego Freeway (I-405) is located

approximately 2 miles to the north and northeast. Surrounding communities include the Cities of Gardena, Lawndale, and Hawthorne to the north; the City of Carson, east of the Harbor Freeway; the Harbor Gateway community, part of the City of Los Angeles, and the City of Torrance to the west; and the Harbor City community, part of the City of Los Angeles, and the City of Lomita to the south.

10. Other public agencies whose approval is required

State of California

- California Office of Statewide Health Planning and Development (OSHPD)
- California Department of Transportation Division of Aeronautics

PURPOSE OF THE INITIAL STUDY

The proposed Harbor-UCLA Medical Center Campus Master Plan is analyzed in this Initial Study, in accordance with the California Environmental Quality Act (CEQA), to determine if approval of the Project may have a significant impact on the environment. This Initial Study has been prepared pursuant to the requirements of CEQA, under Public Resources Code 21000-21177, of the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387) and under the guidance of the County of Los Angeles Department of Public Works. The County of Los Angeles is the Lead Agency under CEQA .

The County has decided to prepare an Environmental Impact Report (EIR) rather than a Negative Declaration or Mitigated Negative Declaration for the project and therefore an Initial Study is not required. Notwithstanding the early decision to prepare an EIR, the County has also decided to complete an Initial Study to assist in the preparation of the EIR and to facilitate environmental assessment early in the design process. .

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☐ Biological Resources	☐ Cultural Resources	☒ Energy
☒ Geology/Soils	☒ Greenhouse Gas Emissions	☒ Hazards/Hazardous Materials
☒ Hydrology/Water Quality	☒ Land Use/Planning	☐ Mineral Resources
☒ Noise	☒ Population/Housing	☒ Public Services
☒ Recreation	☒ Transportation/Traffic	☒ Utilities and Service Systems
☒ Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	October 30, 2014 Date
Clarice R. Nash Printed Name	For

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

2) A list of "Supporting Information Sources" should be attached, and other sources used or individuals contacted should be cited in the discussion.

3) Impact Columns Heading Definitions:

   - "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

   - "Less Than Significant Impact With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The mitigation measures must be described, along with a brief explanation of how they reduce the effect to a less than significant level.

   - "Less Than Significant Impact" applies where the project creates no significant impacts, only Less Than Significant impacts.

   - "No Impact" applies where a project does not create an impact in that category. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one proposed (e.g., the project falls outside of a

fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

4) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   - Earlier Analysis Used. Identify and state where they are available for review.

   - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   - Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

5) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

6) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire protection regarding the state's inventory of forest land, including the Forest and Range Assessment of and the Forest Legacy Assessment Project; and forest carbon measurements methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project::				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI. ENERGY – Would the project:				
a) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?	☒	☐	☐	☐
b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☒	☐	☐	☐
VII. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☒	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☒	☐	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☒	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
VIII. GREENHOUSE GAS EMISSIONS – Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?	☒	☐	☐	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☒	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☒	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XIII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☒	☐	☐	☐
Police protection?	☒	☐	☐	☐
Schools?	☒	☐	☐	☐
Parks?	☒	☐	☐	☐
Other public facilities?	☒	☐	☐	☐
XVI. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☒	☐	☐	☐
XVII. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☒	☐	☐	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities??	☒	☐	☐	☐
XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒	☐	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☒	☐	☐	☐
h) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?	☒	☐	☐	☐
i) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Attachment A: Project Description

ATTACHMENT A: PROJECT DESCRIPTION

A. INTRODUCTION

Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project ("Project") to address the future needs of the Harbor-UCLA Medical Center Campus ("Medical Campus"). The Project is based upon the Harbor-UCLA Medical Center Campus Master Plan, which was completed in June 2012 and will serve as a policy document "guideline" for the Project.

The Project encompasses the addition of a new hospital tower providing acute care services for compliance with seismic requirements which become effective beginning in 2030, renovation of the existing Hospital building for other uses, replacement of other aging facilities and buildings, redesigned vehicular and pedestrian access and circulation, and implementation of a cohesive design that enhances the experience of staff, patients, and visitors. The Project is expected to meet short-term needs as well as long-term needs beyond 2030.

The existing Medical Campus contains approximately 1,050,000 square feet of floor area, including the recently completed Surgery and Emergency Room Replacement Project and recently approved expansion of the Los Angeles Biomedical Research Institute's ("LA BioMed") research facilities. At buildout, the Medical Campus will contain approximately 1,900,000 square feet of developed floor area. A new, centrally located Hospital Tower ("New Hospital Tower") would be the focal point of the Medical Campus. Outpatient facilities would be consolidated to allow proximity of these services to each other and the New Hospital Tower.

B. PROJECT LOCATION AND SURROUNDING USES

The 72-acre County–owned Medical Campus is located in the unincorporated Los Angeles community of West Carson, which encompasses a 2.3-square-mile area between the Harbor Freeway on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block east of the Medical Campus and the San Diego Freeway (I-405) is located approximately 2 miles to the north and northeast. The Medical Campus location is illustrated in **Figure A-1**, *Regional and Vicinity Map*.

Surrounding communities include the Cities of Gardena, Lawndale, and Hawthorne to the north; the City of Carson east of the Harbor Freeway; the Harbor Gateway community, part of the City of Los Angeles, and the City of Torrance to the west; and the Harbor City community, part of the City of Los Angeles, and the City of Lomita to the south.

Figure A-2, *Aerial Photograph with Surrounding Land Uses*, is an aerial photograph of the Medical Campus and vicinity. Carson Street, to the north, is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. A multifamily residential apartment complex, Harbor Cove Villa, is located west of the intersection with Vermont Avenue. The area north of Carson Street is a

predominantly single-family residential neighborhood. Vermont Avenue, to the east, is developed with a mix of neighborhood retail uses and medical services, the Torrance Park Villas condominium complex, and Starlite Trailer Park and Rainbow Mobile Home Park. Wholesale and light industrial uses are located to the southeast along 220th Street. Residential neighborhoods border the Medical Campus to the south, across 220th Street, and west, across Normandie Avenue within the Harbor City community. Off-site parking serving LA BioMed is located across 220th Street from the Medical Campus.

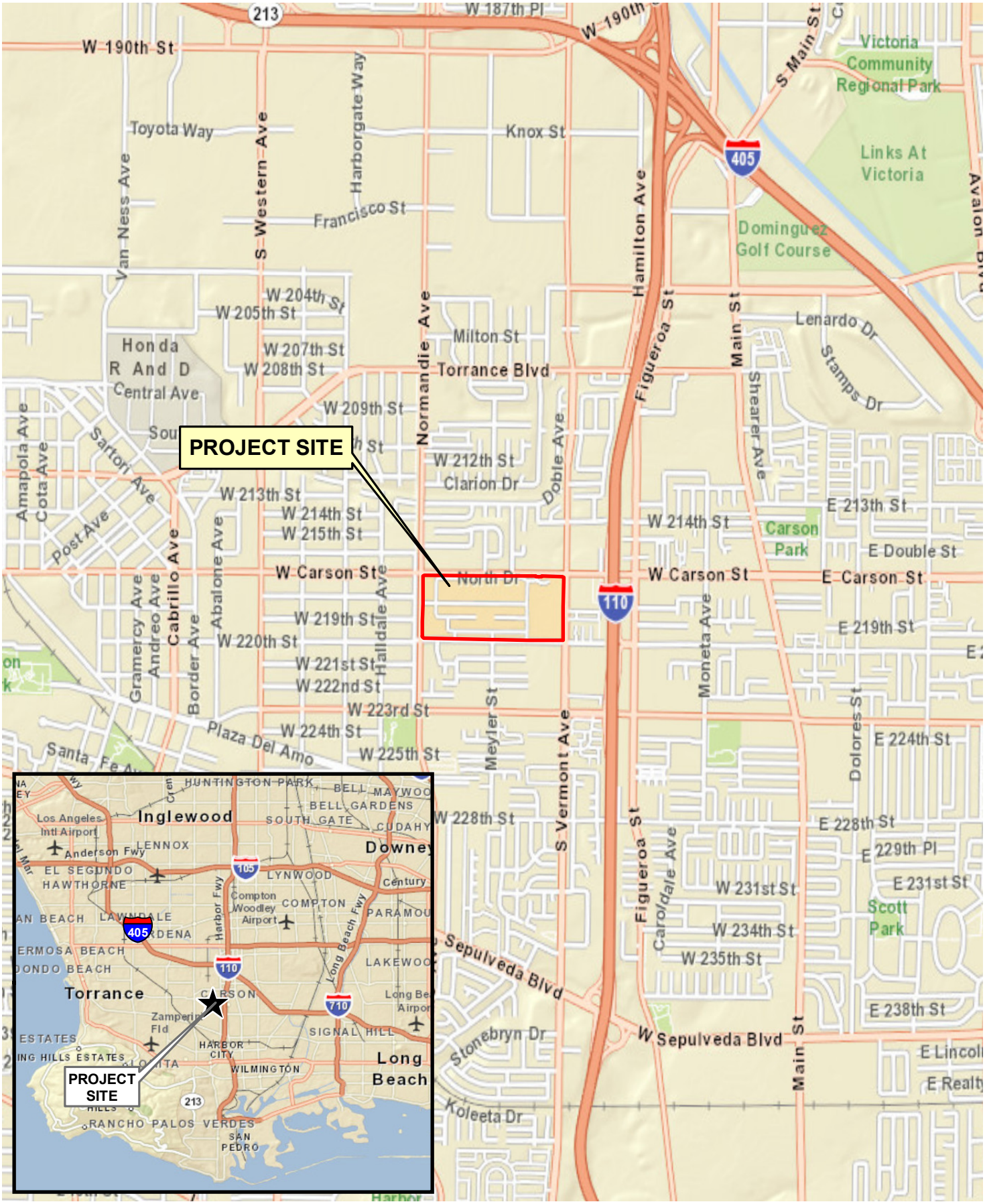
C. EXISTING CONDITIONS

1. Harbor-UCLA Medical Center Uses

The existing Medical Campus layout is illustrated in **Figure A-3**, *Existing Medical Campus Buildings*. The Main Hospital, related treatment facilities, and the majority of support facilities occupy the eastern quarter of the Medical Campus, while buildings occupied by LA BioMed take up the majority of the central Medical Campus, and the majority of outpatient services, including Harbor-UCLA Medical Foundation, Inc. ("MFI") and the related Imaging Center, Children's Institute International ("CII"), and other facilities, occupy the western end of the Medical Campus. Patient diagnostic facilities, administration offices, and additional functions are scattered throughout the Medical Campus. Most of the facilities in the central Medical Campus were constructed prior to 1960, including barracks and temporary/modular buildings that occupy much of the Medical Campus land area. The first major expansion of the existing 1962 Hospital building, the Surgery and Emergency Room Replacement Project, was completed in 2013. This project increased the size of the existing emergency room by 50,000 square feet and added 38 new emergency bays as well as 190,000 square feet of space containing surgery suites, adult and pediatric triage, and a new entrance lobby and waiting area. A new 544-space parking structure and heliport were also constructed.

LA BioMed presently occupies a number of older buildings throughout the Medical Campus and intends to consolidate its operations within a smaller 11.4-acre leasehold ("LA BioMed Campus") in the south-central portion of the Medical Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000, and in September 2014, the Los Angeles County Board of Supervisors approved a development plan for the LA BioMed Campus to meet LA BioMed's near-term facility needs. The LA BioMed development plan proposes the construction of approximately 70,700 net new square feet of floor area within the LA BioMed Campus to accommodate the relocation and consolidation of existing uses and operations from older buildings elsewhere on the Medical Campus, and does not constitute an expansion of LA BioMed operations. Potential future expansion of the LA BioMed Campus beyond the recently approved development plan, together with the disposition of older buildings on the Medical Campus to be eventually vacated by LA BioMed, are included in the overall development program for the Project.

Other newer facilities constructed on the Medical Campus since the 1980s include buildings housing Hospital-related outpatient services and major tenants MFI and CII at the western end of the Medical Campus. Overall, the existing layout of the Medical Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. In particular, the Main Hospital, Primary Care and Diagnostics Center ("PCDC"), and outpatient clinics are currently running at or near capacity and existing facilities provide no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.



PCR

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0 2,000 4,000 Feet

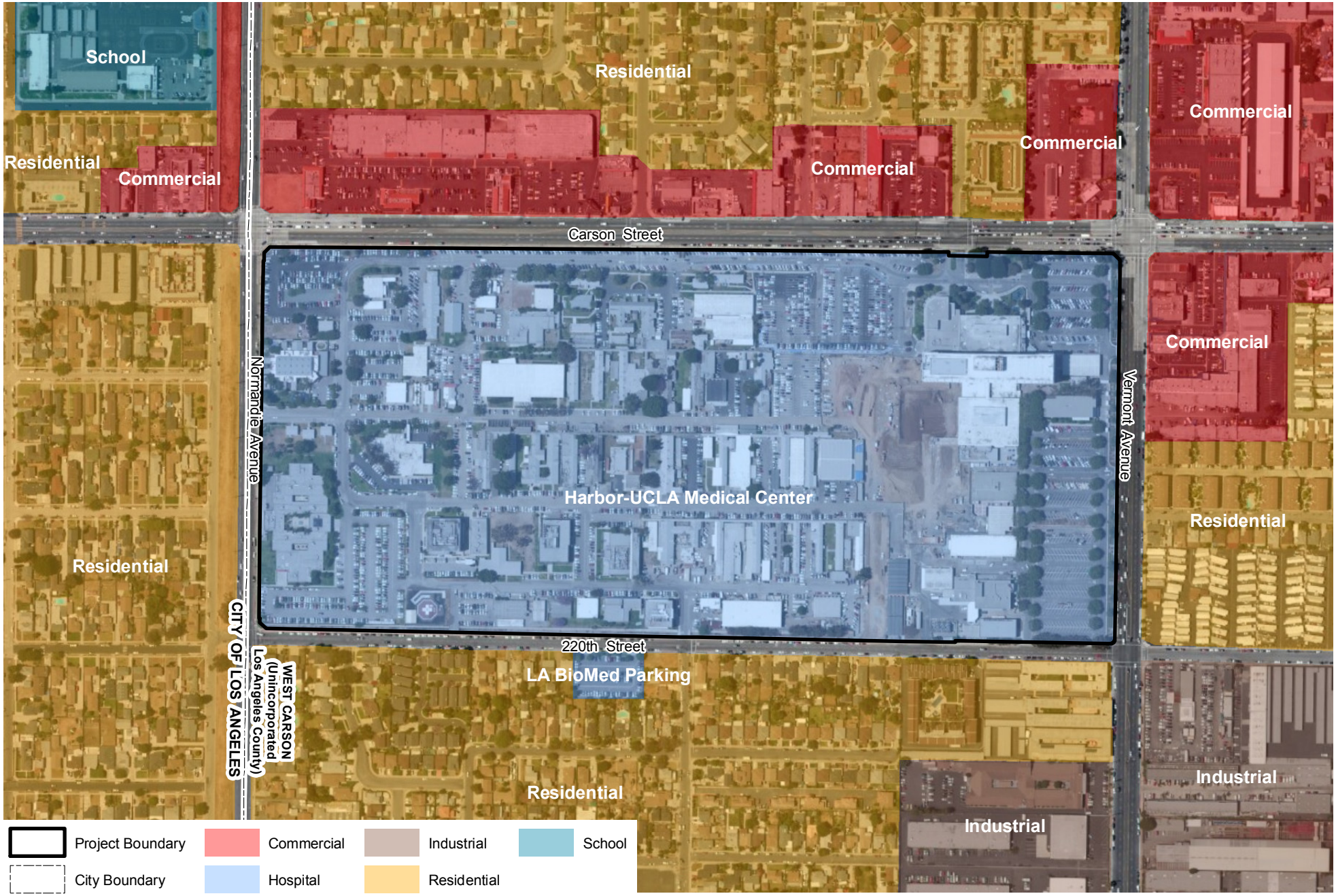
Regional and Vicinity Map

Harbor-UCLA Medical Center Campus Master Plan Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2014.

FIGURE

A-1



PCR

N

0 400 800 Feet

Aerial Photograph with Surrounding Land Uses

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

A-2



LEGEND

- LA BIOMED
- OUTPATIENT
- HOSPITAL
- TREATMENT
- DIAGNOSTICS
- ADMINISTRATION
- MATERIALS MANAGEMENT
- FACILITIES MANAGEMENT
- UTILITIES
- CHILDREN'S INSTITUTE INT.
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

PCR

N

0 400 Feet

Existing Medical Campus Buildings

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Perkins+Will, 2012.

FIGURE

A-3

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2. Circulation and Parking

Vehicular access to the Medical Campus is provided by the primary driveway on Carson Street, near the Main Hospital; two driveways on Vermont Avenue; five driveways on 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveway is signalized. Internal circulation follows the original grid layout established on the Medical Campus, with four east-west roadways and numerous short north-south connector roadways. Most internal intersections of two roadways or drive aisles are stop-sign controlled.

The parking supply on the Medical Campus totals 2,905 spaces, which exceeds the County's parking code requirement of 2,709 spaces.[1] This supply includes 2,168 standard spaces and 124 American with Disabilities Act ("ADA") spaces in designated surface parking lots and the new parking structure in the southeast corner of the Medical Campus, and 596 standard spaces and 17 ADA spaces along the internal streets. An additional 281 spaces (278 standard spaces and three ADA spaces) are provided in off-site parking facilities, and street parking is permitted along all or portions of the four public streets surrounding the Medical Campus.

D. PLANNING AND ZONING

The Medical Campus is designated for Public and Semi-Public use in the Los Angeles County General Plan and has a zoning designation of C-3 (Unlimited Commercial). The C-3 designation allows a broad range of commercial uses and allows a maximum floor area ratio ("FAR") of 13:1. Hospital and ancillary uses on the Medical Campus are consistent with the current zoning. In addition, the eastern portion of the Medical Campus is designated as a Transit Overlay District ("TOD") due to proximity to the Metro Transit Station on Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. The purpose of the TOD zone designation is to create pedestrian-friendly and community-serving uses near transit stops that encourage walking, bicycling, and transit use.

E. DESCRIPTION OF THE PROPOSED PROJECT

1. Project Characteristics

(a) New Project Facilities

The Project proposes to place commercial and community-oriented services along the northern, publicly accessible edge of the Medical Campus and staff and support services in the southern half of the Medical Campus. The New Hospital Tower is intended as the primary focal point. Landscaping and a well-organized network of pedestrian walkways will accommodate circulation throughout the Medical Campus. The LA BioMed Campus will occupy the southern-central part of the Medical Campus, fronting on 220th Street. The CII Burton E. Green Campus will remain in the northwestern corner of the Medical Campus at the intersection of Carson Street and Normandie Avenue, and the remainder of the western end of the Medical Campus will be retained for future expansion opportunities, potentially beyond the 2030 Project buildout

[1] *Los Angeles County Code, Chapter 122.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and Group Homes for Children, which requires 2 spaces per bed, 1 space/250 square feet for outpatient facilities, and 1 space/400 square feet for research use.*

horizon. Until such time as programmatic needs for that portion of the Medical Campus are defined, it will be designated for open space, surface parking, and other short-term uses, as needed.

State law mandates that acute care services can no longer be provided after January 1, 2030 in buildings built before 1973, which includes the Main Hospital. This requirement has led to the proposed decommission of the Main Hospital, except for the PCDC and recently constructed Surgery and Emergency Room Replacement Project facilities. Including these facilities, the Project would result in up to approximately 1,900,000 square feet of developed floor area within the Medical Campus, an increase of approximately 850,000 square feet over the current developed 1,050,000 square feet.

Project components broadly include the following: 1) the New Hospital Tower, 2) outpatient facilities, 3) other services and facilities, 4) LA BioMed Campus long-term buildout, and 5) Medical Campus support. The New Hospital Tower would contain up to 446 staffed patient beds, intervention services, and an inpatient imaging department. The existing Hospital and PCDC department would be retained and used for outpatient and hospital support, outpatient imaging, administrative offices, and other uses. Proposed outpatient facilities would include medical offices, ob/gyn, surgery, internal medicine, neurology, pediatrics, specialty clinic services, classrooms, labs, a library, and outpatient imaging including MRI and CT. Outpatient facilities would also contain mental health and social services and would allocate space for other program uses, such as retail or community support functions.

Other new facilities would provide space for meetings, wellness training, post-medical care, nutrition classes, an herbal shop, bookstore, juice bar, yoga studio, massage therapy, aromatherapy, child care, health food market, fitness/exercise store, and similar uses. These uses would be contained in a new two-story building or contained in the ground floors of the new outpatient building(s), the renovated lobby of the existing Hospital, and ground levels of the new parking structures. Campus support would include a central plant (heating and cooling), water treatment, warehouses/material management, and loading dock.

In order to accommodate new facilities and open space, many of the original and older buildings are proposed to be removed, including the original barracks and modular buildings, Parlow Library, Warehouses #1 and #2, the central plant, and the Harbor-UCLA Professional Building and Imaging Center at the western end of the Medical Campus. However, several existing buildings would remain, including the Main Hospital, which would be decommissioned and reused for outpatient support and administration. The PCDC and the CII Burton E. Green Campus building at the western end of the Medical Campus would also remain. **Figure A-4**, *Proposed Medical Campus Plan*, illustrates the proposed layout of new and retained buildings, the pedestrian circulation network, landscaped areas, vehicular access and circulation, and parking.

As part of the Project, the County proposes to develop a publicly accessible interpretive program about the history of the Medical Campus as a whole. The program would be designed in consultation with a qualified architectural historian and may include such features as photographic and historical documentation, audiovisual displays, documentary film, and online accessible materials. The potential adaptive reuse of an original building on-site to house elements of the interpretive program will be reviewed as well, although the original WWII structures have been determined to have lost significant integrity and do not qualify as an historic district.



Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

Proposed Medical Campus Plan

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Perkins+Will, 2012.

FIGURE

A-4

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Proposed future buildout of the remainder of the LA BioMed Campus with up to 200,000 square feet of biomedical research space, laboratories, offices, and other support facilities, and disposition of the buildings that LA BioMed will vacate elsewhere on the Medical Campus, are considered part of the Project.

(b) Circulation and Parking

Project implementation would create clear distinctions between general public and staff entries and parking facilities. Staff entries and parking would be located in the southeast corner of the Medical Campus, while access for the general public would be provided from Carson Street along the northern perimeter. A new signalized public entrance on Carson Street and an additional unsignalized staff entrance on Vermont Avenue would be added. Sidewalk connections to public transit would be maintained and on-site sidewalks would be added between the main parking areas and the New Hospital Tower and Outpatient buildings. Pick-up/drop-off loading zones would be provided at the main entrances to the New Hospital Tower and Outpatient buildings. A comprehensive signage and wayfinding plan would aid visitors and patients in finding ultimate destinations and parking intended for those uses. The Project would provide sufficient parking to meet or exceed the County's minimum code parking requirement. Proposed vehicular access and parking are illustrated in **Figure A-5**, *Proposed Vehicular Circulation Plan*.

F. CONSTRUCTION PHASING

The Master Plan is intended as a long-term guide for future development on the Medical Campus. In order to make space for new development and to upgrade the quality of buildings, Project implementation would result in the demolition of existing buildings. Construction of each proposed component would entail demolition, excavation and/or grading, construction, and finishing activities. Implementation of the Project is anticipated to occur in phases through the year 2030.

Material storage and equipment staging areas associated with construction activities for future implementation phases of the Project would be located on-site, while temporary construction worker parking would be provided either on the Medical Campus or at one or more off-site facilities, the specific location(s) of which would be determined prior to the start of individual construction phases. The location of off-site parking areas would be limited to off-street lots or parking structures in the vicinity of the Medical Campus, with adequate capacity to accommodate the parking demands of both the existing uses at each respective location and the demands of construction worker vehicles, such that parking shortages would not occur. No on-street construction worker parking, material storage, or equipment staging would be permitted. Shuttle service for construction workers for transportation between off-site parking areas and the Medical Campus would be provided throughout construction for each implementation phase, as necessary.

G. REQUIRED APPROVALS

Implementation of the proposed Project would involve but not be limited to the following approvals:

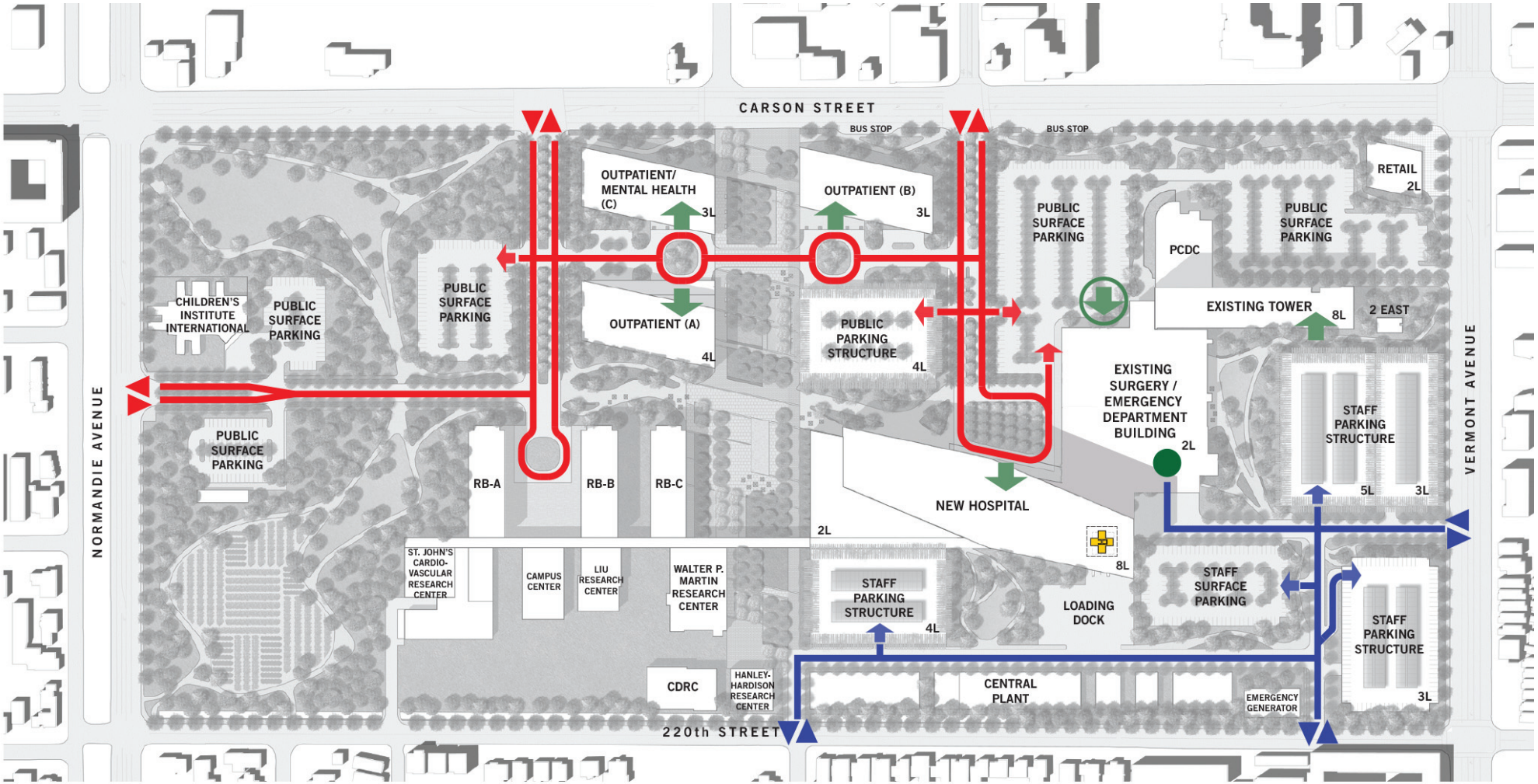
1. County of Los Angeles

- Certification of the Final EIR and Project approval

- Approval of demolition, excavation, and building permits for buildings and other structures
- Approval of haul route

2. State of California

- California Office of Statewide Health Planning and Development (OSHPD)
- California Department of Transportation Division of Aeronautics



LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

Proposed Vehicular Circulation Plan

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Perkins+Will, 2012.

FIGURE

A-5

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Attachment B: Explanation of Checklist Determinations

ATTACHMENT B
EXPLANATION OF CHECKLIST DETERMINATIONS

I. AESTHETICS

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. A scenic vista generally provides focal views of objects, settings, or features of visual interest, or panoramic views of large geographic areas of scenic quality, primarily from a given vantage point. Scenic vistas are generally associated with public vantages. Therefore, a significant impact could occur if the Project introduces incompatible visual elements within a field of view containing a scenic vista or substantially alters a view of a scenic vista. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development that partially obstruct any available views of scenic resources, including long-distance views of the San Gabriel and Santa Monica Mountains, under existing conditions. The Project would be built out in five phases through the year 2030, increasing the developed square footage on the Medical Campus by approximately 850,000 square feet to 1.9 million square feet, which would substantially increase on-site development intensity and associated bulk and height of structures. This increased development intensity could obstruct views of scenic resources in the Project area. Therefore, it is recommended that this issue be analyzed further in an EIR.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?

Less Than Significant Impact. The closest state highways to the Medical Campus include the Harbor Freeway, less than 0.10 miles to the east, and the San Diego Freeway, approximately two miles to the north and east. Neither has been designated an official scenic highway by the California Department of Transportation on the California Scenic Highway Mapping System. The Medical Campus is therefore not visible from or located within the corridor of a designated state scenic highway. Although Project implementation would result in the removal over time of numerous trees and other landscaping throughout the Medical Campus, new landscaping, including trees, would be planted as part of the proposed improvements and would ultimately increase the amount of landscaping and number of trees compared to existing conditions. The Project would result in the demolition and replacement of 42 extant buildings on-site dating to the 1943 founding of the Los Angeles Port of Embarkation Station Hospital on the property. However, a comprehensive Historic Resources Report that evaluates the entire Medical Campus, included in this Initial Study as Appendix A, determined that the buildings are not historically significant (i.e., are not eligible for individual listing or listing as contributors to a historic district in the National Register or California Register, as discussed in Response V.a), and their removal would not constitute an impact on historic or scenic resources.[1]

[1] *GPA Consulting, Historic Resource Report, Los Angeles Biomedical Research Institute, 1000 W. Carson Street, Torrance, California, July 2013.*

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development. The existing visual character of the Medical Campus is generally characterized by aging, scattered facilities, including numerous one-story wood-frame barracks buildings remaining from the c. 1943 founding of the Los Angeles Port of Embarkation Station Hospital, and lacks a unified design. Landscaping is generally sparse and the Medical Campus perimeter is not uniformly demarcated. Finally, parking is scattered in distant surface lots and along internal roadways somewhat haphazardly, and pedestrian connections to buildings is inadequate. Project implementation would substantially modify the existing development pattern on the Medical Campus and would increase overall building height, bulk, and massing, throughout the Medical Campus. Building masses would be articulated through ground floor arcades, covered pathways, and the creation of open space courtyards, open turf areas, gardens, plazas, parks and a fitness trail for patients, staff, and the public. Although the Project is intended to improve the visual quality on the Medical Campus, its implementation would substantially alter the visual character of the Medical Campus, including its publicly visible perimeters. Therefore, it is recommended that this issue be analyzed further in an EIR.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially Significant Impact. The Medical Campus is located within a highly urbanized area characterized by medium to high ambient nighttime artificial light levels. During nighttime hours, the surrounding commercial land uses typically display moderate to high levels of interior and exterior lighting for way-finding, security, parking, billboards, signage, architectural highlighting, and landscaping purposes. Traffic on local streets also contributes to overall ambient artificial light levels in the area. Similar to existing conditions, the Project would include nighttime illumination for architectural highlighting, parking, signage, and security, which may be visible from some nearby off-site vantages; thereby contributing to the lighting conditions in the area. In addition, the Project would introduce new building surface materials to the Medical Campus. Therefore, it is recommended that this issue be analyzed further in an EIR.

II. AGRICULTURAL AND FORESTRY RESOURCES

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown the maps prepared pursuant to the Farmland Mapping Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Medical Campus and surrounding area do not contain agricultural uses or related operations; refer to Figure 9.5, Agricultural Resource Areas Policy Map, of the County's Draft General Plan 2035. The Medical Campus is not located on designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program. Therefore, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of

Statewide Importance to non-agricultural uses, and no impact would occur in this regard. Further analysis of this issue in an EIR is not necessary.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Medical Campus is located in the C-3 Unlimited Commercial Zone and is designated for Public and Semi Public use in the Los Angeles County General Plan. Agricultural uses are not permitted within the C-3 zone and the Medical Campus is not within a designated Agricultural Opportunity Area or under a Williamson Act contract. Further, no agricultural zoning is present in the surrounding area and no nearby lands are enrolled under the Williamson Act. Therefore, the Project would not conflict with existing zoning for agricultural use within a designated Agricultural Opportunity Area or under a Williamson Act contract. Further analysis of this issue in an EIR is not necessary.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))??

No Impact. As described in Response II.b), the Medical Campus is not zoned for agricultural or forestry uses. No land zoned as forest land or timberland is present on the Medical Campus or in the surrounding area. As such, the Project would not conflict with existing zoning, or cause the rezoning of forest land, timberland, or timberland production land. Further analysis of this issue in an EIR is not necessary.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Medical Campus is fully developed with hospital and related uses and has been since the 1940s. No forest lands exist on the Medical Campus or in the Project vicinity. As such, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. Further analysis of this issue in an EIR is not necessary.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. No agricultural resources or related operations currently exist on or near the Medical Campus. Therefore, the Project would not involve changes in the existing environment that could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Further analysis of this issue in an EIR is not necessary.

III. AIR QUALITY

The significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the AQMP or Congestion Management Plan?

Potentially Significant Impact. The Medical Campus is located within the 6,600-square-mile South Coast Air Basin ("Basin"); refer to Figure 8.1, Air Basins, of the County's Draft General Plan 2035. The South Coast Air Quality Management District ("SCAQMD") is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in non-attainment (i.e., ozone, carbon monoxide, PM_{10}, and $PM_{2.5}$). The Project would be subject to the SCAQMD's Air Quality Management Plan ("AQMP"). The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments ("SCAG").

The Project would contribute to regional and local air emissions during construction and operation. Construction activities would produce emissions from construction equipment and fugitive dust. Project operations would increase the amount of traffic in the area and would consequently generate vehicle emissions that could affect implementation of the AQMP. As such, it is recommended that the Project's consistency with the AQMP be addressed in an EIR.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact. As discussed in Response III.a), the Medical Campus is located within the Basin, which is in non-attainment of several criteria pollutants. Implementation of the Project would increase emissions on both a short term (i.e., during construction) and long-term basis in a non-attainment area. Short-term construction emissions would result from a number of sources, including but not limited to the operation of heavy-duty construction equipment and on-site grading. Long-term emissions would result from helicopter activities and motor vehicles traveling to and from the Medical Campus once the Project is fully operational and stationary sources through the use of natural gas and electricity. As the Project would result in increased air emissions associated with construction and operation, it is recommended that this issue be analyzed further in an EIR.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment (ozone, carbon monoxide, & PM_{10}) under an applicable federal or state ambient air quality standard?

Potentially Significant Impact. Since the Project would result in increases in air emissions from construction (e.g., construction equipment, construction vehicle trips) and could result in increases from operations (e.g., helicopter trips as increasing number of patients arrive via helicopter, vehicle trips, stationary sources such as equipment, etc.) within the Basin, which is currently in non-attainment of Federal

and State air quality standards for ozone, carbon monoxide, PM_{10} and $PM_{2.5,}$ it is recommended that this issue be analyzed further in an EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. Construction activities and operation of proposed Project uses would increase air emissions compared to current levels. Land uses generally considered especially sensitive to air pollution are as follows: hospitals, schools, residences, playgrounds, child care centers, athletic facilities, and retirement/convalescent homes. Sensitive receptors in the vicinity of the Medical Campus include patients on the Medical Campus itself and single- and multi-family residences to the north, east, south, and west. Halldale Avenue Elementary School, Meyler Street Elementary School, Stephen M. White Middle School, and Caroldale Avenue Elementary School are located approximately 0.10 miles northwest, 0.15 miles south, 0.25 miles east, and 0.50 miles southeast of the Medical Campus, respectively. Normandale Recreation Center, Veterans Park, and Carson Park are located approximately 0.30 miles southwest, 0.60 miles southeast, and 0.70 miles northeast of the Medical Campus, respectively. Construction and operation of the Project could result in increased air emissions that could impact nearby sensitive receptors. Therefore, it is recommended that this issue be analyzed further in an EIR.

e) Create objectionable odors affecting a substantial number of people?

Potentially Significant Impact. The Project proposes the development of new medical buildings and uses on-site as well as the removal and/or modification of existing facilities. The Project would not introduce any additional major odor-producing uses that would have the potential to affect a substantial number of people. However, odors associated with Project operations may be incrementally increased by additional on-site waste generation and storage, cooking odors from the hospital cafeteria, operation of the Central Utility Plant, and the use of certain cleaning agents on the Medical Campus. Therefore, it is recommended that this issue be analyzed further in an EIR.

IV. BIOLOGICAL RESOURCES

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant With Mitigation Incorporated. The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. The Medical Campus contains several landscaped courtyards with mature specimen trees, but landscaping is generally sparse on the Medical Campus. The Medical Campus does not contain native trees that are regulated by the County, nor are other candidate, sensitive plant, or special status plant species present on-site. Mature trees on the Medical Campus may serve as habitat for migratory birds, which are not considered sensitive species but are regulated under the federal Migratory Bird Treaty Act; potential impacts on migratory birds resulting from tree removal are addressed in Response V.c) and Mitigation Measure BIO-1, below, which would reduce this

potential impact to a less than significant level. The Medical Campus does not otherwise provide habitat for sensitive wildlife species. Further analysis of this issue in an EIR is not necessary.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The Medical Campus is located in an urbanized area, and as such does not contain any riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetland or other sensitive natural communities as indicated in the County or in regulations by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. The Project is not located within a Significant Ecological Area ("SEA") or coastal resource area. Therefore, the Project would not have a substantial adverse effect on any sensitive natural communities. Further analysis of this issue in an EIR is not necessary.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. Neither the Medical Campus nor its surroundings contains wetlands as defined by Section 404 of the federal Clean Water Act. Therefore, the Project would not have an adverse effect on Federally protected wetlands. Further analysis of this issue in an EIR is not necessary.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?

Less Than Significant With Mitigation Incorporated. The Medical Campus and the surrounding area are completely developed and urbanized; therefore, the Medical Campus does not act as a migratory corridor or support resident terrestrial wildlife movement as it is surrounded by urban development that extends for miles. No aquatic habitat is present on or adjacent to the Medical Campus to support fish species. The highly developed conditions of the Medical Campus and surrounding area preclude its use as a native wildlife nursery site. Therefore, the Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or use of any native wildlife nursery site, and further analysis of this issue in an EIR is not necessary.

The Medical Campus contains ornamental trees, several of which are mature (i.e., greater than 12 inches in diameter at breast height). These mature trees could potentially provide nesting sites for migratory birds and therefore removal of on-site mature trees could result in a potentially significant impact. To ensure that impacts are reduced to a less than significant level, Mitigation Measure BIO-1 is prescribed below. This mitigation measure would require tree removal activities to be conducted in accordance with the federal Migratory Bird Treaty Act, in that tree removal would be scheduled between September 1 and February 14 to the extent possible. If tree removal is to occur outside this timeframe, mature trees would be surveyed for the presence of nests no more than seven (7) days prior to removal, and if nests are found, flagged with a buffer area until the nesting cycle has concluded or the nests have failed. With implementation of a

mitigation measure substantially similar to the one below to ensure compliance with the requirements of the MBTA, impacts to migratory bird species would be reduced to a less than significant level.

Mitigation Measures

BIO-1: If the nesting season cannot be avoided and construction or vegetation removal occurs between March 1st to September 15th (January 1st to July 31st for Raptors), the County shall do one of the following to avoid and minimize impacts to nesting birds[2]:

a) Implement a 300-foot minimum avoidance buffers for all passerine birds and 500 foot minimum avoidance buffer for all raptors species. The breeding habitat/nest site shall be fenced and/or flagged in all directions. The nest site area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project.[3]

b) Develop a project specific Nesting Bird Management Plan. The site-specific nest protection plan shall be submitted to CDFW for review. The Plan should include detailed methodologies and definitions to enable a CDFW-qualified avian biologist to monitor and implement nest-specific buffers based upon the life history of the individual species; species sensitivity to noise, vibration, and general disturbance; individual bird behavior; current site conditions (screening vegetation, topography, etc.), ambient levels of human activity; the various project-related activities necessary to construct the Project, and other features. This Nesting Bird Management Plan shall be supported by a Nest Log, which tracks each nest and its outcome. The Nest Log will be submitted to CDFW at the end of each week.

c) The County may propose an alternative plan for avoidance of nesting birds for submittal to CDFW.

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact. The Medical Campus and the surrounding area are completely developed and urbanized. No locally protected biological resources, such as Wildflower Reserve Areas, SEAs, sensitive environmental resource areas ("SERAs"), or oak trees protected under the Oak Tree Permits (Chapter 22.56 – Part 16) ("Oak Tree Ordinance") of the County Municipal Code ("Municipal Code"), exist on-site. The Project would incorporate a landscape plan which would include the planting of various species of trees (evergreen/semi-evergreens, palm trees, and flowering deciduous trees), and other ornamental plantings, including shrubs, turf, and groundcover, in courtyards, gardens, and other open space features. Therefore, the Project would not conflict with local policies or ordinances protecting biological resources. Further analysis of this issue in an EIR is not necessary.

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[2] *Qualified avian biologist shall establish the necessary buffers to avoid take of nest as defined in FGC 3503 and 3503.5*

[3] *NOTE: Buffer area may be increased if any endangered, threatened, or CDFW species of special concern are identified during protocol or pre-construction presence/absence surveys.*

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. As discussed above, the Medical Campus is not located within a SEA. Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in place for the Medical Campus. Therefore, implementation of the Project would not conflict with any Habitat Conservation Plans and no impacts would occur in this regard. Further analysis of this issue in an EIR is not necessary.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?

Less Than Significant Impact. A comprehensive Historic Resource Report was prepared by GPA Consulting for the entire Medical Campus and is included as Appendix A of this Initial Study.[4] The following discussion summarizes the findings of the report.

The Medical Campus was initially founded and developed in 1943 by the U.S. Army to house the Los Angeles Port of Embarkation Station Hospital. Augmenting the state's original San Francisco Port of Embarkation, from which servicemen were deployed overseas, the Los Angeles Port of Embarkation encompassed the Station Hospital and other facilities in the Los Angeles area, including docks and warehouses at the Port of Los Angeles, a staging area and training center at Camp Anza in Riverside, and ammunition storage in Rialto. The Port of Embarkation provided military personnel with final training at the training facilities before deployment overseas, and, at the Station Hospital, received wounded military personnel upon their return, as well as providing medical services to servicemen and their families living in the South Bay area.

Between 1943 and 1946, the property was developed with a central administrative facility and 77 wood-framed barracks buildings that housed 600 patient beds and patient services. By 1946, with the end of the war, the hospital was no longer needed and the property was sold by the U.S. Army as war surplus to Los Angeles County. In 1947, the County converted the existing facilities into the Los Angeles County Harbor General Hospital, to provide hospital services and medical care for the growing South Bay population. The Historic Resource Technical Report therefore defined the period of significance for the Medical Campus as being from 1943-1946, the period during which the property was in use by the U.S. military. A total of 42 buildings of the original 77 remain on the Medical Campus, primarily in the central portion of the property.

The Medical Campus has not been evaluated or identified as significant in any previous historic resource surveys, nor is it currently designated a landmark at the national, state, or local levels. The property as a whole was evaluated as a potential historic district in the Historic Resource Report, and resources were

[4] *GPA Consulting. Historic Resource Report, Los Angeles Biomedical Research Institute, 1000 W. Carson Street, Torrance, California. July 2013.*

evaluated for individual eligibility as well. The Historic Resource Report concluded that the property is significant in the context of World War II military history in Los Angeles, since it was one of a small number of facilities constructed in the region to serve medical needs during World War II. However, the property is lacking in integrity – the ability to convey its significance – because there are not enough buildings remaining from the period of significance; the remaining buildings have been altered to the point that they no longer contribute to an historic district; and enough new buildings have been added that the property no longer represents an intact historic environment. With respect to the individual eligibility of buildings, while some buildings retain integrity from the period of significance, they do not effectively convey the history or significance of the Station Hospital on their own. As such, the property is not eligible for listing in the National Register or the California Register as a historic district, and none of the buildings are individually eligible for listing in the National Register or the California Register.

Although Project implementation would not result in significant impacts on historical resources, the Historic Resource Report prepared for the Medical Campus acknowledges its significance in the context of its association with World War II military history in Los Angeles. The report further notes that, despite its poor condition, Building N6 is the most intact remaining building, and, although the report indicates that retention of N6 is not required to avoid impacting an historic resource, it also recommends consideration of its preservation and rehabilitation. The County proposes to develop a publically accessible interpretive program addressing the history of the Medical Campus, as discussed in Attachment A, *Project Description*, of this Initial Study. The program would be designed in consultation with a qualified architectural historian and may include such features as photographic documentation, audiovisual displays, documentary film, and online accessible materials. In addition, the County will consider the potential relocation and adaptive reuse of all or a portion of Building N6 as part of its overall planning for the improvements at the Medical Campus.

Based on the analysis presented in the Historic Resource Report, implementation of the Project would result in a less than significant impact on historic resources. Further analysis of this issue in an EIR is not necessary.

b) Cause a substantial adverse change in significance of an archaeological resource pursuant to §15064.5?

Less Than Significant With Mitigation Incorporated. The Medical Campus is located within a highly urbanized area and has been subject to physical disruption over the course of several decades since it was first developed in 1943. For this reason, it is likely that any resources that may have been present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried archaeological resources could still exist on the property. Implementation of the Project would require grading, excavation, and trenching into native soils, which could result in direct impacts to undiscovered resources. The following mitigation measures are therefore recommended to ensure that impacts on any previously unknown archaeological resources discovered during Project construction would remain less than significant. Operations during and following Project buildout would have no impact on archaeological resources and further analysis of this issue in an EIR is not required.

CULT-1: If any archaeological materials are encountered during the course of the Project development, work in the area shall cease and deposits shall be treated in accordance with Federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. As part of this effort, the services of an archaeologist

meeting the Secretary of the Interior Professional Qualification Standards for Archaeology shall be secured by contacting the California Historical Resources Information System South Central Coastal Information Center (CHRIS-SCCIC) at Cal State University Fullerton, or a member of the Register of Professional Archaeologists (RPA) to assess the resources and evaluate the impact. In addition, if it is determined that an archaeological site is a historic resource, the provisions of Section 21084.1 of the Public Resources Code and *CEQA Guidelines* Section 15064.5 would be implemented.

CULT-2: If any archaeological materials are encountered during the course of the Project development, a report on the archaeological findings shall be prepared by the qualified archaeologist. A copy of the report shall be submitted to the CHRIS-SCCIC.

CULT-3: If any archaeological materials are encountered during the course of the Project development, recovered archaeological materials shall be curated at an appropriate accredited curation facility. If the materials are prehistoric in nature, affiliated Native American groups (identified by the Native American Heritage Commission) may be consulted regarding selection of the curation facility.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant With Mitigation Incorporated. The Medical Campus has been subject to grading and building activities since it was first developed in 1943, and as with archaeological resources, it is likely that any paleontological resources once present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried resources could still exist on the property. Development of the Project would require grading, excavation, and trenching into native soils that could contain undiscovered paleontological resources. The following mitigation measures are therefore recommended to ensure that impacts on any previously unknown paleontological resources discovered during Project construction would remain less than significant. Operations during and following Project buildout would have no impact on paleontological resources and further analysis of this issue in an EIR is not required.

CULT-4: If any paleontological materials are encountered during the course of Project development, work in the area shall be halted. The services of a qualified paleontologist shall be secured by contacting the Los Angeles County Natural History Museum to assess the resources. In addition, a report on the paleontological findings shall be prepared by the qualified paleontologist and a copy of the paleontological report shall be submitted to the Los Angeles County Natural History Museum.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Impact. As indicated in Response V.c), the Medical Campus has been previously graded and developed, and no known traditional burial sites or cemeteries have been identified on the property. Nonetheless, development of the Project would require grading, excavation, and trenching that may extend into native soils. While the uncovering of human remains is not anticipated, compliance with state law (i.e., Public Resources Code Section 5097.98, State Health and Safety Code Section 7050.5, and California Code of Regulations Section 15064.5(e)) would reduce potential impacts during Project construction to a less than significant level, and no mitigation measures are necessary. Operations during

and following Project buildout would not result in impacts on human remains. Further analysis of this issue in an EIR is not required.

VI. ENERGY

Would the project:

a) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?

Potentially Significant Impact. Implementation of the Medical Campus would require new construction and renovation of the existing Hospital building, which would be subject to the requirements of the County's Green Building Ordinance and Drought Tolerant Landscaping Ordinance. However, given the uncertainty regarding the future implementation of green building and landscaping requirements as part of Project implementation, it is recommended that the Project's consistency with the Green Building Ordinance and Drought Tolerant Landscaping Ordinance be analyzed further in an EIR.

b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?

Potentially Significant Impact. Implementation of the Medical Campus would result in the replacement of aging structures with new, more efficient structures, as well as renovation of the existing Hospital building, which would likely result in greater energy efficiency than under existing conditions. Nonetheless, despite the anticipated increase in energy efficiency per square foot of development, given the substantial overall increase in development intensity on the Medical Campus, it is recommended that this issue be analyzed further in an EIR.

VII. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. Fault rupture is the displacement that occurs along the surface of a fault during an earthquake. Based on criteria established by the California Geological Survey ("CGS"), faults can be classified as active, potentially active, or inactive. Active faults are those that have shown evidence of movement within the past 11,000 years (i.e., during the Holocene Epoch). Potentially active faults are those that have shown evidence of movement between 11,000 and 1.6 million years ago (i.e., during the Pleistocene Epoch). Inactive faults are those that have not exhibited displacement within the last 1.6 million years. Additionally, there are blind

thrust faults, which are low angle reverse faults with no surface exposure. Due to their buried nature, the existence of blind thrust faults is usually not known until they produce an earthquake.

The seismically active region of southern California is crossed by numerous active and potentially active faults and is underlain by several blind thrust faults. The CGS has established earthquake fault zones known as Alquist-Priolo Earthquake Fault Zones around the surface traces of active faults to assist cities and counties in planning, zoning, and building regulation functions. These zones identify areas where potential surface rupture along an active fault could prove hazardous and identify where special studies are required to characterize hazards to habitable structures. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismic or geotechnical hazard zone. Further, the Medical Campus is not located within a designated Alquist-Priolo Earthquake Fault Zone. As no known earthquake faults or Alquist-Priolo Earthquake Fault Zones exist on or near the Medical Campus, there would be no potential for surface fault rupture to affect future uses and further analysis of this issue in an EIR is not necessary

ii) Strong seismic ground shaking?

Potentially Significant Impact. The Medical Campus is located within the seismically active Southern California area. The nearest active fault, the Palos Verdes Fault, is located approximately 3.5 miles south of the Medical Campus. For these reasons, the Medical Campus could be subject to seismic ground shaking during earthquake events on any one of various active faults in the region. The proposed Project is being undertaken in part due to State law, which requires that all acute care facilities constructed prior to 1973 be decommissioned unless they can be retrofitted to meet current seismic safety requirements. As such, the County proposes to relocate acute care services from the existing Hospital building to the proposed new Hospital Tower and re-purpose the existing Hospital for sub-acute care uses. Although newly constructed future uses would be required to comply with State and County regulations related to seismic safety, given the Medical Campus's proximity to active faults in the region, impacts related to seismic ground shaking would be potentially significant. Therefore, it is recommended that this issue be analyzed further in an EIR.

iii) Seismic-related ground failure, including liquefaction?

Potentially Significant Impact. Liquefaction is a form of earthquake-induced ground failure that occurs primarily in relatively shallow, loose, granular, water-saturated soils. Liquefaction can occur when these types of soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Liquefaction usually results in horizontal and vertical movements from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. A shallow groundwater table, the presence of loose to medium dense sand and silty sand, and a long duration and high acceleration of seismic shaking are factors that contribute to the potential for liquefaction. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismically induced liquefaction zone. However, given the potential for seismic shaking and related secondary effects at the Medical Campus, it is recommended that liquefaction and lateral spreading be further evaluated in an EIR.

iv) Landslides?

No Impact. Similar to the surrounding region, the terrain of the Medical Campus is relatively flat. The proposed grading and development would not have an adverse effect on geologic stability on-site or off-site

in adjacent areas. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismically induced landslide zone and no sloped areas exist in the immediate area. Therefore, no impact would occur and further analysis of this issue in an EIR is not necessary.

b) Result in substantial soil erosion or the loss of topsoil?

Potentially Significant Impact. Implementation of the Medical Campus would require building, hardscape, and infrastructure demolition, site clearance, and grading and excavation, which would expose on-site soils. Construction activities associated with the Project, therefore, would have the potential to result in soil erosion during grading and construction activities. Thus, it is recommended that geologic hazards associated with soil erosion be analyzed further in an EIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?

Potentially Significant Impact. As discussed in Response VI.a.iv), above, the Project area is not susceptible to landslides. Subsidence occurs when fluids from the ground (such as petroleum and groundwater) are withdrawn. Since the Medical Campus is not located within a known oil field or groundwater extraction area, subsidence associated with extraction activities is not anticipated. However, evaluation of this issue in an EIR is recommended given the potential for seismic-related effects on proposed development and the extent of grading and excavation proposed.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Potentially Significant Impact. Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with repeated cycles of wetting and drying. The soils beneath the Medical Campus have not yet been formally characterized, and therefore it is assumed that the potential exists for expansive soils that may present a hazard to proposed development. Therefore, further analysis of this issue in an EIR is recommended.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Medical Campus is located in an urbanized area with wastewater infrastructure already in place. New development proposed as part of Project implementation would connect to existing off-site infrastructure and would not use septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur, and further analysis of this issue in an EIR is not necessary.

VIII. GREENHOUSE GASES

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

Potentially Significant Impact. Construction and operation of the Project would increase greenhouse gas emissions ("GHGs). which have the potential to either individually or cumulatively result to contribute to impacts on the environment. Therefore, this issue should be further evaluated in an EIR.

b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. The Project would comply with the County's Green Building Ordinance (Chapter 22.52 – Part 20 of the Municipal Code) by conserving energy, water, and natural resources, and promoting a healthier environment. In conformance with the requirements of this ordinance, the Project would be designed to reduce GHG emissions through various energy conservation measures. In addition, the Project would implement applicable energy conservation measures to reduce GHG emissions, such as those described in the California Global Warming Solutions Act of 2006 (AB 32). However, to the extent that the Project could result in conflicts with applicable GHG reduction plans, policies, or regulations, impacts are considered potentially significant and it is recommended that this issue be analyzed further in an EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant Impact. The Project would include future development of medical buildings and uses on-site, as well as the removal, replacement, and modification of existing buildings. Construction of the Project would involve the temporary use of hazardous substances in the form of paint, adhesives, surface coatings and other finishing materials, and cleaning agents, fuels, and oils. Operation of the Project would involve the use and storage of limited quantities of potentially hazardous materials in the form of cleaning solvents, painting supplies, and pesticides for landscaping. Typical waste generated from hospital uses includes general waste, regulated medical waste, sharps containers, pharmaceutical waste, chemo waste, and pathological waste. Given the nature of proposed uses, construction and operation of the Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. It is recommended that this issue be analyzed further in an EIR.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Impact. As noted above, the Project would include future development of medical buildings and uses on-site, as well as the removal, replacement, and modification of existing buildings, which would involve the routine use, storage, transport, or disposal of limited quantities of hazardous materials. Additionally, short-term grading activities, including trenching and excavation, could expose construction workers or the public to unknown hazardous materials in on-site soil and/or groundwater, should such materials be present. As some of the buildings were built as early as 1943, it is possible that lead-based paint and paint residues are present in the buildings. If released into the environment, these materials could pose a significant hazard to construction workers or the public. Therefore, it is recommended that this issue be analyzed further in an EIR.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Potentially Significant Impact. Schools within one-quarter mile of the Medical Campus include Halldale Avenue Elementary School, Meyler Street Elementary School, and Stephen M. White Middle School. Project construction and operation could result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste. Because of the close proximity of the Medical Campus to these sensitive land uses, it is recommended that this issue be analyzed further in an EIR.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Potentially Significant Impact. The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. Given the potential presence of listed hazardous materials on-site, and associated potential for existing contamination to affect the proposed new uses on-site as well as surrounding off-site land uses, impacts related to the release of hazardous materials during construction and operation of the Project are considered potentially significant. A hazardous materials assessment will include a current database search of hazardous materials sites compiled pursuant to Government Code section 65962.5. It is recommended that the results of this search and analysis of potential impacts associated with hazardous materials sites be analyzed further in an EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Potentially Significant Impact. The Medical Campus is not within an airport land use plan or within two miles of a public use airport. The nearest public airports, Zamperini Field (3301 Airport Drive in Torrance), Hawthorne Municipal Airport (12101 S. Crenshaw Boulevard in Hawthorne), Compton/Woodley Airport (901 W. Alondra Boulevard in Compton), and Los Angeles International Airport ("LAX") (1 World Way in Los Angeles), are located approximately four miles, seven miles, nine miles, and eleven miles from the Medical

Campus, respectively. However, the Project proposes to relocate an existing helipad to a new permanent location atop the proposed new hospital building. It is recommended that future helicopter operations and associated safety hazards within and outside the Medical Campus be analyzed further in an EIR.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for the people residing or working in the area?

Potentially Significant Impact. There are no private airstrips in the vicinity of the Medical Campus, and the Medical Campus is not located within a designated airport hazard area. As discussed in Response VIII.e), the Project proposes to relocate an existing helipad to a permanent new location atop the proposed new hospital building. It is recommended that future helicopter operations and associated safety hazards for people residing or working in the area be analyzed further in an EIR.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The Medical Campus is bordered by Carson Street on the north, Vermont Avenue on the east, 220th Street on the south, and Normandie Avenue on the west. According to Figure 12.7, Disaster Routes, of the County's Draft General Plan 2035, the nearest freeway disaster routes to the Medical Campus are the Harbor Freeway and the San Diego Freeway, located approximately less than 0.10 miles east and two miles north and east of the Medical Campus, respectively. Implementation of the Project would not result in the physical changes to the freeways or any streets designated as an evacuation route in an adopted emergency response or evacuation plan.

While it is expected that the majority of construction activities and staging areas would occur entirely within the Medical Campus boundaries, short-term construction activities for sidewalk and infrastructure improvements may temporarily disrupt access on portions of the public rights-of-way. In these instances, the Project would implement traffic control measures (e.g., construction flagmen, signage, etc.) to maintain flow and access. Furthermore, development of the Project would comply with County's building and applicable fire and safety codes that require adequate access for fire personnel and equipment in and out of the Medical Campus. Similarly, access for doctors, staff, patients, and visitors would be maintained throughout future construction phases such that no interruption or reduction in the availability of medical care services would occur. Therefore, construction activities are not expected to result in inadequate emergency access.

The Project proposes to redesign the existing Medical Campus to improve vehicular access and internal circulation. Given the proposed improvements to Project ingress/egress and parking design, access and circulation at the Medical Campus are not anticipated to interfere with emergency vehicle access. An Emergency Evacuation Plan for the Project, as for the existing hospital, would be maintained, periodically updated, and implemented as necessary during emergency situations at the Medical Campus to ensure proper procedures are followed to protect human health and safety. For these reasons, construction and operation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant, and further analysis of this issue in an EIR is not necessary.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development. The Medical Campus is not located within an identified wildland fire hazard area or very high fire hazard severity zone, based on Figure 12.6, Fire Hazard Severity Zones Policy Map, of the County's Draft General Plan 2035. Further analysis of this issue in an EIR is not necessary.

X. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. Project construction would alter the quantity and composition of surface runoff through grading of hardscape surfaces, construction of impervious streets, building development, introduction of urban pollutants, and irrigation of newly landscaped areas. Additionally, operation of future uses could result in increases in pollutant discharges to receiving waters (including impaired water bodies pursuant to the Clean Water Act Section 303(d) list), significant alteration of receiving water quality during or following construction, or violation of water quality standards or waste discharge requirements. Impacts could be potentially significant and further analysis of this issue in an EIR is necessary.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned land uses for which permits have been granted)?

Potentially Significant Impact. The Project would not directly deplete groundwater supplies as no groundwater extraction activities are proposed. However, the Project would involve future development of medical buildings and uses on the Medical Campus, as well as the removal, replacement, and modification of existing buildings, circulation, and landscaping, which could increase impervious surface area on-site. The reduction in pervious surface area could potentially reduce the amount of water reaching groundwater aquifers beneath the Medical Campus. As such, impacts related to groundwater recharge would be potentially significant and it is recommended that this issue be analyzed further in an EIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact. Project implementation would substantially modify the existing drainage characteristics on the Medical Campus over the long-term, and is expected to result in an overall increase in pervious surface area and the installation or implementation of a range of water quality and drainage

features and practices. Nonetheless, given the magnitude of redevelopment proposed and the related modification of drainage patterns, impacts are considered potentially significant and it is recommended that this issue be analyzed further in an EIR.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Potentially Significant Impact. Refer to Response IX.c). The Project would modify the drainage patterns on the Medical Campus, and as such, it is recommended that this issue be analyzed further in an EIR.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Potentially Significant Impact. The Medical Campus is currently developed with urban uses and existing storm drain facilities currently provide stormwater drainage for on-site uses. The Project would be designed and constructed to comply with LA County's low impact development ("LID") standards for storm water management, but could potentially result in adverse impacts to downstream drainage facilities. To determine if the Project would create or contribute runoff that could exceed the capacity of storm drainage facilities in the area, and to identify appropriate LID compliance features and practices, it is recommended that this issue be analyzed further in an EIR.

f) Otherwise substantially degrade water quality?

Potentially Significant Impact. As discussed in Response IX.a), Project implementation could potentially substantially degrade water quality. This issue will be evaluated further in the EIR.

g) Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to Figure 12.2, Flood Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a 100-year flood hazard area. Therefore, the Project would not place housing within a 100-year flood plain, and no impact would occur in this regard. Further analysis of this issue in an EIR is not necessary.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As discussed in Response IX.g), the Medical Campus is not located within a FEMA-designated 100-year floodplain. Therefore, the Project would not place structures within a 100-year floodplain that would impede or redirect flood flows. Thus, no impact would occur with regard to floodplains and further analysis of this issue in an EIR is not necessary.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. As discussed in Response IX.g), the Medical Campus is not located within a 100-year floodplain. No dams or levees are present on or near the Medical Campus. According to Figure 12.4, Dam and Reservoir Inundation Areas, of the County's Draft General Plan 2035, the Medical Campus is not located within a flood hazard area due to failure of a dam or reservoir. Therefore, flooding resulting from a dam or levee failure would not occur. Further analysis of this issue in the EIR is not necessary.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of the sea floor associated with large, shallow earthquakes. Mudflows result from the down slope movement of soil and/or rock under the influence of gravity.

The Medical Center is not adjacent to any large body of water, and therefore there is no potential for seiche hazards. The Medical Campus is located approximately 5.2 miles east of the Pacific Ocean. According to Figure 12.3, Tsunami Hazard Areas, of the County's Draft General Plan 2035, the Medical Campus is not located within a tsunami hazard area. The Medical Campus is located within a relatively flat and highly urbanized area surrounded by residential uses and commercial development and as such is not in an area susceptible to mudflows. Further analysis of these issues in the EIR is not necessary.

XI. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The Medical Campus is located in an urbanized area surrounded by residential uses and commercial development. The Project involves future development of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification within the existing Medical Campus. The Project would result in the renovation and expansion of existing hospital, medical office, research, and related medical uses entirely within the existing Medical Campus boundaries, and therefore would not physically divide an established community. Thus, no impact would occur in this regard and further analysis of this issue in an EIR is not necessary.

b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. Although the existing Hospital and related uses are consistent with the current designated land use and zoning designations for the Medical Campus and future uses would be

similarly consistent, the Project would substantially increase the intensity of on-site development. As such, impacts related to conflicts with applicable plans, policies, and regulations could occur. It is recommended that this issue be analyzed further in an EIR.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. As discussed above, the Medical Campus is not located within a Significant Ecological Area (SEA). Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in place for the Medical Campus. Therefore, Project implementation would not conflict with any Habitat Conservation Plan, and no impacts would occur in this regard. Further analysis of this issue in an EIR is not required.

XII. MINERAL RESOURCES

Would the project:

a) Result in the loss or availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The Medical Campus is not located within a known mineral resource area and no mineral resources are known to exist at the Medical Campus or in the surrounding area, as shown in Figure 9.6, Natural Resource Areas, of the County's Draft General Plan 2035. Therefore, no impact to mineral resources would occur. Further analysis of this issue in an EIR is not necessary.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The Medical Campus is not located within a Mineral Resource Zone and there are no known designated locally-important mineral resources located on the Medical Campus or in the vicinity, as illustrated in Figure 9.6, Natural Resource Areas, of the County's Draft General Plan 2035. Therefore, no impact to mineral resources would occur. Further analysis of this issue in an EIR is not necessary.

XIII. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. Construction of the Project would require the use of heavy construction equipment (e.g., bulldozers, backhoes, cranes, loaders, etc.) that would generate noise on a short-term basis during each future development phase. Additionally, operations following Project buildout may increase

existing noise levels as a result of related traffic, emergency vehicles/ambulance sirens, helicopter operations, heating, ventilating, and air conditioning ("HVAC") systems, loading/unloading of trucks, and other activities on the Medical Campus. As such, nearby sensitive uses could potentially be affected. Noise-sensitive areas typically include residential areas, schools, convalescent hospitals, acute care facilities, and park and recreational areas. Sensitive receptors in the Project vicinity consist of single- and multi-family residences to the north, east, south, and west. Schools in the Project area include Halldale Avenue Elementary School, Meyler Street Elementary School, Stephen M. White Middle School, and Caroldale Avenue Elementary School, which arelocated approximately 0.10 miles northwest, 0.15 miles south, 0.25 miles east, and 0.50 miles southeast of the Medical Campus, respectively. The Carson Library is located approximately 0.75 miles east of the Medical Campus. Normandale Recreation Center, Veterans Park, and Carson Park are located approximately 0.30 miles southwest, 0.60 miles southeast, and 0.70 miles northeast of the Medical Campus, respectively. The Project would result in short-term construction and long-term operational noise level increases in the Project area that could exceed established noise standards at nearby sensitive receptors, which would be considered a potentially significant impact. It is recommended that the Project's potential to exceed noise standards be analyzed further in an EIR.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. Construction of the Project may generate groundborne vibration and noise due to site grading, clearing activities, and haul truck travel. In addition, Project construction may require pile driving. As such, the Project would have the potential to expose people to, or generate, excessive groundborne vibration and noise levels during short-term construction activities. Therefore, it is recommended that this issue be analyzed further in an EIR.

Additionally, operation of the Project's hospital-related uses could generate groundborne vibration or noise at levels beyond those that currently exist within the existing urbanized development setting. As such, operation of the Project could have the potential to expose people to excessive groundborne vibration or noise. Further analysis of operational groundborne vibration or noise in an EIR is recommended.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. As discussed in Response XII.a, above, operation of the Project may increase existing noise levels as a result of Project-related traffic, emergency vehicles/ambulance sirens, helicopter activities, HVAC systems, loading/unloading of trucks, and human activities on the Medical Campus. Therefore, it is recommended that potential impacts associated with a permanent increase in ambient noise levels be analyzed further in an EIR.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. As discussed in Response XII.a), construction of the Project would require the use of heavy construction equipment (e.g., bulldozers, backhoes, cranes, loaders, etc.) that would generate noise on a short-term basis during the various phases of Project construction. Therefore, it is

recommended that potential impacts associated with a temporary or periodic increase in ambient noise levels be analyzed further in an EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impact. As discussed in Response VIII.e), the Medical Campus is not within an airport land use plan or within two miles of a public use airport. The nearest public airports, Zamperini Field, Hawthorne Municipal Airport, Compton/Woodley Airport, and LAX are located approximately four miles, seven miles, nine miles, and eleven miles from the Medical Campus, respectively. However, the Project proposes to relocate the existing helipad to a permanent helipad location atop the proposed new hospital building, and to relocate the existing helicopter pad to a temporary location on the Medical Campus for a period during construction. Future helicopter operations and associated noise generation within and outside the Medical Campus could result in potentially significant noise impacts to sensitive receptors in the area. As such, it is recommended that this issue be analyzed further in an EIR.

f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impact. As discussed in Response VIII.f), there are no private airstrips in the vicinity of the Medical Campus, and Medical Campus is not located within a designated airport hazard area. However, the Project proposes to relocate the existing helipad to a permanent helipad location atop the proposed new hospital building. Future helicopter operations and associated noise generation within and outside the Medical Campus could result in potentially significant noise impacts to sensitive receptors in the area. It is recommended that this issue be analyzed further in an EIR.

XIV. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Potentially Significant Impact. Population growth and future development projections are prepared by SCAG. SCAG provides current and projected population, housing and employment estimates for the region as a component of the Regional Transportation Plan ("RTP"). SCAG bases its estimates, in part, on anticipated development by County/City jurisdictions based on their General Plans, zoning and on-going development activity. The SCAG projections serve as the basis for providing infrastructure and public services by various jurisdictions and service agencies throughout the region.

There are no residential uses on the Medical Campus. The Project would not have indirect effects on growth through such mechanisms as the extension of roads and infrastructure. The Project would be built out in five

phases through the year 2030 increasing the Medical Campus square footage by approximately 850,000 square feet from the existing 1,050,000 square feet to 1.9 million square feet. The Project involves future development of medical buildings and uses on-site as part of the proposed expansion, removal, replacement, and modification within the existing Medical Campus, which would increase the visitor, patient, and employment population on the Medical Campus. According to the proposed Project, the employee population currently on the Medical Campus is estimated to increase by almost 1,500 jobs, or 27 percent, at Project buildout. Therefore, the increased on-site population should be evaluated for consistency with SCAG projections and for the potential to induce substantial population growth. Accordingly, it is recommended that this issue be analyzed further in an EIR.

b) Displace substantial numbers of existing housing, necessitating the necessitating the construction of replacement housing elsewhere?

No Impact. There is no existing housing on the Medical Campus. Thus, the Project would not displace any housing or associated residential population. No impacts would occur and further analysis of this issue in an EIR is not necessary.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As indicated in Response XIII.a), there are no residential uses on the Medical Campus. According to the Master Plan, the number of jobs on the Medical Campus is estimated to increase by almost 1,500 or 27 percent at Project buildout. Thus, the Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. No impacts would occur. Further analysis of this issue in an EIR is not necessary.

XV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

Potentially Significant Impact. Los Angeles County Fire Station 36, located at 127 W. 223rd Street, Carson, is located approximately 0.65 miles southeast from the Medical Campus; refer to Figure 12.8, Fire Department Battalions and Stations, of the County's Draft General Plan 2035. The Project would increase visitor, patient, and employment populations to the Medical Campus. This increase of population could create a need for expanding existing facilities or staff, construction of a new facility, or adversely impact types of services provided. Therefore, the existing capacity of the County Fire Department to meet these demands must be determined and further analysis of the potential adverse physical impacts to the County Fire Department will be analyzed in the EIR.

ii) Police protection?

Potentially Significant Impact. Carson Sheriff Station, located at 21356 S. Avalon Boulevard, Carson, is located approximately 1.5 miles east from the Medical Campus, refer to Figure 12.9, Sheriff's Department Service Areas, of the County's Draft General Plan 2035. The Project would increase visitor, patient, and employment populations on the Medical Campus. This increase in population could create a need for expanding existing facilities or staff, construction of a new facility, or adversely impact types of services provided. Therefore, the existing capacity of County Sheriff Department to meet these demands must be determined and it is recommended that potential adverse physical impacts to the County Sheriff's Department be analyzed further in an EIR.

iii) Schools?

Potentially Significant Impact. The Medical Campus is located within proximity of Halldale Avenue Elementary School, Meyler Street Elementary School, Caroldale Avenue Elementary School, Van Deene Avenue Elementary School, Torrance Elementary School, Dolores Street Elementary School, St. Philomena School, Stephen M. White Middle School, Carson High School, and Sherry High School. The Project would increase visitor, patient, and employment population on the Medical Campus. Because the Project could attract new employees that might move to the area, it could generate new students and increase demand for school facilities and services. Therefore, it is recommended that the existing capacities of the nearby schools to meet these demands be determined, and that this issue be analyzed further in an EIR.

iv) Parks?

Potentially Significant Impact. The parks located nearest the Medical Campus include Normandale Recreation Center, 22400 Halldale Avenue, Torrance, located approximately 0.30 miles southwest; Veterans Park, 22400 Moneta Avenue, Carson, located approximately 0.60 miles southeast; and Carson Park, 21411 S. Orrick Avenue, Carson, located approximately 0.70 miles northeast of the Medical Campus. The Project would increase the number of visitors, patients, and staff on the Medical Campus. The Project does propose open space courtyards, open turf areas, gardens, plazas, parks and a fitness trail for patients, staff, and the public. However, this increase of population could create a need for expanding or existing facilities or staff, construction of a new facility, or adversely impact types of services provided and the existing capacity of the County, City, or other public parks and recreational facilities to meet these demands must be determined. It is recommended that this issue be analyzed further in an EIR.

v) Other public facilities?

Potentially Significant Impact. The County of Los Angeles Carson Public Library, located at 151 E. Carson Street, Carson, is located approximately 0.75 miles east of the Medical Campus; refer to Figure 13.2, Libraries, of the County's Draft General Plan 2035. The Project would increase the visitor, patient, and staff populations on the Medical Campus, and may attract new residents to the area in response to new employment opportunities. This increase could create a need to expand existing library facilities or staff or construct a new library facility, or could adversely impact types of services provided. Therefore, the existing capacity of public libraries to meet demand in the Project area must be determined. It is recommended that this issue be analyzed further in an EIR.

XVI. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Potentially Significant Impact. According to the County's Draft General Plan 2035, Chapter 10, Parks and Recreation Element, large areas of the County are underserved by parks and recreational facilities. The Element shows that the unincorporated areas of the County face a significant deficit in local parkland of 3,620 acres. Based on population projections, the unincorporated areas of the County would have deficits of 5,986 acres in local parkland and 5,046 acres in regional parkland by the year 2035 if no new parks are created. The County has an adopted standard of four acres of local parkland per 1,000 residents and six acres of regional parkland per 1,000 residents. This requirement may be met by dedication of land, payment of in lieu fees or a combination of both as defined by the County's requirements for residential projects. However, as the Project would not involve the provision of new housing, it is not subject to the County's parkland dedication or fee payment requirements.

As discussed in Response XIV.a.iv), the parks located nearest to the Medical Campus include Normandale Recreation Center, Veterans Park, and Carson Park, located approximately 0.30 miles southwest, 0.60 miles southeast, and 0.70 miles northeast of the Medical Campus, respectively. The Project would increase the visitor, patient, and staff populations on the Medical Campus, and may also attract new residents to the area in response to new employment opportunities. The Project proposes open space courtyards, open turf areas, gardens, plazas, parks and a fitness trail for patients, staff, and the public and it is anticipated that patients and employees of the Project would primarily utilize the Project's recreational facilities as well as nearby off-site recreational facilities. Although the Project has limited potential to result in increased use of off-site parks or other recreational facilities as a result of indirect population growth and employees, such that substantial deterioration of the facilities could occur or be accelerated, it is recommended that this issue be analyzed further in an EIR.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Potentially Significant Impact. The Project proposes open space courtyards, open turf areas, gardens, plazas, parks and a fitness trail for patients, staff, and the public. As the Project would increase the visitor, patient, and staff populations on the Medical Campus, it will be necessary for the EIR to determine if the Project's proposed recreational facilities and Project's population generation would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. It is recommended that this issue be analyzed further in an EIR

XVII. TRANSPORTATION AND CIRCULATION

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Potentially Significant Impact. The Project would be built out in multiple phases through the year 2030, increasing the Medical Campus square footage by approximately 850,000 square feet from the existing 1,050,000 square feet to approximately 1.9 million square feet. The Project involves future development of medical buildings and uses on-site, as well as the removal, replacement, and modification of existing structures, circulation, and landscaping. These uses would add traffic to local and regional transportation systems. Thus, operation of the Project could adversely affect the existing capacity of the street system or exceed an established level of service ("LOS") standard. Construction of the Project would also result in a temporary increase in traffic due to construction-related truck trips and worker vehicle trips. Traffic impacts during construction could also adversely affect the street system. A traffic study will therefore be prepared for the Project. The analysis of traffic impacts will identify key intersections for analysis, quantify existing and future traffic conditions at those locations, identify impacts caused by the addition of Project-generated traffic, and identify mitigation measures to reduce potentially significant impacts generated by the Project, as appropriate and where feasible. In addition, construction activities could temporarily limit or otherwise alter access to public transit or other alternative transportation facilities or services (e.g., bike lanes, sidewalks, etc.), and operation of proposed uses could increase demands on such facilities and services, and impacts in this regard could also be potentially significant. As the Project has the potential to result in significant traffic and transportation-related impacts, it is recommended that this issue be analyzed further in an EIR.

The parking supply on the Medical Campus currently totals 2,905 spaces, exceeding the County's parking code requirement of 2,709 spaces.[5] An additional 278 spaces are provided off-site, and street parking is permitted along all or portions of the four public streets surrounding the Medical Campus. On-campus parking is scattered, with the majority of spaces contained in lots relegated to the perimeters of the Cam pus, sometimes far from the facilities they serve, and in sometimes makeshift fashion along internal streets. Moreover, pedestrian connections between parking lots and buildings generally poorly organized or marked. The availability of parking on-site also fluctuates over time during facility upgrades or construction. The Project proposes to reorganize the on-site parking supply, concentrating patient and visitor parking along the northern perimeter of the Medical Campus and staff parking in the southeast portion of the Medical Campus. The Project proposes to provide sufficient parking to meet or exceed the County's code requirement in the future; however, this may not be sufficient to meet actual future demand. It is recommended that this issue be analyzed further in an EIR.

[5] *Los Angeles County Code, Chapter 122.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and Group Homes for Children, which requires 2 spaces per bed, 1 space/250 square feet for outpatient facilities, and 1 space/400 square feet for research use.*

b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Potentially Significant Impact. The congestion management program ("CMP") for the County requires that the traffic impacts of individual development projects of potential regional significance be analyzed. The CMP system comprises a specific system of arterial roadways, plus all freeways. The closest roadway within the CMP system to the Medical Campus is the Harbor Freeway, less than 0.10 miles to the east, and the San Diego Freeway, approximately two miles to the north and east. According to the County CMP Traffic Impact Analysis Guidelines, a CMP traffic impact analysis is required if (1) a project would add 50 or more trips during A.M. or P.M. weekday peak hours to CMP arterial monitoring intersection, including freeway ramps; or (2) a project would add 150 or more trips during A.M. or P.M. weekday peak hours, in either direction, to CMP freeway monitoring locations. The Project could result in additional vehicle trips from operation of the proposed expansion of medical facilities. Accordingly, it is recommended that this issue be analyzed further in an EIR.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?

Potentially Significant Impact. The nearest airports, Zamperini Field, Hawthorne Municipal Airport Compton/Woodley Airport, and LAX, are located approximately four miles, seven miles, nine miles, and eleven miles from the Medical Campus, respectively. However, the Project proposes to relocate the existing helipad to a permanent helipad location atop the proposed new hospital building. As such, the Project could result in a change in air traffic patterns, including an increase in hospital-related air traffic levels and changes in landing and takeoff locations and flight paths. It is recommended that the potential for substantial safety risks be analyzed further in an EIR.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development. The Project does not propose uses that are incompatible with the Medical Campus or existing street system, and the roadways adjacent to the Medical Campus are part of an established urban roadway network and contain no sharp curves or dangerous intersections. However, the Project would alter the existing building configuration on-site, construct new access driveways and internal circulation, expand parking facilities, and create new pedestrian improvements. Additionally, the Project would result in an increase in traffic levels in the Project area. Considering these factors, the potential for hazardous conditions may increase over existing conditions under the Project. It is recommended that this issue be analyzed further in an EIR.

e) Result in inadequate emergency access?

Potentially Significant Impact. The Medical Campus would be designed to provide access to fire, ambulatory, and police vehicles from adjacent roadways. Access to the Medical Campus is provided by

Carson Street, 220th Street, Vermont Avenue, and Normandie Avenue. While it is expected that the majority of construction activities for the Project would be confined on-site, short-term construction activities may temporarily affect access on portions of adjacent streets during certain periods of the day. In addition, the Project would generate traffic in the vicinity and would result in some modifications to access from the streets that surround Medical Campus. It is recommended that this issue be analyzed further in an EIR.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Potentially Significant Impact. The Medical Campus is located in an area well served by public transportation. The Medical Campus is served by transit, which includes the Metro Bus Harbor Transitway on the Harbor Freeway. The Metro Express Line (Route 450) and local municipal bus line CE448 utilize the Harbor Freeway and the Carson Metro Transit Station, which is located less than 0.10 miles east of the Medical Campus. The transit station is located at the south side of Carson Street and public sidewalks are provided between the station and the Medical Campus. A LADOT Park and Ride lot is located to the west of the freeway at the north side of Carson Street. The Medical Campus is served by three public transit systems – LA Metro, Torrance Transit, and Gardena Municipal Bus Lines – and by its own on-Campus shuttle service. Metro Lines 202 and 550 travel along Vermont Avenue, with bus stops at the Carson Street intersection and near 220th Street. As the Project would change site access conditions and contribute additional population to the surrounding area, it is recommended that Project consistency with policies, plans, and programs supporting alternative transportation be analyzed further in an EIR.

XVIII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact. The sewer system in the public right-of-way is owned and maintained by the County of Los Angeles Sanitation District ("LACSD"). Several large trunk sewers are located around the perimeter of the Medical Campus. The Project involves future development of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities, and may increase the visitor, patient, and employment populations on the Medical Campus, in turn generating increased wastewater volumes. Increased wastewater volumes could potentially result in impacts with respect to wastewater treatment. Therefore, it is recommended that this issue be analyzed further in an EIR.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The Project proposes the development of new medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Given the associated increase in demand for water service and wastewater treatment, the potential exists for the

Project to require the construction or expansion of water and/or wastewater treatment facilities. Therefore, it is recommended that this issue be analyzed further in an EIR.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. Refer to Section IX, above. Given the proposed changes to on-site drainage patterns, implementation of the Project would require the construction or expansion of storm water drainage facilities. Therefore, it is recommended that this issue be analyzed further in an EIR.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Potentially Significant Impact. The Project proposes the development of newmedical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of the existing Medical Campus. The Project would increase visitor, patient, and employment populations on the Medical Campus. Therefore, it is currently anticipated that the Project's proposed mix of land uses would generate demand for water that meets or exceeds the threshold requiring the preparation of a water supply assessment ("WSA") pursuant to Senate Bill ("SB") 610. Based on the WSA, the EIR will evaluate whether available water supplies can adequately accommodate the Project's increased demand for water. Changes in water availability and water regulations, as well as water conservation features and practices, are important considerations in the ability of the Project to support its on-site population. Therefore, it is recommended that this issue be analyzed further in an EIR.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Potentially Significant Impact. The Project involves the development of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of the existing Medical Campus. As such, given the associated increase in demand for wastewater treatment, the potential exists for the Project to exceed the capacity of existing wastewater treatment facilities. Therefore, it is recommended that this issue be analyzed further in an EIR.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Potentially Significant Impact. The Project proposes the development of new medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Construction associated with Project buildout would generate inert solid waste (e.g., export soils, construction and demolition debris) which would require disposal at an unclassified landfill. In addition, during future Project operation, medical uses would generate solid waste which would be disposed of at the landfill(s) serving the County. All jurisdictions, including the County, are required to divert or recycle up to 50 percent of solid waste generated, to reduce the volume of waste requiring disposal in landfills. Although recycling would

extend the life of the landfill(s) serving the Project area, implementation of the Project would increase demand for landfill services and potentially accelerate projected landfill closures. Therefore, it is recommended that Project impacts related to solid waste disposal be analyzed further in an EIR.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Potentially Significant Impact. The California Integrated Waste Management Act of 1989, also known as Assembly Bill ("AB") 939, mandates jurisdictions to meet a diversion goal of 50 percent by 2000 and thereafter. In addition, each county is required to prepare and administer a Countywide Integrated Waste Management Plan ("CoIWMP"). This plan is comprised of the county's and the cities' solid waste reduction planning documents plus an Integrated Waste Management Summary Plan ("Summary Plan") and a Countywide Siting Element ("CSE"). For Los Angeles County, the County's Department of Public Works ("Public Works") is responsible for preparing and administering the Summary Plan and the CSE. These documents were approved by the County, a majority of the cities within the County containing a majority of the cities' population, the County Board of Supervisors, and the California Department of Resources Recycling and Recovery ("CalRecycle"). The Summary Plan, approved by CalRecycle on June 23, 1999, describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. In addition, Los Angeles County continually evaluates landfill disposal needs and capacity through preparation of CoIWMP Annual Reports. Within each annual report, future landfill disposal needs over the next 15-year planning horizon are addressed in part by determining the available landfill capacity.

As described above, there are a number of State and County plans and policies that address the availability of sufficient landfill capacity and the diversion/recycling of waste debris, with which the Project could potentially conflict. Therefore, it is recommended that Project consistency with plans and policies related to solid waste be analyzed further in an EIR.

h) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?

Potentially Significant Impact. Long-term sustainability is one of the key principles guiding the Project. The Project would be required to comply with the County's Green Building Ordinance (Chapter 22.52 – Part 20 of the Municipal Code) by conserving energy, water, natural resources, and promoting a healthier environment. Green building techniques that accommodate new technology and green building practices would be integrated into all building design, construction, and occupancy and integrated with Medical Campus infrastructure and include integrated stormwater and wastewater treatment. In addition, the implementation of the Project would utilize a standardized approach to third party certification systems (i.e., LEED), and all future development would be required by contract specifications to achieve a minimum LEED Silver certification (though incentives could result in higher levels of LEED certification). Project landscaping installed would be compliant with the County's Drought Tolerant Landscaping Ordinance (Chapter 22.52 – Part 21) of the Municipal Code. Further, the Project would be developed in compliance with all state and local regulations related to energy conservation. Nonetheless, it is recommended that this issue be analyzed further in an EIR.

i) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?

Potentially Significant Impact. As indicated in Response XVII.h), the Project would implement a wide variety of sustainability features throughout the Medical Campus and thus would not involve inefficient use of energy resources. The Project would include installation of energy efficient HVAC units, windows, a lighting control system that is Title 24 compliant, tank less hot water heaters, low flow plumbing fixtures, irrigation systems, and drought tolerant landscaping (where feasible). Therefore, the Project would not result in an inefficient use of energy resources. Nonetheless, it is recommended that this issue be analyzed further in an EIR.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. As analyzed in previous sections of this Initial Study, the Project could result in environmental impacts that could degrade the quality of the environment. As such, it this issue will be analyzed further in an EIR.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

Potentially Significant Impact. As discussed above, the Project could potentially result in significant individually limited, but cumulatively considerable, impacts regarding aesthetics, air quality, geology/soils, GHG emissions, hazards/hazardous materials, hydrology/water quality, land use/planning, noise, population/housing, public services, recreation, traffic/transportation, and utilities/services. Therefore, the EIR will evaluate potential individually limited but cumulatively considerable impacts associated with these issues.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Due to the potentially significant impacts associated with implementation of the Project, the Project has the potential to cause substantial adverse effects on human beings, either

directly or indirectly. Thus, a potentially significant impact associated with this issue could occur, and this issue will be analyzed further in an EIR.

Appendix A

Historic Resources Report

LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE
1000 W. CARSON STREET
Torrance, California

Historic Resource Report



Prepared by:

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July 2013

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EXECUTIVE SUMMARY

This report presents the results of a historic resource evaluation of the property located at 1000 W. Carson Street in the City of Torrance. The assessor's parcel number for the property is 734-001-901. The property was developed as a military station hospital by the U.S. Army in 1943 and became Los Angeles County Harbor General Hospital in 1947. It is now called Harbor-UCLA Medical Center. The Los Angeles Biomedical Research Institute is also located on the campus.

The property is not currently designated a landmark at the national or state levels, nor has it been identified or evaluated as significant in any previous historic resource surveys. GPA Consulting (GPA) was retained to complete this evaluation as part of the environmental review of a proposed project on the property in compliance with the California Environmental Quality Act (CEQA).

The property was evaluated in this report using the National Register of Historic Places (National Register) and California Register of Historical Resources (California Register) criteria. The primary contexts used in the evaluation were World War II military history and the history of public health in the Los Angeles area. After careful research and evaluation, GPA concludes that the property is not eligible for listing in the National or California Registers. While it is significant in the context of World War II military history in the Los Angeles area, it is lacking in integrity. GPA also concludes that none of the buildings on the property are individually eligible at the federal or state levels. Therefore, the property is not a historic resource subject to CEQA. As the project will have no impact on historic resources, no further study is required. While it is not required, the preservation and rehabilitation of Building N6 is recommended. It is the most intact building remaining on the property.

1. INTRODUCTION

1.1 Purpose and Qualifications

The purpose of this report is to determine and set forth whether or not a proposed project will impact historic resources. The project site is located on a single parcel of land at 1000 W. Carson Street in the City of Torrance. The assessor's parcel number for the 77-acre property is 734-001-901. The subject property was developed as a military station hospital by the U.S. Army in 1943 and became Los Angeles County Harbor General Hospital in 1947. The property is now called Harbor-UCLA Medical Center, and is still owned by the County of Los Angeles. A modern hospital facility occupies the eastern end of the property, while the Los Angeles Biomedical Research Institute (LA BioMed) operates in a series of World War II era barracks, recently constructed buildings, and modular buildings in the center portion of the property.

Harbor-UCLA Medical Center is in the process of preparing a master plan for the Medical Center portion of the property. LA BioMed is in the process of securing a master lease from the County for an 11-acre portion of the property to be devoted exclusively to LA BioMed. LA BioMed plans for the construction of two new research buildings, which require the removal of some of the existing World War II era buildings, and likely the removal of many of the remaining buildings in the 11-acre lease premises. As many of the existing buildings are over 50 years of age, LA BioMed commissioned this Historic Resource Report to determine if they are historic resources subject to CEQA.

Teresa Grimes, Principal Architectural Historian with GPA, was responsible for the preparation of this report. She fulfills the qualifications for historic preservation professionals outlined in Title 36 of the Code of Federal Regulations, Part 61. Amanda Yoder, Architectural Historian at GPA assisted with the preparation of the report. Their résumés are available upon request.

1.2 Methodology

In conducting the analysis of potential historic resources and project impacts, the following tasks were performed:

1. Conducted a preliminary field inspection of the project site and surrounding area to determine the study area for the report and to identify potential historic resources. The study area was identified as the entire 77-acre parcel, because it is a single parcel with a common history and use. The study area was not larger because the proposed project would have no potential to impact known or unknown historic resources in the vicinity of the property. Potential historic resources were considered buildings or structures 50 years of age or older. While the modern hospital facility on the eastern end of the property owned and operated by the Harbor-UCLA Medical Center was originally constructed in 1963, making it 50 years of age, it was not identified or evaluated as a potential historic resource because the proposed project would have no potential to impact it.

2. Conducted an intensive field inspection of the buildings identified as potential historic resources to establish their general condition and physical integrity. Digital photographs were taken of each potential historic resource within the study area during this field inspection.

3. Researched the property to determine whether or not it is currently listed as a landmark at the national, state, or local levels and whether or not it has been previously identified or evaluated as a historic resource. This involved a records search at the South Central Coastal Information Center at California State University, Fullerton. It revealed no previously recorded built-environment or archaeological resources within the study area. However, the property is included in the California Historical Resources Inventory System (CHRIS) with an evaluation code of 6J. This evaluation appears to be incorrectly applied as it means California Historical Landmarks or Points of Historical Interest found ineligible for designation by the State Historical Resources Commission. As the property is not and has never been designated at Landmark or Point of Interest, this evaluation is nonsensical. Further investigation by GPA determined that the State Office of Historic Preservation provided a cursory evaluation of the property for the Department of State Architect in 1995 in response to a request for funding by the County of Los Angeles.

4. Obtained building permit records from the Los Angeles County Department of Public Works website and reviewed the available documents. There were no original permits for the buildings constructed by the U.S. Army. However, there are aerial photographs from 1943 and 1952 that document the presence of the buildings during that period and the original layout of the campus. Building permit records were used to help document the dates the buildings were altered. For a full list of permitted alterations, please see the permit tables in Appendix II.

5. Researched the property and surrounding area at local libraries and archives to establish the general history and the contexts in which it should be evaluated. This included a review of the relevant databases, newspapers, books, and articles.

6. Reviewed and analyzed ordinances, statutes, regulations, bulletins, and technical materials relating to federal, state and local historic preservation designations, and assessment processes and programs.

2. REGULATORY ENVIRONMENT

Generally, a lead agency must consider a property a historic resource under CEQA if it is eligible for listing in the California Register of Historical Resources. The California Register is modeled after the National Register of Historic Places. Furthermore, a property is presumed to be historically significant if it is listed in a local register of historic resources or has been identified as historically significant in a historic resources survey (provided certain criteria and requirements are satisfied) unless a preponderance of evidence demonstrates that the property is not historically or culturally significant.[1] The national and state designation programs are described below.

2.1 NATIONAL REGISTER OF HISTORIC PLACES

The National Register is "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[2]

[1] Public Resources Code Section 5024.1 and 14 CCR Section 4850.
[2] Title 36 Code of Federal Regulations Part 60.2.

Criteria

To be eligible for listing in the National Register, a property must be at least 50 years of age and possess significance in American history and culture, architecture, or archaeology.[3] A property of potential significance must meet one or more of four established criteria:[4]

A. Associated with events that have made a significant contribution to the broad patterns of our history; or

B. Associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Yield, or may be likely to yield, information important in prehistory or history.

Physical Integrity

According to *National Register Bulletin #15*, "to be eligible for listing in the National Register, a property must not only be shown to be significant under National Register criteria, but it also must have integrity."[5] Integrity is defined in *National Register Bulletin #15* as "the ability of a property to convey its significance."[6] Within the concept of integrity, the National Register recognizes seven aspects or qualities that in various combinations define integrity. They are feeling, association, workmanship, location, design, setting, and materials, and they are defined by *National Register Bulletin #15* as follows:[7]

- Location is the place where the historic property was constructed or the place where the historic event occurred.
- Design is the combination of elements that create the form, plan, space, structure, and style of a property.
- Setting is the physical environment of a historic property.
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.

[3] Title 36 Code of Federal Regulations Part 60.4.
[4] Title 36 Code of Federal Regulations Part 60.4.
[5] *National Register Bulletin #15*, p. 44.
[6] *National Register Bulletin #15*, pp. 44-45.
[7] *National Register Bulletin #15*, pp. 44-45.

- Association is the direct link between an important historic event or person and a historic property.

Context

To be eligible for listing in the National Register, a property must also be significant within a historic context. *National Register Bulletin #15* states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are "those patterns, themes, or trends in history by which a specific...property or site is understood and its meaning...is made clear."[8] A property must represent an important aspect of the area's history or prehistory and possess the requisite integrity to qualify for the National Register.

Historic Districts

The National Register includes significant properties, which are classified as buildings, sites, districts, structures, or objects. A historic district "derives its importance from being a unified entity, even though it is often composed of a variety of resources. The identity of a district results from the interrelationship of its resources, which can be an arrangement of historically or functionally related properties."[9]

A district is defined as a geographically definable area of land containing a significant concentration of buildings, sites, structures, or objects united by past events or aesthetically by plan or physical development.[10] A district's significance and historic integrity should help determine the boundaries. Other factors include:

- Visual barriers that mark a change in the historic character of the area or that break the continuity of the district, such as new construction, highways, or development of a different character;

- Visual changes in the character of the area due to different architectural styles, types, or periods, or to a decline in the concentration of contributing resources;

- Boundaries at a specific time in history, such as the original city limits or the legally recorded boundaries of a housing subdivision, estate, or ranch; and

- Clearly differentiated patterns of historical development, such as commercial versus residential or industrial.[11]

Within historic districts, properties are identified as contributing and noncontributing. A contributing building, site, structure, or object adds to the historic associations, historic architectural qualities, or archeological values for which a district is significant because:

- It was present during the period of significance, relates to the significance of the district, and retains its physical integrity; or

- It independently meets the criterion for listing in the National Register.[12]

[8] *National Register Bulletin #15*, p. 7.
[9] Ibid, p. 5.
[10] Title 36 Code of Federal Regulations Part 60.3(d).
[11] *National Register Bulletin #21*, p. 12.

2.2 California Register of Historical Resources

In 1992, Governor Wilson signed Assembly Bill 2881 into law establishing the California Register. The California Register is an authoritative guide used by state and local agencies, private groups and citizens to identify historic resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse impacts.

The California Register consists of properties that are listed automatically, as well as those that must be nominated through an application and public hearing process.[13] The California Register automatically includes the following:

- California properties listed in the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 0770 onward; and
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

The criteria for eligibility of listing in the California Register are based upon National Register criteria, but are identified as 1-4 instead of A-D. To be eligible for listing in the California Register, a property must be at least 50 years of age and possess significance at the local, state, or national level, under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

Historic resources eligible for listing in the California Register may include buildings, sites, structures, objects, and historic districts. Resources less than 50 years of age may be eligible if it can be demonstrated that sufficient time has passed to understand its historical importance. While the enabling legislation for the California Register is less rigorous with regard to the issue of integrity, there is the expectation that properties reflect their appearance during their period of significance.[14]

[9] *National Register Bulletin #16*, p. 16.
[13] Public Resources Code Section 5024.1.
[14] Public Resources Code Section 4852.

The California Register may also include properties identified during historic resource surveys. However, the survey must meet all of the following criteria:[15]

1. The survey has been or will be included in the State Historic Resources Inventory.

2. The survey and the survey documentation were prepared in accordance with office (OHP) procedures and requirements.

3. The resource is evaluated and determined by the office (OHP) to have a significance rating of Category 1 to 5 on a DPR Form 523.

4. If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

OHP Survey Methodology

The evaluation instructions and classification system proscribed by OHP in its *Instructions for Recording Historical Resources* provide a three-digit evaluation code for use in classifying potential historic resources. In 2003, the codes were revised to address the California Register. The first digit indicates the general category of evaluation. The second digit is a letter code to indicate whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number, which is coded to describe some of the circumstances or conditions of the evaluation. The general evaluation categories are as follows:

1. Listed in the National Register or the California Register.

2. Determined eligible for listing in the National Register or the California Register.

3. Appears eligible for listing in the National Register or the California Register through survey evaluation.

4. Appears eligible for listing in the National Register or the California Register through other evaluation.

5. Recognized as historically significant by local government.

6. Not eligible for listing or designation as specified.

7. Not evaluated or needs re-evaluation.

[15] Public Resources Code Section 5024.1.

3. ENVIRONMENTAL SETTING

3.1 Historic Contexts

U.S. Military History in Los Angeles Leading up to World War II

Los Angeles was captured by American forces from Mexican militia in the summer of 1846, and became part of the United States in 1850 when California joined the union. In order to consolidate their conquest the U.S. military constructed Forts Hill and Moore, as well as a naval base in San Pedro. Fort Hill was positioned atop a hill overlooking El Pueblo. Six weeks later Fort Moore was constructed on the very same hill near the present-day intersection of North Hill Street and Cesar Chavez Avenue. The military has maintained a presence in San Pedro ever since, while all that remains of Fort Moore is a memorial.

During the Civil War, California provided 17,000 volunteers despite the fact that a significant portion of the state's population emigrated from southern states.[16] Many of these men served in battalions in the east, but others served in Arizona. Because of the large amount of Confederate sympathizers in Southern California, the federal government maintained a strong military presence in the state. Through the Civil War several camps were established to house the Union Army. Among them were Camp Latham, Camp La Cienega, and Camp Drum.[17]

In the early 20th century, Los Angeles established its official port at San Pedro. This port would quickly become the largest port on the West Coast.[18] The military quickly realized that such an important port should not be vulnerable to attack and constructed Fort MacArthur. Large gun batteries were added to the fort during World War I and removed after World War II. During the Cold War the fort became part of the Nike surface-to-air missile defense system. In the late 1970s part of the fort was declared surplus property. It was purchased by the City of Los Angeles and converted into Angel's Gate Park. The remainder of the fort became an air force base, which is what it remains today.[19]

U.S. Military History in the Los Angeles Area During World War II

World War II was a very different war for Los Angeles residents. Unlike previous wars, Los Angeles was under the threat of real attack. The American Civil War and World War I had both been fought far away from the city, but Los Angeles' position on the Pacific Coast meant that many Angelinos would experience much more drastic effects of war. An example of this was the Battle of Los Angeles. The battle was actually a false alarm caused by the sighting of unidentified aircraft. The defense forces of Southern California took the threat seriously and sounded air raid sirens, ordered blackouts, and began shooting flak into the skies.[20] Despite no enemy aircraft being confirmed, the event still showcased the Army's level of preparedness for a real attack.

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[16] California State Military Museum, "California and the Civil War," accessed June 24, 2013, http://www.militarymuseum.org/HistoryCW.html

[17] ASM Affiliates, *SurveyLA Historic Context Statement, Context: Institutional Development: Government and Private, Theme: Military Institutions and Activities*, 2012.

[18] Ibid.

[19] Fort MacArthur Museum, "The History of Fort MacArthur," accessed June 27, 2013, http://www.ftmac.org/Fmhist.htm

[20] Ibid.

At the outset of the war, Los Angeles became a major center for aircraft and ship production and repair. Before the war San Pedro shipyards employed approximately 20,000 workers. During the war that number more than quadrupled. The city also became a hub for the construction of aircraft for the war effort. Los Angeles' shipyards and factories incentivized the Army to increase the city's defenses.

Early in the war the Navy did not have enough ships to patrol the entire West Coast. Thus, they commandeered all manner of ships in order to patrol the coast until enough warships could be manufactured. This included all yachts in California as well as a large number of tuna fishing boats.[21]

Airbases were constructed next to the Los Angeles International Airport and in Santa Ana, and air units were placed in other airports such as the 146th tactical airlift wing at the Van Nuys Airport.[22] In the desert, anti-aircraft gunners were trained to defend the skies around Los Angeles region at Camp Haan. At another desert camp soldiers practiced tank warfare.[23]

After the attack on Pearl Harbor, the organization and movement of troops to the Pacific Theater became one of the primary objectives of the U.S. Army. The Port of Embarkation in San Francisco, established in 1898 during the Spanish-American War, became the nerve center for the transportation of men and materials across the Pacific Ocean. However, it was quickly overwhelmed by such a large mission, so the Army established new ports of embarkation in Los Angeles, Seattle, and Portland.

The Los Angeles Port of Embarkation included docks and warehouses in Los Angeles Harbor, a hospital in Torrance, Camp Anza in Riverside, and ammunition storage in Rialto. Peak employment was over 15,000 personnel.[24] The Port of Embarkation served as the first and last point of entry for military troops; men would receive their final training at the staging areas or be hospitalized upon their return.[25]

The Army constructed the Los Angeles Port of Embarkation Station Hospital in 1943 in Torrance. The hospital provided health services to the families of servicemen in the area, as well as wounded servicemen returning from the Pacific Theater. The site consisted of 77 one-story wood-framed barracks buildings organized into neat rows. In 1946, the site was declared Army surplus and purchased by the County of Los Angeles for $48,271.[26] The hospital was converted into the Los Angeles County Harbor General Hospital to serve the civilians in the South Bay. In 1951, the hospital became affiliated with the UCLA School of Medicine.

Both civilians and military personal used other hospitals during the war. In Van Nuys the Army built Birmingham General Hospital named after Brigadier General Henry Patrick Birmingham. The buildings followed the same plan as the station hospital in Torrance: dozens of wood-framed barracks situated in rows. The hospital had 1,777 beds,

[21] Roger W. Lotchin, *Bad City in the Good War* (Indiana: Indiana University Press), p. 8.
[22] Ibid, p. 9.
[23] Ibid.
[24] No Author, "Port of Embarkation Posts 'Closed' Signs," *Los Angeles Times,* March 30, 1946, accessed June 10, 2013 via ProQuest.
[25] No Author, "Army's Gigantic Transport Corps Two Years Old," *Los Angeles Times,* July 31, 1944, accessed June 10, 2013 via ProQuest.
[26] California State Military Museum, "Historic California Posts, Stations and Airfields Los Angeles Port of Embarkation Station Hospital," accessed June 26, 2013, http://www.militarymuseum.org/LAPEStnHosp.html.

approximately half of which were reserved for returning soldiers. The hospital's location near Hollywood meant that movie and radio stars frequented the hospital. The site was even the filming location for Fred Zimmerman's "The Men." In 1953, the majority of the hospital was torn down and replaced by the Birmingham Junior High School (now the Birmingham Community Charter High School). The rest of the site was retained by the Army and used as a missile defense battalion during the Cold War. These barracks survive and are now used by the Daniel Pearl Magnet High School.

One of the more unusual military hospitals developed by the Army was the Pasadena Area Station Hospital, also referred to as the McCormack General Hospital. The hospital was originally the Vista del Arroyo Hotel and Bungalows. In the 1880s, a small inn occupied the site overlooking the Arroyo Seco. Hotel tycoon, Daniel M. Linnard purchased the inn in 1919 and demolished it to make way for the existing buildings, which were constructed during the 1920s and 1930s.[27] In 1943, the Army acquired the property and began using it as a hospital, as well as offices. It primarily served as a convalescent hospital for Army officers. It continued to function as a hospital until 1949. The building was once again put to federal use as the U.S. Court of Appeals and Federal Building in 1985.

Another important military hospital was part of the Long Beach Naval Base at Terminal Island. The base had been established in 1917, but when the war began the base expanded beyond Terminal Island and the Terminal Island Dry Dock Facility was constructed. Because of the limited size of the island, the dry dock was never the permanent home for any of the Navy's ships, instead the dry dock was mainly used for ship repair. In addition to the dry dock the Navy built barracks, large cranes, a boiler shop, a plate shop, massive above-ground and underground fuel storage facilities, a net depot, an ammunition depot, a large hospital, a prison, a degaussing range, a radio station, and an airfield.[28] After the war the facility played a large part in the demilitarization process by decommissioning several warships. The hospital was located on East Carson Street and continued to function until 1994 when it officially closed. It was eventually demolished and replaced with a shopping center.

History of Public Heath in the Los Angeles Area[29]

In the 1960s, the Los Angeles City Health Department merged into the Los Angeles County Health Department. In 1972, the Los Angeles County departments of hospitals, public health, and mental health, along with the veterinarians' office, were merged into the Department of Health Services (DHS) to provide integrated health services.

DHS currently operates four hospitals: Los Angeles County-USC Medical Center, Olive View-UCLA Medical Center, Martin Luther King Jr. Community Hospital, and Harbor-UCLA Medical Center. In addition the Rancho Los Amigos National Rehabilitation Center provides physical therapy services to individuals around the county. The oldest of these is Los Angeles County-USC Medical Center, originally called Los Angeles County General Hospital.

[27] California State Military Museum, "Historic California Posts McCornack General Hospital (Pasadena Area Station Hospital)," accessed June 26, 2013, http://www.militarymuseum.org/McCormackGenHosp.html.
[28] California State Military Museum, "Naval Station Long Beach", accessed July 1, 2013, http://www.militarymuseum.org/NOBLongBeach.html.
[29] This context was largely derived from the article by Michael R Cousineau and Robert E. Tranquada, "Crisis & Commitment: 150 Years of Service by Los Angeles County Public Hospitals," in *American Journal of Public Health* (April 2007) accessed June 26, 2013, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1829364/.

Los Angeles County's health care system began in 1856, when six Daughters of Charity of St. Vincent DePaul traveled to Los Angeles from Emmitsburg, Maryland, to open a hospital. Their eight-bed facility later became St. Vincent's Hospital, from which the County purchased medical services for indigent patients at a cost of $1.22 a day. It was not long before the cost of caring for the indigent became an issue in Los Angeles, and in 1878, the County opened its own 100-bed Los Angeles County Hospital and Poor Farm as a way of lowering costs to the County. This facility in Downey evolved into the Rancho Los Amigos National Rehabilitation Center.

The Los Angeles County health care system was built under changing and sometimes conflicting social policies governing both public health and welfare for the poor. Although public health laws contributed to the evolution of the DHS, the Los Angeles County health care system emerged largely from the county's responsibility to provide for the health and welfare of its indigent population. The Pauper Act of 1855, adopted shortly after California achieved statehood, evolved to become Section 17000 of the state Welfare and Institutions Code. Passed in 1935, Section 17000 delegated the health and welfare responsibilities of the indigent to the counties. Counties appropriated a portion of their tax base to health care, and by 1966, 66 public hospitals were distributed across all but nine of the 58 counties in California.

Until 1915, public health activities and administration were centered primarily in the City of Los Angeles, which had operated a health department since 1879. The city's first health officer, Walter Lindley, used his office to attract health seekers, individuals who might be lured to Southern California by its warm climate and lifestyle. Families from the East Coast and Midwest came to Southern California, and the population surged. The growing economy also attracted immigrants from Asia and Mexico, who came to Los Angeles searching for employment opportunities.

New communities of immigrants formed outside the city limits of Los Angeles. High rates of infant mortality and infectious disease were reported in the media and discussed by both City and County officials. Residents' fears of communicable disease grew as the number of immigrant families in the area grew, introducing a new dimension to the struggle to expand the Los Angeles County health care system.

In 1915, the Los Angeles County Public Health Department, which had jurisdiction over smaller cities and unincorporated regions, appointed John Larabee Pomeroy, who, as the County's first health officer, confronted high infectious-disease rates among immigrant families. Pomeroy developed a series of 12 free health clinics strategically placed throughout the county that would provide a new front against communicable diseases and alleviate some of the patient care demands at General Hospital.

However, throughout the early years of the Great Depression, private physicians in the county opposed these clinics, fearing they would draw paying patients away from their offices. Under this pressure they were closed by the County's Board of Supervisors. Poor and immigrant families in Los Angeles County had little access to private health care, however, and with the growing concern that immigrants would spread infectious diseases to others, physicians eventually dropped their opposition, facilitating the expansion of public health clinics in the 1940s and 1950s.

The growing rates of infectious diseases contributed to Los Angeles County's decision to build a new facility on the General Hospital campus in the 1920s. Infectious diseases even influenced the design of the new facility, with its vertical stacks of wards separated by

stairwells and elevators to reduce the flow of patients, visitors, and staff, and the spread of infectious agents.

Fear of communicable diseases did not ease the concerns of taxpayers, who were wary of the cost of building the new hospital. An initial bond measure failed and a second narrowly passed in 1923, authorizing a $5 million bond, later augmented by a 10-cent property tax surcharge, to acquire the land and construct the hospital. Actress Mary Pickford dedicated the hospital's eight-ton cornerstone on December 7, 1930, and the 1,680-bed Los Angeles County General Hospital opened in December 1933. Its size was one million square feet, and its cost was $12 million.

As infectious diseases subsided, many of the Los Angeles County General Hospital campus facilities and ancillary hospitals built to treat infectious disease were converted to provide general acute care or even specialty care. Several miles south of Los Angeles County General Hospital, Rancho Los Amigos was started in 1890 as a poor farm and became an internationally recognized rehabilitation institute, but only after the poliomyelitis epidemic pressed it into service as a respiratory center.

Changes in types of health problems facing Los Angeles were not the only factors affecting change in public hospitals. Facilities were added or expanded in response to changing demographic and social forces and events. In 1942, the capacity of the General Hospital was expanded to nearly 3,800 beds to accommodate injured military personnel returning from World War II. At the end of the war, the County acquired two military hospitals: the Los Angeles Port of Embarkation Station Hospital in Torrance (now Harbor-UCLA Medical Center) and a hospital in Long Beach, which was later closed. A 265-bed psychiatric hospital was built next to the General Hospital in 1955, in part as a response to the closures of state psychiatric hospitals. New educational institutions became part of the Los Angeles County Hospital, including the College of Medical Evangelists, which later moved to Loma Linda University, and the California College of Medicine, which moved to become the University of California, Irvine School of Medicine.

Postwar population growth in Los Angeles County and suburbanization had a profound impact on Los Angeles and its health care system. Up to this time, the General Hospital served not only the poor but also some of the middle-income working class who lived in central and east Los Angeles. These communities were thriving, with industries, jobs, and neighborhoods with single-family dwellings. During the postwar population surge of the 1950s, industries, jobs, and money followed the mostly White families to the growing suburban communities. The previously prospering central and east Los Angeles communities became home to a growing number of low-income families who were predominantly Black and Latino.

As employment-related, private health insurance expanded and private hospitals were built to serve growing middle-class suburban communities, health care for the poor became the prominent domain of the Los Angeles County General Hospital. By the 1960s, the hospital had become a medical complex that included the General Hospital, the Pediatric Pavilion, the Psychiatric Hospital, and the Women's and Children's Hospital. It was renamed the Los Angeles County-USC Medical Center.

The social and economic neglect of south-central Los Angeles, capped by police racism, culminated in urban unrest and the Watts riots of 1965, a seminal point in the history of Los Angeles. An independent commission's report on the causes of the Watts

riots identified the lack of health care in south-central Los Angeles and led to the building of the Martin Luther King Jr. Medical Center and the Charles R. Drew Postgraduate Medical School (later to become the Charles R. Drew University of Medicine and Science). Both opened in 1972.

3.2 History and Description of the Study Area

The property located at 1000 W. Carson Street is a medical campus spanning 77 acres. It is bounded by Carson Street on the north, 220th Street to the south, and Vermont and Normandie Avenues to the east and west, respectively. The property is completely flat. There are a number of surface parking lots, roads, and sidewalks scattered throughout the site, though most of the buildings are surrounded by patches of lawn. There are a number of mature trees and shrubs, although a regular planting pattern is not evident.

The property was originally a military station hospital, constructed as part of the Los Angeles Port of Embarkation.[30] The hospital was completed in 1943 and equipped with 600 beds and medical, surgical, and dental facilities in 77 barracks. The original plan also included a theater, sports fields, recreation rooms, and two mess halls.[31] Research did not indicate if these planned recreational facilities were ever constructed.

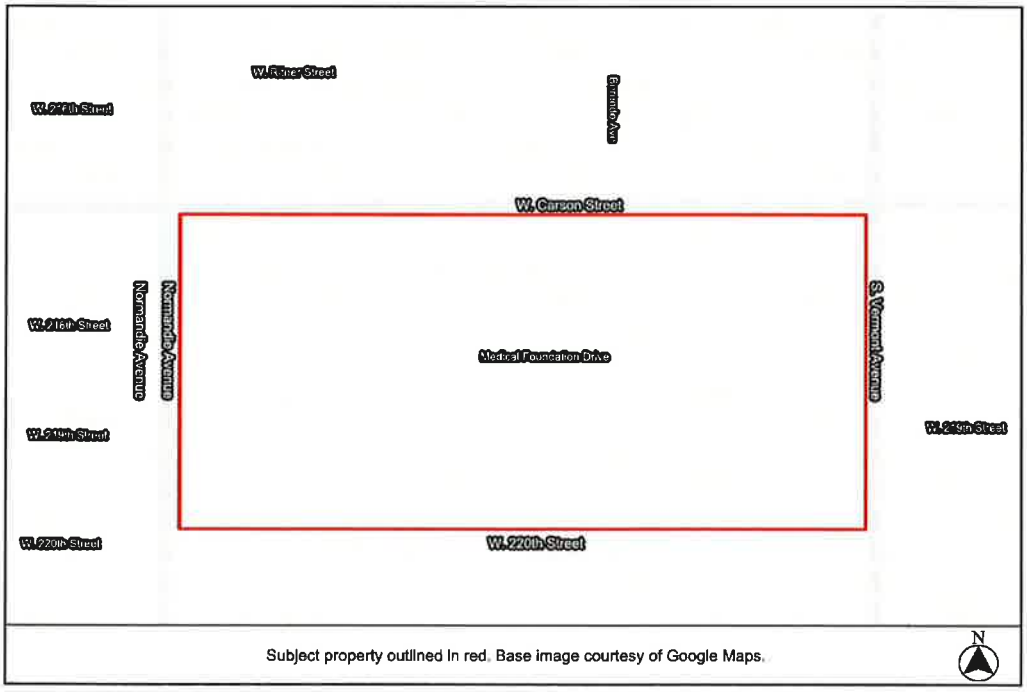

Figure 1: Location Map. Source: Google Maps.

The site consisted primarily of one-story rectangular buildings with gabled roofs and wood clapboard siding. The barracks had multi-light double-hung windows and partially-glazed paneled doors. The majority of the long, thin buildings were oriented facing north-south with covered walkways that connected the buildings running east to west. At the

[30] No Author, "Army's Gigantic Transport Corps Two Years Old," *Los Angeles Times*, July 31, 1944, accessed June 10, 2013, via ProQuest.
[31] No Author, "Army 600 Bed Hospital Ready," *Los Angeles Times*, August 27, 1943, accessed June 4, 2013, via ProQuest.

west end of the site, there was a grouping of small cottages: single-story, square buildings with gabled roofs that were likely used for staff housing.

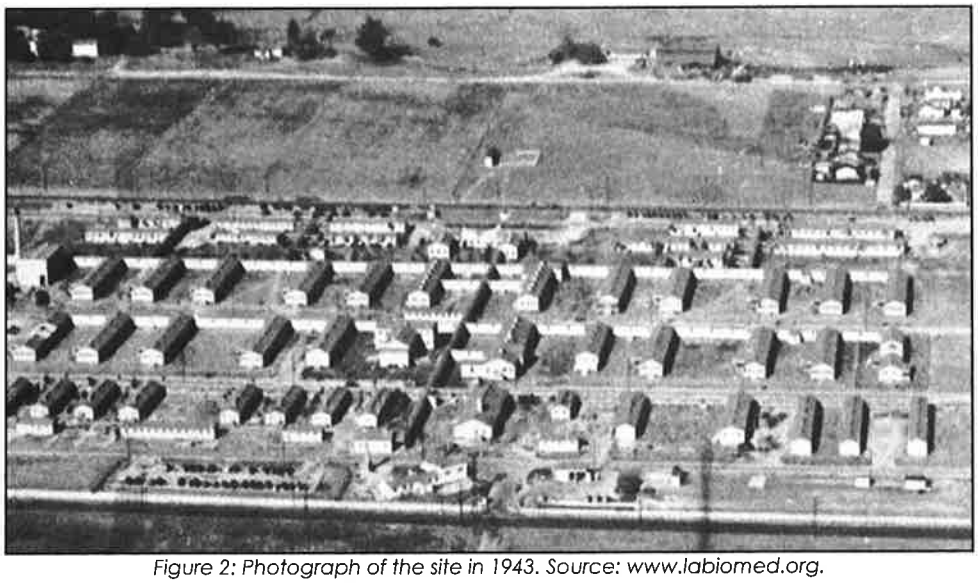

Figure 2: Photograph of the site in 1943. Source: www.labiomed.org.

After the war ended, the last patient to receive treatment at the hospital was discharged in February of 1946.[32] The site was officially closed by the military the following month. [33] At that time Los Angeles County made plans to purchase it to relieve overcrowding at Los Angeles County General Hospital near Downtown Los Angeles. The County purchased the property in June for $48,271 and renamed it Harbor General Hospital.[34]

Harbor General Hospital opened in July of 1946, equipped with 60 beds and 70 employees.[35] Prior to the opening of Harbor General, the South Bay area was sparsely populated and did not require a hospital. Depending on the seriousness of their condition, patients would either be treated at a clinic in nearby San Pedro or at Los Angeles County General Hospital near Downtown Los Angeles.[36] When factories began to spring up in the area to produce materials for the war, those looking for work quickly settled in the area.[37] Tracts of single-family residences were constructed to answer the need for housing. Harbor General operated out of the military barracks, seemingly at a fraction of the original military station hospital's capacity. Harbor General left the site relatively unchanged aside from the addition of just three buildings, as seen on a 1952 aerial photograph of the site. Only one (Building N24, the Outpatient Clinic) of these three early postwar buildings remains.

[32] Harbor-UCLA Medical Center. "Celebrating 50 Years of Caring: The Beginning." Accessed June 19, 2013. http://www.humc.edu/calendar/cabegin.html.
[33] No Author, "County Eyes U.S. Hospital in Torrance," *Los Angeles Times*, February18, 1946, accessed June 10, 2013, via ProQuest.
[34] Harbor-UCLA Medical Center. "Celebrating 50 Years of Caring: The Beginning." Accessed June 19, 2013. http://www.humc.edu/calendar/cabegin.html
[35] Harbor-UCLA Medical Center, "Celebrating 50 Years of Caring: The 1940s-1950s," accessed June 19, 2013, http://www.humc.edu/calendar/ca4050.html.
[36] Harbor-UCLA Medical Center. "Celebrating 50 Years of Caring: The Beginning." Accessed June 19, 2013. http://www.humc.edu/calendar/cabegin.html
[37] Harbor-UCLA Pediatrics. "History of Harbor-UCLA Medical Center," accessed June 26, 2013. http://harborpeds.org/aboutus/ourhistory.

The hospital's first patient arrived in August of 1946 after a plane crash in a nearby field. Later that year, tuberculosis patients were transferred to Harbor General from Los Angeles County General Hospital and were treated in isolation wards. In 1948, Harbor General would also serve as a rehabilitation facility for patients suffering from the polio epidemic.[38]

Harbor General's affiliation with UCLA began in 1951. The Veteran's Administration ruled that hospitals would receive compensation for providing training, encouraging hospitals to introduce residency programs. Soon after, in 1948, the County Board of Supervisors allowed an informal affiliation between UCLA's School of Medicine and Harbor General. UCLA's medical school was founded in 1945, but did not have access to facilities in which to practice. In 1951, UCLA admitted its first medical students and Harbor General served as the medical school's southern campus.[39]

In 1956, a bond measure provided funds for the construction of a new hospital facility. The project consisted of an eight-story hospital and an adjacent two-story wing for outpatient services. The two facilities were designed as a joint effort between architects Welton Becket, Adrian Wilson, Paul R. Williams, and Francis J. Heusel.[40] The hospital was constructed on the east end of the site, which was vacant land with the exception of four barracks at the south end. These barracks were removed for the construction of the new hospital.

The new Harbor General Hospital was completed, and began accepting patients in 1963. No longer necessary for the hospital, the barracks were vacated and slated for demolition. Despite the fact that the barracks were only meant to last seven years,[41] Sherman Mellinkoff, then Dean of the UCLA School of Medicine, saw their potential for additional research space and convinced the County to retain the buildings.[42]

Medical research began at Harbor General in the early 1950s with the formation of the Research Committee under Dr. Walter P. Martin and the Attending Staff Association (ASA).[43] In 1963, the ASA hired a full-time research administrator, Frank J. DeSantis, who sought out grants and contracts for research. In 1973, the Attending Staff Association became the Professional Staff Association, and by 1981, what was then called the Harbor-UCLA Research and Education Institute was established as a separate, non-profit entity. Today the barracks are occupied by the Los Angeles Biomedical Research Institute, commonly known as LA BioMed, which traces its roots back to the ASA.[44]

Based on aerial photographs (please refer to Figures 4-7 below), the site remained much the same from 1943 to 1980. Today, only 42 of the World War II era buildings remain, concentrated in the center of the site. Many of the original buildings have been demolished and replaced with more modern facilities, constructed primarily at the south

[38] Ibid.
[39] Ibid.
[40] No Author, "Furtherance of County Hospital's Set: New Structures Represent Cost of $14,100,000," *Los Angeles Times*, December 28, 1958, accessed June 4, 2013, via ProQuest.
[41] Harbor-UCLA Medical Center, "Celebrating 50 Years of Caring: The 1960s-1970s," accessed June 19, 2013, http://www.humc.edu/calendar/ca6070.html.
[42] LA BioMed, "Our Historical Timeline: Vacated Barracks Become Research Space," accessed June 21, 2013, http://www.labiomed.org/history/.
[43] Harbor-UCLA Medical Center, "Celebrating 50 Years of Caring: Research and Education Institute," accessed June 19, 2013, http://www.humc.edu/calendar/carei.html.
[44] Ibid.

and western portions of the site. The new construction does not follow a unified campus plan and seems to have been constructed randomly, and likely on an as-needed basis.

Some remaining buildings are freestanding, such as Building N14, while others in the B, C, D, E, and F blocks are connected by the original covered walkways. However, some buildings connected to these walkways have been demolished, leaving crude scars such as exposed framing or gable remnants. Thus, the once regular pattern of barracks now has missing pieces, and new buildings have filled some of the gaps.



Figure 3: Building N6, north elevation, view looking southwest. Source: GPA.

The most intact building that remains is Building N6, at the north end of the site. Although it is in generally poor condition, it provides the most insight into how the original buildings appeared in 1943. Building N6 is a rectangular building with a gabled roof and flush eaves. The original roof material is not known and has been replaced with a composition shingle. There are louvered attic vents at the gable ends. At the center of the gable ridge is a wood cupola; the cupola has a gabled roof and is clad in horizontal clapboard with louvered vents on its north- and south-facing sides. The exterior of the building is clad in wide, horizontal clapboards with simple wood corner boards and trim. The building has no foundation and is elevated above ground level by concrete piers. A plywood skirt now encloses the open space beneath the building. The original entrances, based on evidence from Buildings N14 and N6, were partially glazed wood panel doors with sidelights, accessed by wood steps. The windows on Building N6 are eight-over-eight double-hung wood windows surrounded by simple wood trim. Portions of original buildings were identified by the GPA project team based on these characteristics. For descriptions of the other buildings on the site, please see the state historic resource inventory forms (DPR 523 forms) located in Appendix I. For a list of buildings on the site over 50 years of age, please see Table I on the following pages.

TABLE I – BUILDINGS OVER 50 YEARS OF AGE

BUILDING NAME	DEPARTMENT	BUILD DATE
B	Walkway connecting B buildings	1943
B1	LA BioMed – Medicine/Pathology	1943
B2	LA BioMed - Surgery	1943
B3 Annex	Medical Records	1943
B4	LA BioMed – Pediatrics/Psychiatry	1943
C1	LA BioMed - Medicine	1943
C2	LA BioMed – Medicine/Obstetrics	1943
C3	LA BioMed - Surgery	1943
D	Walkway connecting D buildings	1943
D1	LA BioMed	1943
D3	LA BioMed – Obstetrics and Gynecology/Medicine	1943
D5	Outpatient Psychiatry	1943
D6	Outpatient Psychiatry	1943
E	Walkway connecting E buildings	1943
E2	LA BioMed - Medicine	1943
E3	LA BioMed – Pituitary Hormone Center	1943
E4	LA BioMed – Pediatrics	1943
E5	LA BioMed – Medicine/Clinical Trials	1943
E6	LA BioMed – Anesthesiology/Medicine/Pathology/Surgery	1943
F	Walkway connecting F buildings	1943
F1	LA BioMed	1943
F2	LA BioMed	1943
F3	Facilities Management	1943
F4	Facilities Management/Hospital Plan. & Arch.	1943
F5	Storage	1943
F6	Storage	1943
F7	Surgery	1943
F8	Resource Center/Sleep Rooms	1943
F9	Storage	1943
H1	LA County Transportation	1943
N	Walkway connecting N buildings	1943
N6	Medical Records	1943
N14	LA BioMed – Administration	1943
N17	Patient Resource Center/Snack Bar	1943
N22	Clinical Social Work/Outpatient Pharmacy	1943
N24	Outpatient Clinics	1950
N28	Women's Health Care Clinic	1943/50
N34	DHS – Child Health Disability & Prevention	1943

BUILDING NAME	DEPARTMENT	BUILD DATE
T1	Facilities Management	1943
Cottage #14	Public Health	1943
Cottage #16	Nursing – Home Health Care	1943
Cottage #18	Medical Records	1943
Paint Shop	Facilities Management	1943

Common alterations to the buildings include: incompatible additions; the replacement of the original cladding with T1-11 siding or stucco in part or entirely; the removal of the corner boards; the replacement of the foundation skirts with plywood; the replacement of original doors and windows and in some cases, removal of door and window openings entirely; the addition and then removal of wall mounted air conditioning units; the addition of newer heating and air conditioning equipment and ducts which are exposed on the exteriors; and the addition of handicapped access ramps. For a full list of permitted alterations, please see the permit tables in Appendix II.

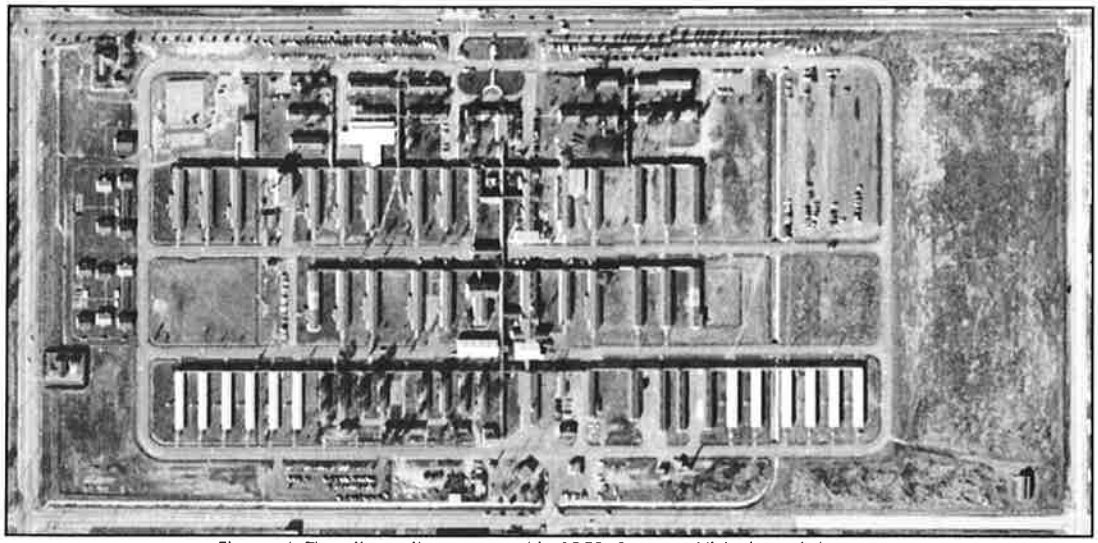

Figure 4: The site as it appeared in 1952. Source: Historicaerials.com

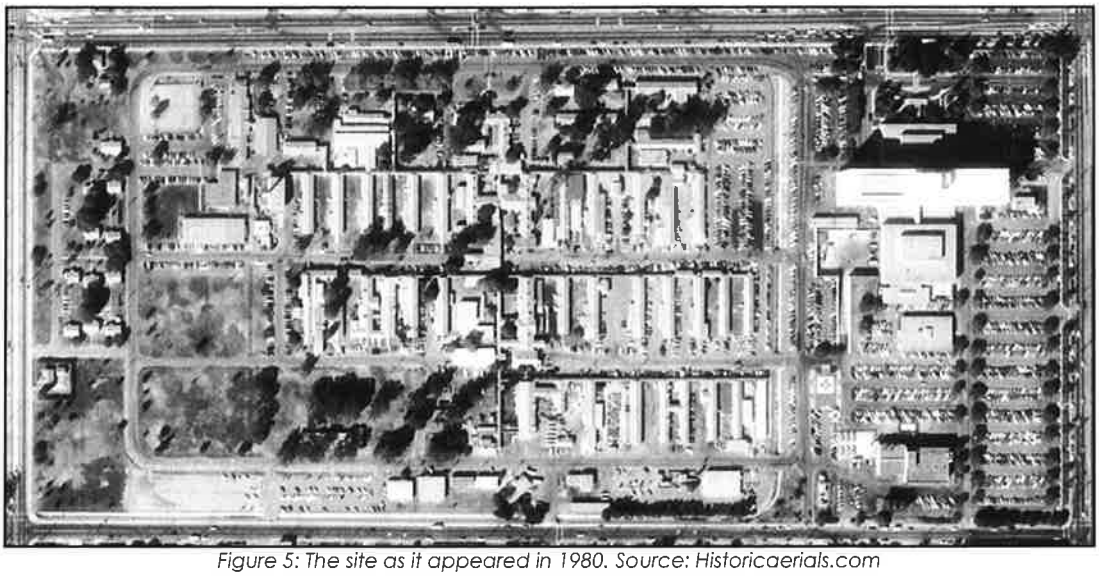

Figure 5: The site as it appeared in 1980. Source: Historicaerials.com

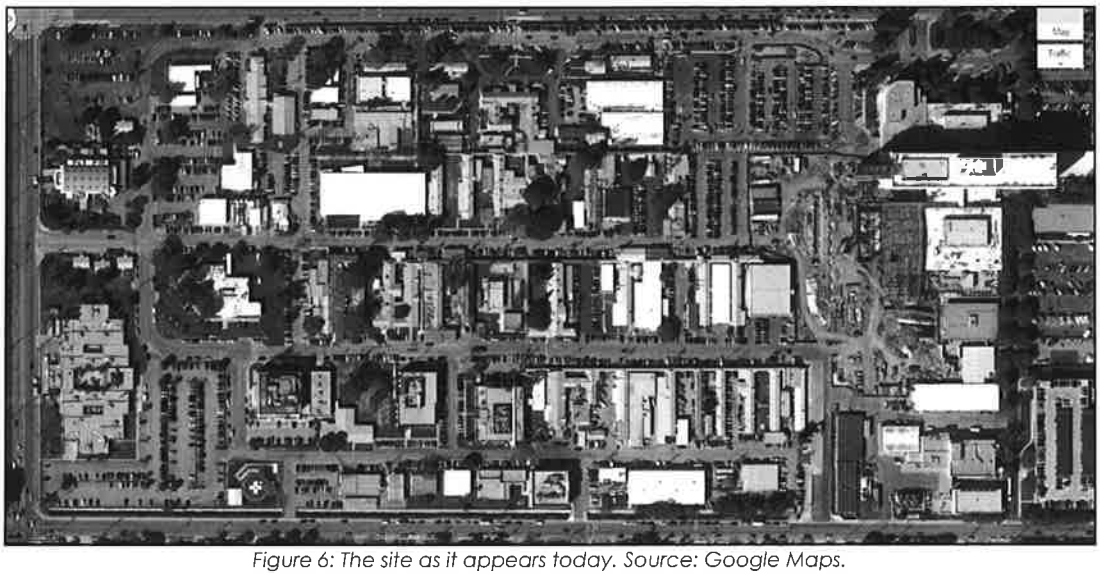

Figure 6: The site as it appears today. Source: Google Maps.

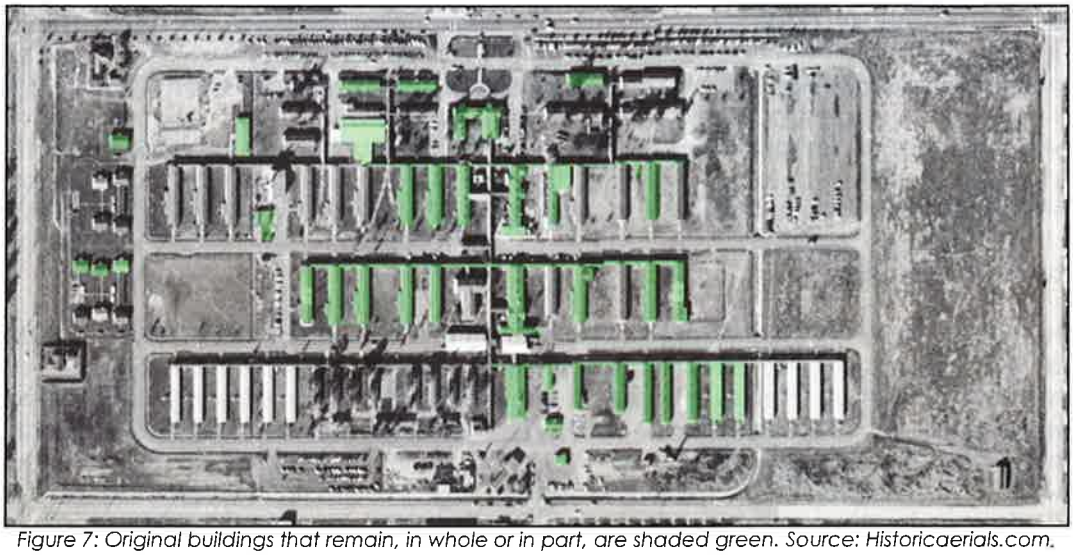

Figure 7: Original buildings that remain, in whole or in part, are shaded green. Source: Historicaerials.com.

4. EVALUATION OF ELIGIBILITY

The medical campus at 1000 W. Carson Street was evaluated for listing in the National and California Registers. The contexts and themes considered in these evaluations included military history during World War II and the history of public health in the Los Angeles area.

4.1 National Register

Large properties with multiple buildings and structures from the same period of time and multiple buildings or structures with a common history and use are typically evaluated to determine if such buildings constitute a historic district. As such, the medical campus was evaluated to determine if it constitutes a historic district. Historic districts usually meet the last portion of Criterion C, "a distinguishable entity whose components may lack individual distinction." However, they must also be significant within a historic context. As such, historic districts may also be historically significant under Criterion A, B, or D, or architecturally significant under other portions of Criterion C.

Criterion A

In order to qualify under Criterion A, a property must be associated with events or trends that have made a significant contribution to the broad patterns of our history. The first context considered under this criterion is World War II military history in the Los Angeles area. World War II had a major impact on the Los Angeles area. The military dramatically increased its presence in the area with the construction of new military facilities, expansion of existing military facilities, and adaptation of existing civilian facilities for military use. These facilities included forts, camps, airfields, shipping yards, submarine bases, and hospitals. Thousands of people relocated to the Los Angeles area during the period for jobs in the defense industry.

In order to create staging areas for soldiers being deployed to the Pacific Theater, the construction of military camps in California accelerated. Two troop embarkation points were designated, a main one in San Francisco and a sub-port in Los Angeles. By 1944, Los Angeles was elevated to a full port. The Los Angeles Port of Embarkation expanded

the historic military presence in the Los Angeles Harbor, especially in Wilmington. It is unknown if there are any properties remaining from the period in Wilmington. Because of the lack of available land in the Los Angeles area, the Army constructed Camp Anza on a ranch in Riverside County near the March Air Base. Camp Anza became the main processing center for soldiers waiting to be deployed. Camp Anza is largely gone. There are a few individual buildings remaining, some of which were converted to single-family residences. The station hospital in Torrance was a key component of the Los Angeles Port of Embarkation, because it provided critical medical care to servicemen returning from the Pacific Theater.

The subject property is significant under Criterion A in the context of World War II military history in the Los Angeles area. The property has a direct and significant association with the military build up in the Los Angeles area, because it was expressly constructed to serve military medical needs during World War II and was one of only a few such facilities in the area. The property played an important role in the Port of Embarkation through which over 600,000 military personnel traveled to the Pacific Theater. The period of significance for the property in this context is 1943 to 1946, the duration it was used by the U.S. military.

The second context considered under this criterion is the history of public health in the Los Angeles area, specifically Los Angeles County. The history of public health in Los Angeles County reaches back to the 19th century. By the postwar era it had become a large network of hospitals and clinics serving millions of individuals. The main purpose of the system was and still is to ensure the general health of the citizens, prevent the spread of infectious diseases, and provide critical care to low-income individuals in Los Angeles County. The County of Los Angeles purchased the subject property in 1946 to increase access to medical care in the southern portion of the county. However, the newly founded Los Angeles County Harbor General Hospital remained relatively small, using only a small portion of the military station hospital buildings. As the population in the South Bay continued to grow during the 1950s, the County began to plan for a new hospital facility, which was completed on the eastern portion of the campus in 1963. Therefore, with regard to the evaluation of the original station hospital as a historic resource, the period of significance for this context would be 1946 to 1962.

The property is associated with the history of public health in Los Angeles County. However, as *National Register Bulletin # 15* points out: "Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A: the property's specific association must be considered important as well."[45] The property is not significant under National Register Criterion A because it does not have a specific and important association with this context. It was not constructed specifically as a public health facility, but rather an existing facility that was taken over after World War II. It was created to assist in the decentralization of public health services in the county during the postwar period. Therefore, it is not any more or less important than any other facility in the network created after World War II. Furthermore, there is no evidence that there were any advances made in public health on the property during the period of significance. The programs, for which the hospital is well known, specifically the programs in women's health care and emergency medicine, were not established until 1969.

[45] *National Register Bulletin #15*, p. 12.

Criterion B

To be eligible for listing in the National Register under Criterion B, a property must be associated with the lives of persons significant in our past. As a hospital (whether it was operated by the U.S. Army or the County of Los Angeles) thousands of individuals have worked at and even more have received medical care on the campus. There is no doubt that among these employees were some particularly accomplished doctors, nurses, and healthcare professionals. However, their collective achievements would be better understood within the contexts of World War II military history and the history of public health in the Los Angeles area under Criterion A. Additionally, research did not reveal any particular individuals, significant or otherwise, who were directly associated with the property. Therefore, the property does not appear to be significant under Criterion B.

Criterion C

To be eligible for listing under Criterion C, a property must embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.

The property, in its original form, was a typical example of an Army hospital constructed for the mobilization of military personnel during World War II. During World War II, the Army constructed temporary hospitals in the United States, as permanent hospitals on military bases did not have the capacity to care for the massive increase in personnel. These temporary hospitals were much like cantonments (temporary garrisons and training camps) in that they included a complement of buildings that were quickly constructed.

At the beginning of the 20th century the Army developed standards for mobilization camps. The standards remained unchanged through World War I. As late as 1930, the *Handbook for Quartermasters* contained construction documents for single-story unpainted wood-framed buildings with gabled roofs and wood-sash windows. These documents evolved into the Series 700 barracks that accounted for the majority of Army buildings erected between 1940 and 1941. The World War II buildings were painted, doors were moved from side elevations to gable ends, and ventilators were added to gable ends in buildings with ceilings. Interiors remained unpainted and uninsulated in most cases. Concrete piers and footings replaced treated timber posts, which helped to prolong the life of World War II era temporary buildings. Concrete slabs were poured for showers and latrines, which remained separate buildings. The Series 800 barracks were introduced in 1941 and further modified by the Army Corps of Engineers in 1942. The design of barracks could be adjusted for a variety of uses, such as mess halls; however, detailed plans were also developed for specialized buildings such as field houses for recreational activities. Security against armed attack was not a consideration in the layout of cantonments or hospitals. Therefore, buildings were generally organized into evenly spaced rows.[46]

The property is not significant in the context of military architecture or planning. Not enough of the original layout remains, but more importantly the original layout was not unique in any way. The barracks and other buildings were mostly situated in rows that

[46] John S. Garner. *World War II Temporary Military Buildings: A Brief History of Cantonments and Training Stations in the United States* (Champaign, IL: U.S. Army Construction Engineering Research Laboratories), pp. 35-39.

resulted in a mundane and repetitive plan with no central feature. The buildings are not collectively or individually significant for their architecture as they merely followed the standards that were dictated by the Army and used throughout the country. Therefore, the property does not represent a significant distinguishable entity whose components may lack individual distinction, and the buildings do not represent the work of a master architect, embody the distinctive characteristics of a type, period, or method of construction, or possess high artistic values. Therefore, the property and its buildings do not appear to be significant under Criterion C.

Criterion D

Criterion D was not considered in this report, as it generally applies to archeological resources; however, there is no reason to believe that the property has yielded or will yield information important to the prehistory or history of the local area, state, or nation.

Assessment of Integrity

To be eligible for listing in the National Register, a property must not only be shown to be significant under the National Register criteria, but it must also have integrity. Integrity is the ability of a property to convey its significance. While some factors of integrity are more important than others depending on the property, a majority of the seven should be retained.

To be eligible for listing in the National Register, historic districts must retain integrity as a whole. For a district to retain integrity as a whole, the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished.[47] In other words, the integrity of each building within a potential historic district is also evaluated to determine if it is contributing or non-contributing. Only those buildings that were present during the period of significance and retain their integrity are counted as contributing. In addition, the relationships among the district's components must be substantially unchanged since the period of significance.[48] According to National Register Bulletin #15:

> *When evaluating the impact of intrusions upon the district's integrity, take into consideration the relative number, size, scale, design, and location of the components that do not contribute to the significance. A district is not eligible if it contains so many alterations or new intrusions that it no longer conveys the sense of a historic environment.*

Regardless of the significance of the potential historic district in the context of the military history of Los Angeles during World War II, it does not retain integrity as a whole because there are not enough buildings remaining from the period of significance (1943-46). Furthermore, most of the remaining buildings are so altered that they do not retain sufficient integrity to contribute to the potential historic district.

There are roughly 100 buildings on the property, not including sheds and some small temporary buildings. There are 42 buildings on the property remaining from the period of significance. All of them have been altered to some extent. In some cases, the alterations are limited to the replacement of doors and the addition of handicapped

[47] *National Register Bulletin #15*, p. 46.
[48] Ibid.

access ramps. But in most cases the buildings have been engulfed by additions such that their original form, material, and design are no longer evident. Table II below identifies potential contributing and non-contributing buildings to provide an idea of how much change has taken place since the end of the period of significance and to illustrate the lack of historic integrity.

TABLE II – WOULD-BE CONTRIBUTING AND NON-CONTRIBUTING BUILDINGS

BUILDING NAME	CONTRIBUTING NON - CONTRIBUTING	REASON
B Walkway	Contributing	Doors replaced and some windows removed but retains historic cladding, windows, and plan.
B2	Contributing	Cladding replaced but only in the gable ends. Otherwise, retains most of the historic features including windows and clapboards.
B3 Annex	Contributing	Retains almost all historic features including windows and clapboards, aside from a small patch of T1-11 on a side elevation.
C1	Contributing	Retains most of the historic features including windows, clapboards, and cupolas, despite side additions.
D Walkway	Contributing	Retains most of the historic clapboards and windows, some wings removed and doors replaced.
D3	Contributing	Retains almost all of the historic features including clapboards and windows. The side elevation addition is distinct from the original construction.
D5	Contributing	Retains almost all of the historic features including clapboards and windows. The side elevation addition is very distinct from the original construction.
D6	Contributing	Retains almost all of the historic features including clapboards and windows. The side elevation addition is very distinct from the original construction.
E Walkway	Contributing	Retains almost all of the historic features including clapboards and windows. The doors have been replaced, although the original door openings remain.
F8	Contributing	This building, while different from the others, does not appear to have undergone any major alterations. It retains historic metal cladding, metal casements, and paneled entry door.
N Walkway	Contributing	Does not appear to have undergone any major alterations.
N28	Contributing	N28 consists of two historic buildings attached in the center by new construction. The historic portions retain the historic clapboards and windows.
N34	Contributing	All cladding replaced, but retains doors and windows and original plan.
N6	Contributing	Retains almost all of the historic features including clapboards and windows. The doors have been replaced, although one original door opening remains.
B1	Non-contributing	Heavily altered, notably the south elevation. The south

BUILDING NAME	CONTRIBUTING NON - CONTRIBUTING	REASON
		elevation has been stuccoed and the doors and windows have been replaced. The side elevations, while more intact, are almost entirely covered by machinery and equipment.
B4	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed and the doors and windows have been replaced. Most windows on the side elevations have been replaced with metal sliders.
C2	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed and the doors and windows have been replaced. All but three window openings on the side elevations have been boarded up.
C3	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed and the doors and windows have been replaced. Some window openings on the side elevations have been boarded up.
Cottage 14	Non-contributing	All cladding and all windows replaced.
Cottage 16	Non-contributing	All cladding and all windows replaced.
Cottage 18	Non-contributing	All cladding and all windows replaced.
D1	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed and the doors and windows have been replaced. D1 has a number of additions, and many window openings have been boarded up.
E2	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed, large portions of cladding have been replaced and many windows have been replaced.
E3	Non-contributing	South and west elevations are not at all visible due to additions. On the east elevation, the doors have been replaced and the windows have been boarded up, taken up by A/C units, or obscured by security bars.
E4	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed and the doors and windows have been replaced. A large portion of cladding has been replaced with stucco and many windows have been replaced with vinyl.
E5	Non-contributing	All cladding and all windows replaced. A new porch entrance has been constructed on the south elevation.
E6	Non-contributing	Completely surrounded by additions.
F Walkway	Non-contributing	Cladding replaced with stucco.
F1	Non-contributing	All cladding and doors replaced, all window openings in filled, south end truncated and loading dock

BUILDING NAME	CONTRIBUTING NON - CONTRIBUTING	REASON
		installed.
F2	Non-contributing	Very little is visible as F2 is enclosed by a fence; based on what is visible, the original cladding and doors have been replaced.
F3	Non-contributing	All cladding and all windows replaced.
F4	Non-contributing	Large portions of original cladding and windows have been replaced and door openings have been removed.
F5	Non-contributing	All cladding and all doors replaced.
F6	Non-contributing	All cladding and all doors replaced, some windows replaced.
F7	Non-contributing	All cladding replaced, many windows and doors replaced.
F9	Non-contributing	Surrounded by additions, the only visible portion has been stuccoed and the windows have been replaced.
H1	Non-contributing	All cladding, doors and windows have been replaced.
N14	Non-contributing	Retains a good portion of original material including windows and clapboards; however, there are numerous additions.
N17	Non-contributing	All cladding replaced, some windows replaced, some doors replaced.
N22	Non-contributing	All cladding replaced, some windows replaced, some doors replaced.
Paint Shop	Non-contributing	All cladding and doors replaced, some windows replaced.
T1	Non-contributing	All cladding and doors replaced, original window openings and vehicular entrances replaced.

As illustrated in Table II and Figure 8 on the following page, of the 42 buildings remaining from the period of significance, only 14 retain sufficient integrity to be considered contributing to the potential historic district. These buildings are generally scattered throughout the property, and they have been joined by new buildings that were constructed on the campus beginning in the early 1980s. Indeed, so many buildings have been added to the campus that it no longer conveys its sense as an historic environment. (Select photographs of the buildings on the property are located in Section 7: Additional Figures).



Figure 8: Would-be contributing buildings are shaded yellow. Source: Google Maps.

A detailed analysis of the integrity of the potential historic district is set forth below:

Location – The place where the historic property was constructed or the place where the historic event occurred.

While many of the buildings from the period of significance have been altered or demolished, they have not been moved to or from another location. Therefore, the integrity of location has been retained.

Setting – The physical environment of the historic property.

The setting of the potential historic district has been greatly diminished by the demolition of the World War II era buildings and the addition of new buildings. Nearly half of the World War II era buildings have been demolished and 87 new buildings have been added to the campus in the last 50 years. Most of the new buildings are incompatible with the World War II era buildings in scale, massing, design, and materials, and their location and orientation do not follow the original plan for the campus. Moreover, the new buildings do not seem to follow a new plan for the campus. Rather, they appear to have been constructed wherever space was available at the time, and each appears to have been designed by a different architect. Therefore, the integrity of setting has been lost.

Materials – The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

The primary material used within the potential historic district is wood, because there were restrictions on the use of metal and other materials during World War II. Metal and petroleum-based building materials were diverted from domestic use to the war effort for the manufacturing of ammunition, as well as military equipment and vehicles. Wood, therefore, was used in the fabrication of the clapboard siding, windows, and doors. On many of the individual buildings, these elements have been removed and replaced or covered by incompatible additions. For example, the original wood cladding has been replaced with T-11 siding or stucco in part or entirely; wood windows have been

removed and replaced, most often with aluminum windows; and wood doors have been replaced with metal doors. Furthermore, the original materials that remain are in fair to poor condition due to moisture penetration. The buildings and their component parts have gone unpainted for so long that bare wood is exposed. As such, the integrity of the materials has been compromised.

Design – The combination of elements that create the form, plan, space, structure, and style of a property.

The design of the potential historic district does not reflect the original use of the property as military station hospital. According to the research, the property included 77 barracks, as well as a theater, sports fields, recreation rooms, and two mess halls. There are 43 buildings remaining from the period of significance.[49] Although they are primarily concentrated in the central portion of the property, they lack cohesion as a grouping. The very distinctive pattern of long rectangular barracks connected by walkways has been lost by the seemingly random demolition of barracks. The pattern of development has been further disrupted by the addition of numerous buildings constructed on the property beginning in the early 1980s. The design of these new buildings is inconsistent with the design of the original buildings. While the original buildings were all one story in height with gabled roofs, multi-light wood windows, and clapboard exteriors, the new buildings have multiple stories with flat roofs, fixed and banded aluminum windows, and mostly stucco exteriors. Moreover, many of the 43 World War II era buildings remaining are lacking in integrity of design, because they have been enveloped by additions that post-date the period of significance for the potential historic district. Therefore, the design integrity of the campus as a whole has been lost.

Workmanship – The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

The potential historic district does not include a high-degree of craftsmanship. The World War II era buildings were constructed very quickly and were only meant to last for seven years. As previously stated, nearly half of the World War II era buildings have been demolished and those that remain have been extensively altered. Therefore, the integrity of workmanship has been lost because there is so little remaining of it from the period of significance.

Feeling – A property's expression of the aesthetic or historic sense of a particular period of time.

In the case of the potential historic district, the concept of feeling would be its reflection of a World War II era military station hospital. While the property is still used as a medical campus, it no longer reflects the period of time when it was constructed and used as a military station hospital. The demolition and alteration of original buildings and the construction of new buildings has negatively affected the feeling of the property. Therefore, the integrity of feeling in the potential historic district is poor.

Association – The direct link between an important event or person and a historic property.

[49] Please note that the east-west walkways connecting the north-south barracks are being counted as individual buildings.

The property does not retain its integrity of association because it is not sufficiently intact to convey its relationship to World War II military history. It does not retain its quality of association as a military station hospital because of the demolition and alteration of original buildings and the construction of new buildings.

Summary of Eligibility

The subject property is not eligible for listing in the National Register. Although it is significant under Criterion A in the context of the military history of Los Angeles during World War II, it does not retain sufficient integrity to convey its significance. While some of the individual buildings retain their integrity from the period of significance, they do not effectively convey the history or significance of the military station hospital on their own. One building on the site was not any more important than another. Therefore none of the buildings on the property are individually eligible for listing in the National Register.

4.2 California Register

Because the California Register criteria mirror those of the National Register, the property at 1000 W. Carson Street is ineligible for listing in the California Register for the same reasons outlined under the National Register evaluation.

5. CONCLUSIONS AND RECOMMENDATIONS

The property at 1000 W. Carson Street is not currently designated a landmark at the national, state, or local levels, nor has it been identified or evaluated as significant in any previous historic resource surveys. The property was evaluated in this report as part of the CEQA compliance process. The property as a whole was evaluated as a potential historic district, but it does not appear to be eligible for listing in the National Register or California Register. While it is significant in the context of World War II military history in the Los Angeles area, it is lacking in integrity. None of the buildings on the property are individually significant because one building alone cannot convey the significance of the former military hospital. The recommended evaluation code for the property is 6Z ineligible for designation at the national, state, and local levels through survey evaluation. Therefore, the property is not a historic resource subject to CEQA. As the project will have no impact on historic resources, no further study is required.

While it is not required, the preservation and rehabilitation of Building N6 is recommended. It is the most intact building remaining on the property. The building could be preserved in place or moved to another location on the campus. If moved, its orientation should be strictly east-west or north-south. The building could continue to function as a part of the medical campus or it could be used for an educational exhibit on the history of the property.

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7. ADDITIONAL FIGURES



Figure 9: Imaging Center, view looking northeast. Source: GPA



Figure 10: Chronic Diseases Clinical Research Center. Source: GPA.



Figure 11: Hanley-Hardison Research Center, north and east elevations, view looking southwest. Source: GPA.



Figure 12: Example of temporary trailers. Source: GPA



Figure 13: Hospital, north and west elevations, view looking southeast. Source: GPA

APPENDIX I: DPR 523 FORMS

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) B Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; 1/4 of 1/4 of Se ; B.M

c. Address B Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Removal of Building B3 leaving behind a scar, original doors replaced.

Notes: Long, narrow building that houses an interior hallway connecting "B" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☐ Building ☑ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

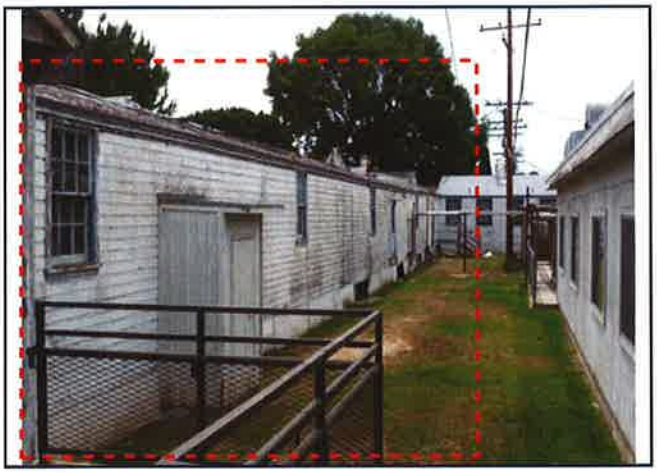
*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) B Walkway - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South elevation, building scar. 6/11/13.



North elevation, view looking southwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Irregular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Cupolas, gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Clapboard, stucco
Primary Elevation: None

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 8-over-8 double-hung
Window Material(s): Wood

Alterations: South elevation cladding replaced, HVAC ducts at east elevation, concrete ADA-accessible ramps with metal handrails at south elevation, plywood skirt around perimeter of building, original doors replaced.

Notes: Entrances on projecting bays, canopies over some entrances, wood steps to entrances on projecting bays, much of the building is surrounded by machinery/equipment.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B1 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South elevation, view looking north. 6/11/13.



West elevation, south end, view looking northeast. 6/11/13.



West elevation, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: L-shaped
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: South

Door Type(s): Slab, partially glazed slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions, south elevation door opening altered, ADA-accessible concrete ramp with metal handrail, plywood skirt around perimeter of building, original doors replaced, some original cladding replaced with T1-11.

Notes: Wood steps to south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B2 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking northwest. 6/11/13.



South elevation, view looking north. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B3 Annex - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B3 Annex - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: None

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 2-over-2 double-hung
Window Material(s): Wood

Alterations: Some original cladding replaced with T1-11, concrete ADA-accessible ramp with metal handrails on east elevation, original door replaced.

Notes: B3 Annex was an annex to Building B3 which has since been demolished. Canopy over south elevation entrance, wood steps to south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B3 Annex - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B4 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B4 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush, open
Roof Material: Composition shingle
Exterior Materials: Wood clapboard,stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, slider
Window Material(s): Wood, aluminum

Alterations: Addition to west elevation, some original windows replaced, HVAC ducts added to west elevation, door opening removed, entrance porch partially demolished, some original cladding replaced with stucco, concrete ADA-accessible ramp at south elevation, plywood skirt around perimeter of building, north elevation door opening altered, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B4 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



Entrance through B Walkway, view looking south. 6/11/13.



West elevation, view looking northeast. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building C1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building C1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Cupolas
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): Multilight awning or hopper, 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions to south and west elevations, HVAC ducts added to west elevation, free-standing water heater shed at west elevation, some window openings boarded up, plywood skirt around perimeter of building, visible doors replaced.

Notes: Wood steps to south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building C1 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking east. 6/11/13.



South elevation, door. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building C2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building C2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, single-hung
Window Material(s): Wood, vinyl

Alterations: Some window openings boarded up, some windows replaced in original openings, concrete ADA-accessible ramp at south elevation entrance, south elevation cladding replaced, addition of gabled projection over south elevation entrance, HVAC ducts added to west elevation, some cladding patched, plywood skirt around perimeter of building, original doors replaced.

Notes: Wood steps at east and west elevation entrances, entrance porch at north end of west elevation supported and enclosed by wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building C2 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.



West elevation, view looking northeast. 6/11/13.



East elevation, view looking northwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building C3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building C3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: South

Door Type(s): Partially-glazed slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung, multi-light hopper, single-hung, slider
Window Material(s): Wood, vinyl, aluminum

Alterations: Some windows boarded up, some windows replaced in original openings, HVAC ducts added to west elevation, some original cladding replaced with T1-11 or stucco, concrete ADA-accessible ramp with metal handrails at south elevation entrance, addition of gabled projection over south elevation entrance, security bars added to some windows, plywood skirt around perimeter of building, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building C3 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.



West elevation, view looking northeast. 6/11/13.



East elevation, view looking southwest. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building D1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Cross-gabled
Roof Features: Gable-end attic vents, cupolas
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: None

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 12-over-12 and 9-over-9 double-hung
Window Material(s): Wood

Alterations: Additions to south and west elevations, the majority of windows boarded up, vent openings sealed, concrete ADA-accessible ramps with metal handrails on south elevation, original doors replaced.

Notes: Canopy over east elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking west. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building D1 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking north. 6/11/13.



South elevation, view looking north. 6/11/13.



West elevation, view looking east. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building D3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab, partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, slider
Window Material(s): Wood, aluminum

Alterations: Additions to south and west elevations, some windows replaced, HVAC ducts added to west elevation, some original doors replaced.

Notes: Wood ADA-accessible ramp on south elevation, wood porch steps on south and west elevation entrances. Large entry porch on west elevation, supported and enclosed by thin wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and west elevations, view looking northeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building D3 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking east. 6/11/13.



Original windows, south elevation. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D5 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building D5 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab door with sidelights
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions on south and west elevations, HVAC ducts added to west elevation, A/C units added to windows, concrete porch steps with metal handrails at south elevation entrance, plywood skirt around perimeter of original building, original door replaced within original opening.

Notes: Entry porch at west elevation supported and enclosed by wood posts, canopy over south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, view looking northeast. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building D5 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South elevation, view looking north. 6/11/13.



West elevation, entrance porch. 6/11/13.



Southeast corner detail. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** _____ **Date** _____ **T** _____ ; **R** _____ ; _____ **1/4 of** _____ **1/4 of Se** _____ ; _____ **B.M**

c. Address Building D6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone _____ ; _____ mE/ _____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

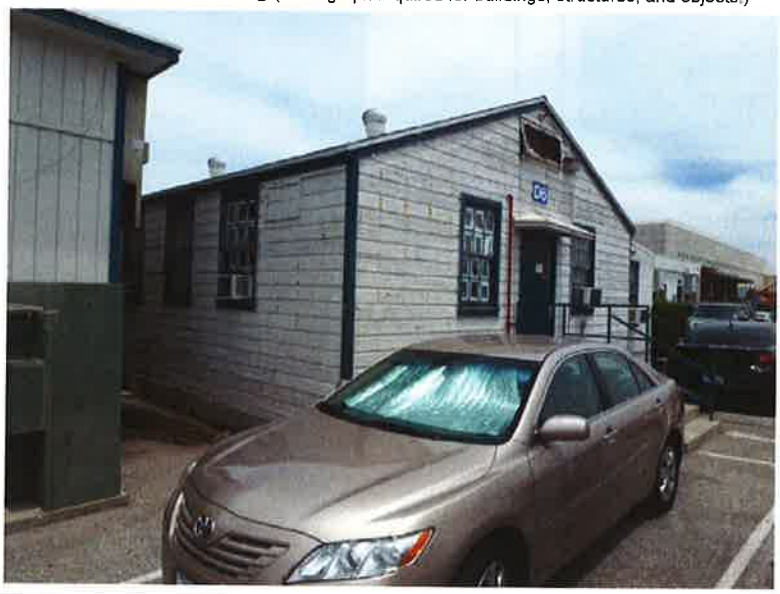
Alterations: Addition to east elevation, vent openings sealed, A/C units in original windows, HVAC ducts added to east elevation, concrete porch steps with metal handrails at south elevation entrance, plywood skirt around perimeter of building, original doors replaced.

Notes: Canopy over south elevation entrance, porch on east elevation supported and enclosed by wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and west elevations, view looking northeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List): _____

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building D6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and east elevations, view looking northwest. 6/11/13.



East elevation, view looking northwest. 6/11/13.



South elevation, attic vent detail. 6/11/13.



Southeast corner detail. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, sliding
Window Material(s): Wood, aluminum

Alterations: Addition to west elevation, windows on east elevation replaced with aluminum sliders, new concrete steps at west elevation, south elevation cladding replaced with stucco, concrete ADA-accessible ramp with metal handrails on west elevation, plywood and chickenwire skirt around perimeter of building, original doors replaced.

Notes: Canopy over west elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, view looking southeast

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building E2 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.



East elevation, view looking west. 6/11/13.



West elevation, south end, view looking southeast. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: None

Door Type(s): Partially-glazed slab
Door Material(s): Metal
Window Type(s): Obscured by screen
Window Material(s): Metal

Alterations: No windows visible, either boarded up or obscured by security bars, A/C units in a number of windows, concrete ADA-accessible ramp with metal handrails at east elevation, chickenwire skirt around perimeter of building, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☑ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E4 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E4 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with fascia board
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung, slider
Window Material(s): Wood, vinyl, aluminum

Alterations: Additions to south and west elevations, some windows replaced within original openings, original doors replaced, addition of gabled projection over south elevation entrance, HVAC unit added to roof, plywood skirt around original portion of building, wood and concrete ramp at west elevation entrance.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking northeast. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building E4 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, south end, view looking northeast. 6/11/13.



West elevation, north end, view looking east. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E5 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E5 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Fixed
Window Material(s): Metal

Alterations: Completely altered - all original windows, cladding and doors replaced, addition of gabled projection over south elevation entrance, HVAC vents added to west elevation, concrete ADA-accessible ramp with metal handrails on south elevation.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building E5 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboards, T1-11, stucco
Primary Elevation: None

Door Type(s): Partially-glazed slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Extensive additions. The original building is "sandwiched" between new construction leaving only the original south elevation visible, HVAC vents added to south elevation, concrete ADA-accessible ramps on west elevation, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building E6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, addition, view looking northeast. 6/11/13.



North elevation, view looking southeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Cross-gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Boarded up
Window Material(s): None visible

Alterations: Loading dock added, stuccoed addition between F1 and F2, HVAC ducts added to east elevation, truncated south end, windows boarded up, original cladding replaced with stucco, original doors replaced.

Notes: Wood porch steps at east elevation.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building F1 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☐ Continuation ☐ Update



East elevation, view looking northwest. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; **1/4 of** **1/4 of Se** ; **B.M**

c. Address Building F2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed slab
Door Material(s): Wood
Window Type(s): None visible
Window Material(s): None visible

Alterations: Stuccoed addition between Buildings F1 and F2, original cladding replaced, visible doors replaced.

Notes: Very little of Building F2 is visible, the majority is enclosed by chain-link fence.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

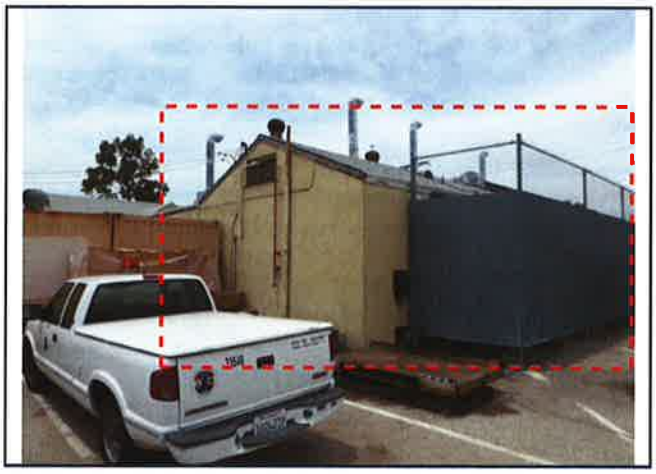
*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F2 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



South and east elevations, view looking northwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, jalousie
Window Material(s): Wood

Alterations: Additions to east, south and west elevations--the original building is "sandwiched" between new construction, original cladding replaced, HVAC ducts added to east elevation, plywood skirt around perimeter of building.

Notes: Wood entry porch with wood porch supports and railing.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building F3 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking southeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F4 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F4 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Some windows replaced, addition to west elevation, original cladding replaced with T1-11 on east elevation, door opening removed from north elevation, window opening altered, security bars added, HVAC ducts added to west elevation, original doors replaced.

Notes: Canopies over east elevation doors, wood walkway along east elevation.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevations, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

*Resource Name or #: (Assigned by Recorder) Building F4 - 1000 W. Carson Street

Recorded By Amanda Yoder

Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



Removed door opening. 6/11/13.



Replacement window and security bars, east elevation. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F5 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F5 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Slab, paneled
Door Material(s): Wood
Window Type(s): Multilight hopper, 2-over-2 and 6-over-6 double-hung
Window Material(s): Wood

Alterations: Original cladding replaced with stucco, some original doors replaced, HVAC ducts added to east elevation, wood ADA-accessible ramp at west elevation.

Notes: Canopies over west elevation entrance, wood stairs at east elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevation, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F5 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



West elevation, view looking southeast. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: None

Door Type(s): Partially-glazed slab
Door Material(s): Wood
Window Type(s): Multilight hopper, 6-over-6 double-hung
Window Material(s): Wood

Alterations: Some window openings boarded up, some original windows replaced, original doors replaced, original cladding replaced with stucco, HVAC ducts added to west elevation.

Notes: Wood steps at east elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevations, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F7 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F7 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: None

Door Type(s): Partially glazed slab
Door Material(s): Wood
Window Type(s): 2-over-2 double hung, multi-light hopper
Window Material(s): Wood

Alterations: Additions to west elevation, original cladding replaced with stucco, some original windows replaced, HVAC ducts added to east elevation, ADA-accessible ramps at west elevation entrances, both concrete and wood, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevations, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building F7 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation additions, view looking east. 6/11/13.



East elevation, view looking southwest. 6/11/13.



West elevation, doorway. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F8 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F8 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Not visible
Foundation: Not visible

Roof Form: Gabled
Roof Features: None
Eaves: Shallow, open
Roof Material: Rolled asphalt
Exterior Materials: Standing seam metal siding
Primary Elevation: North

Door Type(s): Partially-glazed panel
Door Material(s): Wood
Window Type(s): Hoppers, paired casements
Window Material(s): Steel

Alterations: No major alterations were observed.

Notes: This building is significantly different from the rest of the c. 1943 buildings in that its cladding, construction and windows are all made of metal as opposed to wood. Its original function may have differed.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F8 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



East elevation, windows. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F9 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F9 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: None

Door Type(s): None visible
Door Material(s): None visible
Window Type(s): Slider
Window Material(s): Aluminum

Alterations: Original cladding replaced with stucco, original windows replaced with aluminum sliders.

Notes: The only visible portion of F9 is the north gable end.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☑ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building H1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building H1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Slider
Window Material(s): Aluminum

Alterations: Original windows and doors replaced, original cladding replaced, security bars added to some windows, wall A/C units added to north and east elevations.

Notes: Canopies over south elevation entrances, brick structure at north elevation, possibly an incinerator.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #
HRI #

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building H1 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



North and east elevations, view looking southwest. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N14 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N14 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Irregular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents and attic access doors, cupolas
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door with sidelights
Door Material(s): Wood
Window Type(s): 8-over-8 double-hung, sliders
Window Material(s): Wood, aluminum

Alterations: Additions to all elevations, some window openings on west elevation altered, some original windows replaced with aluminum sliders, HVAC ducts added to south elevation, vent openings sealed, non-original concrete steps on north elevation entrances with metal handrails.

Notes: Multiple entrances, accessed by concrete or wood steps. Free-standing wood shed to the rear clad in plywood with a gabled roof, 6-over-6 double-hung wood windows and a wood slab door.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):



North elevation, east end, view looking southwest. 6/11/13.



North elevation, west entrance. 6/11/13.



West elevation, addition detail. 6/11/13.



West elevation, view looking northeast. 6/11/13.



East elevation, view looking west. 6/11/13.



South elevation, free-standing shed. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N17 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N17 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door, slab
Door Material(s): Wood
Window Type(s): Multilight casements, single-hung
Window Material(s): Wood, vinyl

Alterations: Original cladding replaced with stucco, security bars added to some windows, some windows replaced on north elevation, awning added over north entrance, chickenwire skirt around perimeter of building, some original doors replaced.

Notes: Wood entrance ramp on the north elevation, wood porch entrance on the west elevation, porch is supported and enclosed by thin wood beams.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N17 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



North elevation, entrance. 6/11/13.



West elevation, view looking southeast. 6/11/13.



North elevation, typical window. 6/11/13.



North elevation, replacement window. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N22 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N22 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gable
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Multilight casement, 6-over-6 double-hung
Window Material(s): Wood

Alterations: Cladding replaced with stucco, security bars added to some windows, HVAC ducts added to west elevation, original doors replaced, concrete ADA-accessible ramp with metal handrails at north elevation entrance, plywood skirt around building perimeter, doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N22 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking west. 6/11/13.



North elevation, entrance and ramp. 6/11/13.



South elevation, original window. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N24 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N24 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: T-shaped
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Cross-gabled and shed
Roof Features: None
Eaves: Open with fascia board
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North [blocked by new construction]

Door Type(s): Double, slab
Door Material(s): Metal
Window Type(s): Sliders
Window Material(s): Aluminum and wood

Alterations: Additions to east and south elevations, replacement of some windows with aluminum sliders, original cladding possibly replaced with stucco, original doors replaced, HVAC ducts added to east elevation.

Notes: This building appears to date after the property was purchased by Los Angeles County and may be an early Harbor General Hospital building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking west. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1950 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N24 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and east elevations, view looking northwest. 6/11/13.



West elevation, view looking southeast. 6/11/13.



East elevation, original window. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N28 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N28 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Combination hipped/gabled
Roof Features: None
Eaves: Shallow, both open and boxed
Roof Material: Composition shingle
Exterior Materials: Stucco, wood clapboard
Primary Elevation: East

Door Type(s): Slab, fully-glazed
Door Material(s): Wood, metal
Window Type(s): Hopper/awning, 2-over-2 double-hung, sliding
Window Material(s): Wood, metal

Alterations: Additions, replacement of original windows with metal sliding windows, new concrete steps with metal handrails at entrances, HVAC ducts added to east elevation, awning added to primary entrance on west elevation, concrete ADA-accessible ramp with metal handrails at west elevation main entrance, replacement of original doors. This was originally two buildings that were later connected by the stuccoed portion in the center.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, north end, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
1943/50 1952 Historic Aerial/Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N28 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, north end, view looking southwest. 6/11/13.



South and west elevations, view looking northeast. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N34 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N34 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: South

Door Type(s): Partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 3-over-3, 6-over-6 and 8-over-8 double-hung
Window Material(s): Wood

Alterations: Original cladding replaced with stucco, HVAC ducts added to west elevation, new concrete porch steps, concrete ADA-accessible ramp with metal handrails.

Notes: South elevation porch with thin wood porch supports and wood porch enclosure.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N34 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking west. 6/11/13.



South elevation, view looking northwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents and cupola
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 8-over-8 double-hung
Window Material(s): Wood

Alterations: Window opening on west elevation boarded up, HVAC ducts added to south elevation and roof, siding patched, vent openings sealed on south elevation, water heater added to south elevation, east elevation entrance moved, south elevation entrance opening possibly altered, ADA-accessible concrete ramps with metal handrails at entrances on east and south elevations, plywood skirt around building perimeter, original doors replaced.

Notes: Canopy over south entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/17/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



North elevation, view looking southwest. 6/11/13.



East elevation, view looking southwest. 6/11/13.



East elevation and ADA, view looking west. 6/11/13.



South elevation, typical window. 6/11/13



South elevation, HVAC ducts. 6/11/13.



South elevation, entrance. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building T1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building T1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Irregular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: West

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): Multilight awning/hopper, slider
Window Material(s): Wood, aluminum

Alterations: Additions, some window openings boarded up, some windows replaced with aluminum sliders, vehicular openings on north elevation boarded up, original cladding replaced with stucco, original doors replaced.

Notes: Canopy over west elevation entrance, originally used as a gas station.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, view looking east. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building T1 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



North elevation, view looking south. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Cottage 14 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Cottage 14 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Paneled
Door Material(s): Wood
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Original windows replaced (original window openings maintained), original cladding replaced with stucco, new concrete porch steps.

Notes: Entrance porch at north and south elevations with shed roofs supported by thin wood posts, no windows on east elevation.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Cottage 14 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Cottage 16 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Cottage 16 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Paneled
Door Material(s): Wood
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Original windows replaced (original window openings maintained), original cladding replaced with stucco, new concrete porch steps.

Notes: Entrance porch at north and south elevations with shed roofs supported by thin wood posts, no windows on east elevations.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #
HRI #

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Cottage 16 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Cottage 18 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Cottage 18 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Paneled
Door Material(s): Wood
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Original windows replaced (original window openings maintained), original cladding replaced with stucco, new concrete porch steps.

Notes: Entrance porch at north and south elevations with shed roofs supported by thin wood posts, no windows on east elevations.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Cottage 18 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) D Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address D Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal, wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions to north elevation, removal of Building D4 and patch with T1-11, original doors replaced.

Notes: Long, narrow building that houses an interior hallway connecting "D" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☐ Building ☑ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southeast. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):



South elevation, building scar. 6/11/13.



North elevation, gable remnant. 6/11/13.



South elevation, severe window deterioration. 6/11/13.



Interior, severe termite damage. 6/11/13.



Interior, floor damage. 6/11/13.



Interior wall materials. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) E Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; **1/4 of** **1/4 of Se** ; **B.M**

c. Address E Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal, wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions to north elevation, replacement of original doors, alterations to door openings.

Notes: Long, narrow building that houses an interior hallway connecting "E" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

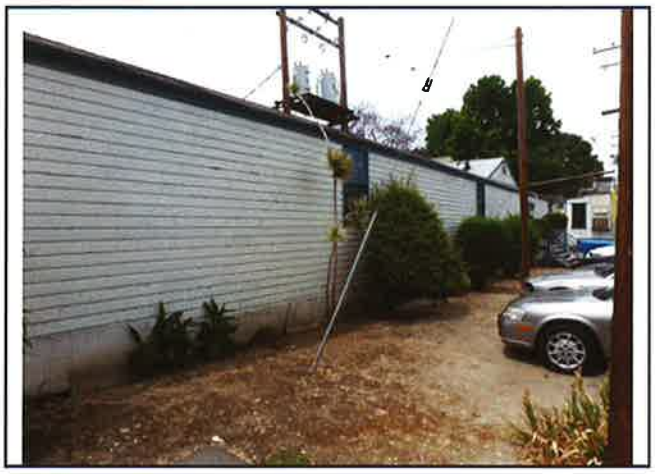
***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) E Walkway - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



North elevation, view looking southwest. 6/11/13.



South elevation, view looking north. 6/11/13.



South elevation, view looking north. 6/11/13.



North elevation, altered entrance. 6/11/13.



North elevation, altered entrance. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) F Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address F Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 2-over-2 double-hung
Window Material(s): Wood

Alterations: Portions of F Walkway are enclosed, but the majority is a covered, open walkway supported by thin wood posts and covered with a gabled roof. It may have been entirely open or entirely enclosed originally.

Notes: Long, narrow building that houses an interior hallway connecting "F" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building. Portions of F Walkway are open and covered with a gabled roof supported by thin wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) F Walkway - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



F Walkway, view looking east. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) N Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address N Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: None

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: None
Primary Elevation: None

Door Type(s): None
Door Material(s): None
Window Type(s): None
Window Material(s): None

Alterations: No major alterations were observed.

Notes: Long, narrow open walkway covered by a gabled roof supported by thin wood posts, connects "N" buildings.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☐ Building ☑ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
N Walkway, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☑ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Paint Shop - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Paint Shop - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: L-shaped
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Combination
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: East

Door Type(s): Single and double, slab doors
Door Material(s): Metal
Window Type(s): Sliders, fixed, 6-over-6 double-hung
Window Material(s): Aluminum, wood

Alterations: Additions, original cladding replaced with stucco, door opening removed, security bars added to some windows, awnings added to some windows, non-original doors.

Notes: No skirt around building base.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Paint Shop - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northwest. 6/11/13.



East elevation, north end, view looking northwest. 6/11/13.

*Required Information

APPENDIX II: ALTERATION PERMITS

N BLOCK				
Building	Applicant	Owner	Date	Work Completed
N28	R.E. Shonerd	Los Angeles County	9/21/1950	Add flammable liquid storage vault for pharmacy
N6	S. A. DiGiamaopolo	Los Angeles County	2/29/1968	Change partitions, add sheetrock to walls
N14	S. A. DiGiamaopolo	Los Angeles County	3/12/1971	Install interior partitions
N14	S. A. DiGiamaopolo	Los Angeles County	6/21/1971	1,500 sq.ft. addition, a covered loading dock for receiving office supplies
N24	Clyde M. Johnson	Los Angeles County	12/22/1971	4,000 sq. ft. addition to N24 for research lab
N24	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	12/22/1971	1 - 4 ton compressor, 1 - 5 ton compressor
N14	Clyde M. Johnson	Los Angeles County	5/4/1972	Cover open section to create new office space
N24	S. A. DiGiamaopolo	Los Angeles County	10/20/1972	225 sq. ft. shed addition to house animals
N22	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/25/1972	1 Compressor
N24	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/30/1972	1 24M BTU Compressor
N22	S. A. DiGiamaopolo	Los Angeles County	12/29/1972	Convert warehouse to offices
N14	Illegible	Los Angeles County	1/4/1973	Relocate 2 doors
N24	S. A. DiGiamaopolo	None listed	1/9/1973	Convert restrooms to examination rooms
N28	S. A. DiGiamaopolo	Los Angeles County	1/19/1973	Join existing structures and make small addition [originally A 14 and 16, joined in the middle by this permit]
N28	Air Tec	Los Angeles County	1/19/1973	Replace existing: 4 air handling units, 2,000 cfms; 4 60M ventilation systems
N17	S. A. DiGiamaopolo	Los Angeles County	2/14/1973	Install partitions and add toilet room

N17	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	2/14/1973	1 - 3 horsepower comrpessor
N14	S. A. DiGiamaopolo	Los Angeles County	8/1/1973	Addition of storage area (plan check only)
N14	Nichols Sheet Metal and Air Co. Inc.	L.A. General Hospital	8/1/1973	1 - 3 1/2 horsepower compressor
N24	None listed	Los Angeles County	10/26/1973	Construct two offices
N14	Illegible	Los Angeles County	3/13/1974	East side addition
N14	S. A. DiGiamaopolo	Los Angeles County	4/15/1974	Addition of office
N6	S. A. DiGiamaopolo	Los Angeles County	5/3/1974	Install 7' high office partition
N28	Paul Thompson	Los Angeles County	6/26/1974	Addition for research
N28	S. A. DiGiamaopolo	Los Angeles County	11/22/1974	Construct telephone equipment room
N28	S. A. DiGiamaopolo	Los Angeles County	1/21/1975	Addtion to clinic
N28	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	1/21/1975	1 - 3hr heat pump, 1 - 5hr heat pump, 1 - 2hr heat pump
N28	Nichols Sheet Metal and Air Co. Inc.	None listed	1/21/1975	1 - heat pump, 126,000 BTUs
N14	Bill Ferguson	Harbor General	9/7/1976	Add 2 walls and shelves
N34	Nichols Sheet Metal and Air Co. Inc.	Harbor General	9/1/1977	A/C unit, gas piping
N34	Paul Burton	Harbor General Hospital	9/21/1977	Remove 3 wall heaters
N28	S. A. DiGiamaopolo	Los Angeles County	10/7/1977	Interior changes, enclosure of play area
N14	S. A. DiGiamaopolo	Los Angeles County	7/6/1978	Wood frame addition for storage
N14	S. A. DiGiamaopolo	Los Angeles County	10/31/1978	Add a room to the existing building
N28	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Alter existing building into storage room and lab
N28	Ernest Garcia	Los Angeles County	12/14/1978	Alteration
N14	S. A. DiGiamaopolo	Los Angeles County	12/19/1978	Add northeast offices to existing building room 7B (Phase I only)

N14	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	1/15/1979	36/100 Gas & electric a/c units
None listed	Frank Gallo	Los Angeles County	1/15/1979	Extension of "A" [now N] ramp
N14	Frank Gallo	Los Angeles County	4/30/1979	Photo machine
N14	R.G. Lyman	Harbor General Hospital	5/9/1979	Install fire sprinklers
N14	S. A. DiGiamaopolo	Los Angeles County	2/1/1980	Interior partitions
N28	S. A. DiGiamaopolo	Los Angeles County	5/5/1980	Install fire sprinklers
N14	S. A. DiGiamaopolo	Los Angeles County	8/4/1980	Construct 30' x 15' lattice patio roof cover
N24	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	1/13/1981	60,000 BTU Compressor
N28	S. A. DiGiamaopolo	Los Angeles County	9/3/1981	Remodel
N14	Howell Barvin (?)	Los Angeles County Harbor-UCLA Medical Center	2/20/1982	Remodel interior
N14	Illegible	Los Angeles County Harbor-UCLA Medical Center	3/18/1982	Fire-rated drywall
N24	SWG Sheet Metal	Los Angeles County Harbor General	12/13/1982	1 - 24,000 BTU Compressor, 1 4 ton gas & electric replacing existing 48,000 BTUs
N24	None listed	Harbor General Hospital	11/24/1984	2 - 60,000 BTU compressors, 28 - supply and return vents
N14	None listed	Harbor-UCLA Medical Center	12/12/1984	Add kitchen
N14	So Dev Concepts Inc	Harbor-UCLA Medical Center	12/12/1984	Move A/C, supply
N14	Halco Const.	Harbor UCLA Medical Center	8/27/1987	Replace T-bar ceiling
N14	Action Fire	Harbor UCLA Medical Center	5/1/1991	Install fire sprinklers
N14	George G. Layman	Los Angeles County	5/1/1991	Enclose shipping dock
N24 and N26	Mary Werk	Los Angeles County Harbor-UCLA Medical Center	11/24/1992	Addition of (state-approved) trailers to existing HIV clinic (foundation only)
N14	Nichols Sheet Metal and Air Co. Inc.	None listed	illegible	1 - 36,000 BTU furnace

B BLOCK				
Building	Applicant	Owner	Date	Work Completed
B2	Illegible	Los Angeles County	11/24/1965	Alter
B2	Charles R. Reid	Harbor General Hospital	2/21/1968	Interior partitions
B5	Illegible	Los Angeles County	3/26/1968	2124 sq.ft. addition to lab building on side of barracks (plan check only)
B6	Illegible	Los Angeles County	6/14/1968	Revision of B6, Area II (plan check only)
B4	Glen Colvin	Harbor General Hospital	10/4/1968	Add windows, one door and siding at barracks
B6	Clyde M. Johnson	Harbor General Hospital	3/19/1969	Add partitions to south end
B3	S. A. DiGiamaopolo	Harbor General Hospital	2/7/1970	Enclose porch on west side
B5	S. A. DiGiamaopolo	Los Angeles County	2/10/1970	Add research laboratory (plan check only)
B5	Charles R. Reid	Harbor General Hospital	2/10/1970	1800 sq.ft. addition for labs and offices
B5	S. A. DiGiamaopolo	Los Angeles County	3/30/1970	B5 addition, northeast end, conference room (plan check only)
B5	A.W. Peterson	Los Angeles County	5/21/1971	Fire damage
B1	S. A. DiGiamaopolo	Los Angeles County	5/21/1971	Alteration of and addition to research lab (plan check only)
B2	S. A. DiGiamaopolo	Los Angeles County	5/21/1971	Install noise ceiling, install tracks for x-ray and add to footings
B4	S. A. DiGiamaopolo	Los Angeles County	2/14/1972	Install cabinets and do necessary work
B3	S. A. DiGiamaopolo	Los Angeles County	4/19/1972	1600 sq.ft. addition for storage
B1	Ernest J. Davis	Los Angeles County	3/15/1973	Remodel, new partitions at rear
B4	S. A. DiGiamaopolo	Los Angeles County Harbor General Hospital	12/17/1973	Addition to existing structure for laboratory
B4	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	12/17/1973	1 - 3 1/2 horsepower compressor
B5	S. A. DiGiamaopolo	Los Angeles County	6/10/1974	2710 sq.ft. addition (plan check only)

B3	None listed	Los Angeles County	8/16/1974	988 sq.ft. addition
B6	S. A. DiGiamaopolo	Los Angeles County	10/16/1974	2769 sq.ft. lab addition (plan check only)
B6	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/16/1974	1 - 5 ton gas/electric compressor; 1 - 3 ton gas/electric compressor
B-2	Colin P. Ward	Los Angeles County	12/10/1974	Install non-load bearing wall
B6	S. A. DiGiamaopolo	Los Angeles County	1/2/1975	Enclose B6 ramp (plan check only)
B1	S. A. DiGiamaopolo	Los Angeles County	12/29/1975	Construct wood frame building with raised-floor offices and lab (plan check only)
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	12/29/1975	2 - 2 horsepower compressors
B5	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	6/20/1976	1 - 3/4 horsepower refrigeration system
B5	Randy Brown	Harbor General Hospital	11/8/1976	Fire sprinklers
B5	Dir. Mech. Services	Los Angeles County	11/8/1976	Wood frame building with raised-floor office and storage area, 435 sq.ft.
B5	Keith Gallo	Harbor General Hospital	5/13/1977	Wood ramp, 25' long, 4' wide
B4	J. Broudreaux	Los Angeles County	5/16/1977	Renovate existing building (plan check only)
B4	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County	5/16/1977	1 - Forced air furnace
B6	J. Broudreaux	Los Angeles County	9/7/1977	144 sq.ft. addition to existing building
B6	Ernest L. Garcia	Harbor General Hospital	9/7/1977	1 - 8,000 BTU compressor
B3	S. A. DiGiamaopolo	Los Angeles County	12/9/1977	Install fire sprinkler to existing building (plan check only)
B2	S. A. DiGiamaopolo	Los Angeles County	12/9/1977	Install fire sprinkler to existing building (plan check only)
B5	S. A. DiGiamaopolo	Los Angeles County	7/18/1978	703 sq.ft. addition to southwest corner (plan check only)

B5	S. A. DiGiamaopolo	Los Angeles County	7/26/1978	Install fire sprinklers in conference room alteration (plan check only)
B5	S. A. DiGiamaopolo	Los Angeles County	7/28/1978	Install fire sprinklers in addition (plan check only)
B5	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	7/28/1978	1 - 55,000 BTU forced air furnace
B	S. A. DiGiamaopolo	Los Angeles County	9/15/1978	"Close in passage way with doors"
B3	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Addition to existing building for use as record storage (plan check only)
B	S. A. DiGiamaopolo	Los Angeles County	12/19/1978	Install "pass-thru" door and counter
B2	S. A. DiGiamaopolo	Los Angeles County	12/19/1978	Construct vestibule and alter existing building
B5	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	3/14/1979	Modify existing duct system
B5	R.G. Lyman	Harbor General Hospital	5/10/1979	Install fire sprinklers
B5	S. A. DiGiamaopolo	Los Angeles County	6/5/1979	Remodel and addition to B5
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	2/15/1980	1 - 48,000 BTU compressor
B1	Ernest L. Garcia	Los Angeles County	12/3/1980	Build 2 partition walls
B6	Western Automatic Sprinkler	Harbor General Hospital	4/28/1981	Install fire sprinklers
B6	S. A. DiGiamaopolo	Los Angeles County	4/28/1981	510 sq.ft. addition to B6
B4	S. A. DiGiamaopolo	Los Angeles County	9/29/1981	Remodel interior
B3	None listed	Los Angeles County	11/15/1981	2 - 100,000 BTU forced air furnaces
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor Hospital	6/22/1982	2 - 60,000 BTU compressors
B4	S. A. DiGiamaopolo	Los Angeles County	7/12/1982	Cold storage room and office
B6	R.E. Thomas Co.	Harbor-UCLA Medical Center	9/2/1982	Add 3 fire sprinkler heads
B6	S. A. DiGiamaopolo	Los Angeles County	9/2/1982	Alteration to building B6 and addition (plan check only)

B2	None listed	Los Angeles County	11/15/1982	2 - 60,000 BTU compressors; 2 - 100,000 BTU furnaces
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor Hospital	11/21/1982	1 - 24,000 BTU compressor; 6 - supply outlets
B5	S. A. DiGiamaopolo	Los Angeles County	1/3/1983	Addition to B5
B4	S&G Sheet Metal	Research Education Institute, Inc.	6/20/1984	2 - 60,000 BTU compressors, 40 - inlets and outlets
B6	S&G Sheet Metal	Research Education Institute, Inc.	6/20/1984	3 - 60,000 BTU compressors, air inlets and outlets
B5	Graves & Son's	None listed	11/20/1984	3 - 60,000 BTU compressors; 15 - supplies
B5	Nichols Sheet Metal and Air Co. Inc.	None listed	11/29/1984	1 - 2 ton heat pump; 6 - supplies
B1	So Dev	Harbor-UCLA Medical Center	12/12/1984	Fire sprinklers
B1	R&J Air Conditioning	Harbor General Hospital	2/20/1985	Adding/relocating 5 units
B1	Halco Const.	Harbor-UCLA Medical Center	3/8/1985	Construct new rooms in exisiting building
B4	Norm Fast	Harbor-UCLA Medical Center	1/22/1991	2,182 sq.ft. addition
B4	R&J Air Conditioning	Research Education Institute, Inc.	10/1/1991	2 - 30,000 BTU units, 28 - outlets

C BLOCK				
Building	Applicant	Owner	Date	Work Completed
C1	Harbor General Hospital	Los Angeles County	1/19/1950	Waiting room addition 168 sq. ft.
C1	Charles Seymour	Los Angeles County	4/29/1963	370 sq.ft. addition to building (plan check only)
C1	None listed	Harbor Hospital	8/6/1968	Area II - C1 remodel (plan check only)
C1	Glen Colvin	Los Angeles County	12/12/1968	Alter/repair C1
C1	Clyde M. Johnson	Los Angeles County	4/9/1970	Add 39x36 research laboratory
C1	S. A. DiGiamaopolo	Los Angeles County	12/14/1970	1,0650 sq.ft. addition to C1 (plan check only)
C1	TRN Heating and Air Conditioning	Harbor General Hospital	12/14/1970	1 - 3 horsepower compressor
C1	S. A. DiGiamaopolo	Los Angeles County	6/23/1972	1,500 sq.ft. addition (plan check only)
C1	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	6/23/1972	1 - 5 horsepower compressor
C1	S. A. DiGiamaopolo	Los Angeles County	3/19/1973	Add 870 sq.ft. C1 Annex Lab (plan check only)
C4	S. A. DiGiamaopolo	Los Angeles County	9/14/1976	Alteration to existing building
C3	S. A. DiGiamaopolo	Los Angeles County	9/23/1976	Alter existing room into offices
C1	S. A. DiGiamaopolo	Los Angeles County	4/7/1978	Alteration to existing building (plan check only)
C1	S. A. DiGiamaopolo	Los Angeles County	4/7/1978	Alteration to existing building (plan check only)
C2	S. A. DiGiamaopolo	Los Angeles County	8/16/1978	Install additional partitions
C3	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	1/15/1979	1 - 36/80 A/C unit compressor
C1	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	3/19/1979	2 compressors: 1 - 3 1/2 horsepower, 1 - 5 horsepower

C2	S. A. DiGiamaopolo	Los Angeles County	6/5/1979	Add a partition
C3	S. A. DiGiamaopolo	Los Angeles County	12/11/1979	Alter rooms 13, 13A, 15 and 17
C3	S. A. DiGiamaopolo	Los Angeles County	12/18/1979	Alter existing building north end into offices (plan check only)
C2	S. A. DiGiamaopolo	Los Angeles County	5/14/1980	Add 10'x3'x6" bubble to east side of building
C2	S. A. DiGiamaopolo	Los Angeles County	8/4/1980	Partition off lobby
C1	S. A. DiGiamaopolo	Los Angeles County	9/16/1980	Addition to building
C1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	6/1/1981	1 - 18M, 40M Heat compressor
C1	Halco Const. Co	Los Angeles County	6/3/1981	Addition to building
C1	S. A. DiGiamaopolo	Los Angeles County	9/3/1981	Install wall and door in C1
C3	S. A. DiGiamaopolo	Los Angeles County	9/3/1981	Alteration to existng building (plan check only)
C3	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	9/3/1981	2 - 48/120 A/C unit compressors
C1	S/P Co. Inc.	Harbor-UCLA Medical Center	5/26/1982	3 - 32,000 CFM air-handling units; 3 <100,000 BTU compressors, 2 exhaust fans
C1	Harbor General Hospital	Los Angeles County	8/11/1982	1,400 sq.ft. addition (plan check only)
C1	R.G. Lyman	Harbor-UCLA Medical Center	4/29/1983	Install fire sprinklers
C1	So Dev.	Harbor-UCLA Medical Center	6/7/1984	"Hallway" (plan check only)
C1	S&G Sheetmetal	Harbor General Hospital	9/19/1984	3 - compressors (1 36,000 BTU, 1 48,000 BTU, 1 60,000 BTU); 38 inlet and outlets
C4	None listed	Los Angeles County	9/21/1984	2 - 60,000 BTU compressor; 2 - 100,000 BTU forced air furnace
C4	None listed	Los Angeles County	11/15/1984	2 - 100,000 BTU forced air furnaces
C5	Los Angeles County	Los Angeles County	11/15/1984	2 - 60,000 BTU compressor; 2 - 100,000 BTU forced air furnace

C2	Gerard Somers	Los Angeles County	5/29/1986	Alteration inside building C2 (plan check only)
C2	Halco Const. Co	Los Angeles County	5/25/1999	Match handicap ramp per permit #BL9905120018

D BLOCK				
Building	Applicant	Owner	Date	Work Completed
D3	Harbor General Hospital	Los Angeles County	2/20/1950	Alterations to building
D1	Robert M. Bigelow	Los Angeles County	10/1/1969	Vet lab, surgery locker room - post mortem
D1	Clyde M. Johnson	Los Angeles County	4/22/1970	Convert storage area to 2 vet labs
D3	S. A. DiGiamaopolo	Los Angeles County	5/4/1971	Connect part of dayroom to an office
D3	Clyde M. Johnson	Los Angeles County	8/17/1971	Alteration of interior partitions
D3	S. A. DiGiamaopolo	Los Angeles County	9/17/1971	480 sq. ft. addition for conference room (plan check only)
D1	Clyde M. Johnson	Los Angeles County	9/17/1971	Roof over wash area
D3	Clyde M. Johnson	Los Angeles County	4/20/1972	Remove interior walls
D1	Frank Gallo	Los Angeles County	12/14/1972	Add 15' partition and 1 door
D1	Frank Gallo	Los Angeles County	2/16/1973	8' roof extend ??? shed roof
D1	Ernest Garcia	Los Angeles County	1/28/1974	Alter storage
D3	Calvin Ward	Los Angeles County	12/10/1974	Relocate 2 walls, relocate door
D4	Calvin Ward	Los Angeles County	12/10/1974	Cover ??? walls
D4	S. A. DiGiamaopolo	Los Angeles County	6/13/1975	Alteration to building D4 - 2x4 studs, 5/8 dry wall partition (plan check only)
D1	S. A. DiGiamaopolo	Los Angeles County	10/1/1975	Addition - animal surgery (plan check only)
D1	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/1/1975	1 - 116M BTU compressor
D1	S. A. DiGiamaopolo	Los Angeles County	4/7/1976	Addition to storage shed at east side of D1
D1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	2/14/1977	1 - 140M BTU forced air furnace
D Ramp	J. Broudreaux	Los Angeles County	7/8/1977	Enclose ramp to make into storage room
D1	S. A. DiGiamaopolo	Los Angeles County	11/4/1977	Relocated existing entrance door

D1	J. Broudreaux	Los Angeles County	11/23/1977	Construct 39'x42' concrete block building - sheep-holding building (plan check only)
D1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	11/23/1977	4 - 1,000 CFM air-handling units, 2 - 69M BTU compressors
D1	Valentini's Refrigeration	Professional Staff Assoc	11/23/1977	2 - 60,000 BTU compressors; 2 - ventilation systems; 2 - 120,000 BTU forced air furnaces
D4	S. A. DiGiamaopolo	Los Angeles County	10/10/1978	Divide existing room with 1-hour rated partition (plan check only)
D1	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Alter existing building (plan check only)
D3	Frank Gallo	Los Angeles County	1/15/1979	Raising foundation for repair
D6	S. A. DiGiamaopolo	Los Angeles County	1/15/1979	Install new doorway
D6	S. A. DiGiamaopolo	Los Angeles County	7/26/1979	Alter for storage room
D2	Los Angeles County	Los Angeles County	8/29/1979	1 - 120,000 BTU forced air furnace with cooling
D4	Nichols Refrig. Inc.	Harbor General Hospital	9/19/1979	1 - 15M BTU remote; 1 - 11M BTU remote
D3	Dennis Lish	Harbor General Hospital	9/5/1980	Install fire sprinklers
D3	S. A. DiGiamaopolo	Los Angeles County	9/5/1980	Addition to building
D5	S. A. DiGiamaopolo	Los Angeles County	8/20/1981	Construct 15'x8' bubble north and attached to D ramp for toilets
D4	None listed	Los Angeles County	4/30/1982	Alteration inside of building D4 (plan check only)
D4	Thomas M. Ryan	Harbor-UCLA Medical Center	5/26/1982	1 - 1,600 air handling unit; 1 - 48,000 BTU compressor
D3	Graves & Son's	None listed	1/19/1984	3 - 48,000 BTU compressors; 15 - supplies
D5	S. A. DiGiamaopolo	None listed	7/24/1984	2 - 60,000 BTU compressors; 2 - 100,000 BTU furnaces
D6	S. A. DiGiamaopolo	None listed	10/24/1984	2 - 60,000 BTU compressors; 2 100,000 BTU furnaces
D1	Charles Seymour	None listed	11/20/1984	2 - 398M BTU boilers

D2	Tony DiGiampaolo	Los Angeles County	4/9/1986	Interior wall

E BLOCK				
Building	Applicant	Owner	Date	Work Completed
E6	A. Anderson?	Los Angeles County	11/13/1966	Repair lab and Experiments (partitions)
E5	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	4/22/1970	2 compressors: 1 - 3.5 horsepower and 1 - 5 horsepower
E4	S. A. DiGiamaopolo	Los Angeles County	11/8/1971	Addition (plan check only)
E4	Modern Air Cond. Co.	Harbor General Hospital	11/8/1971	1 - 5 horsepower compressor; 1 - 4 horsepower compressor
E2	Clyde M. Johnson	Los Angeles County	12/7/1971	Alterations of interior partitions
E5	S. A. DiGiamaopolo	Los Angeles County	12/8/1972	546 sq.ft. office addition
E5	S. A. DiGiamaopolo	Los Angeles County	12/8/1972	3 air-handling units
E4	S. A. DiGiamaopolo	Los Angeles County	3/8/1973	795 sq.ft. addition to existing structure (plan check only)
E2	S. A. DiGiamaopolo	Harbor General Hospital	7/23/1973	Vivarium records office
E4	S. A. DiGiamaopolo	Los Angeles County	6/26/1974	800 sq.ft. addition (plan check only)
E4	Nichols Sheet Metal and Air Co. Inc.	None listed	8/26/1974	1 combined unit
E6	S. A. DiGiamaopolo	Los Angeles County	12/21/1974	Remodel for offices
E4	S. A. DiGiamaopolo	Los Angeles County	8/29/1975	Lab and office addition (plan check only)
E4	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	8/29/1975	2 - 200,000 BTU compressors
E2	S. A. DiGiamaopolo	Los Angeles County	8/26/1976	Wood frame building with raised-floor research labs and office
E2	S. A. DiGiamaopolo	Los Angeles County	8/26/1976	1 - 2,000 CFM air-handling unit; 2 - 5 ton a/c units and components
E6	S. A. DiGiamaopolo	Los Angeles County	6/21/1977	Alter existing building and add an addition (plan check only)

E3	S. A. DiGiamaopolo	Los Angeles County	11/15/1977	Install room divider
E3	S. A. DiGiamaopolo	Los Angeles County	6/28/1978	Alteration to existing building
E4	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Remodel E4 rooms 1A and 14A (plan check only)
E2	S. A. DiGiamaopolo	Los Angeles County	1/15/1979	Alteration to existing building (plan check only)
E3	S. A. DiGiamaopolo	Los Angeles County	3/16/1979	Add to existing building for office space (plan check only)
E6	Steve Meredith	Los Angeles County	12/31/1979	Fire sprinklers in E6 addition
E6	S. A. DiGiamaopolo	Los Angeles County	1/3/1980	Addition to E6
E6	S. A. DiGiamaopolo	Los Angeles County	1/7/1980	Enclose corridor alcove
E4	S. A. DiGiamaopolo	Los Angeles County	1/7/1980	Install metal storage building
E3	S. A. DiGiamaopolo	Los Angeles County	4/16/1980	Cold storage room
E3	John F. Loguzzo	Los Angeles County UCLA Medical Center	4/16/1980	Fire sprinklers
E3	E.B. Kilstofte	Los Angeles County	4/18/1980	Remodel lab
E6	S. A. DiGiamaopolo	Los Angeles County	5/2/1980	Porch roof over ramp between E6 and E6 trailers
E4	Robert Oliveira	Harbor General Hospital	5/28/1980	Install fire sprinklers
E6	S. A. DiGiamaopolo	Los Angeles County	3/24/1981	Add offices to west side of E6
E6	Pyro Auto. Prot.	Los Angeles County	3/24/1981	Fire sprinkler system
E6	Nichols Sheet Metal and Air Co. Inc.	None listed	3/24/1981	1 - 30,000 BTU compressor
E3	Beverly Aire	Los Angeles County	5/1/1981	2 compressors: 1 - 24M, 1 - 42M; 2 ventilation systems
E4	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	5/28/1981	1 - 48,000 BTU compressor
E4	S. A. DiGiamaopolo	Los Angeles County	6/1/1981	Install two trailers and ramps
E3	R.A. Aire	Harbor-UCLA Medical Center	5/5/1982	2 - 1,050 CFM air-handling unit; 2 - 40,000 BTU forced air furnaces

E3	Howell Barfoot	"County UCLA"	8/28/1982	Alter existing building floor for free-standing equipment
E3	Western Automatic Sprinkler	Los Angeles County	11/10/1982	Install 2 fire sprinklers
E3	Howell Barfoot	Los Angeles County	11/30/1982	Construct ramp from E3 to trailer
E3	Ray Brewington	Los Angeles County	12/2/1982	3 - 2,000 CFM air-handling units; 3 - 60,000 BTU compressors
E6	Halco Const. Co.	Harbor-UCLA Medical Center	12/16/1982	1 ventilation system
E3	So Dev	Harbor-UCLA Medical Center	5/14/1984	Addition to E3
E3	So Dev	UCLA Medical Center	7/2/1984	Install automatic fire sprinklers
E6	S. A. DiGiamaopolo	Los Angeles County	12/12/1984	Addition to building E6 for laboratory and offices
E6	South Bay Heating & Air	Los Angeles County	12/22/1984	1 - 2,000 CFM air-handling unit; 1 - 60,000 BTU compressor; 21 - registers
E5	Ernest Garcia	Los Angeles County	8/15/1985	Wood frame work
E3		Research and Education Institute, Harbor-UCLA Medical Center	11/13/1987	480 sq.ft. addition to existing lab building
E6	George G. Layman	Harbor-UCLA Medical Center	1/15/1991	Enclose 241 sq.ft. of open space to include into building E6
E6	George G. Layman	Research and Education Institute	5/1/1991	Minor renovation - Relocating walls, reflooring, enclosing an open corridor
E5	Mary Werk	Los Angeles County Harbor-UCLA Medical Center	6/18/1993	Interior alterations (plan check only)
E5	Eidson Fire Protection	Los Angeles County	11/16/1993	Relocate 5 fire sprinklers, change other heads
E3	Regency Fire Protection	Los Angeles County	12/16/1997	New fire sprinkler system/1173 sq. ft.
E3	All Seasons Air Conditioning	Los Angeles County	1/20/1998	Add 1 5-ton heat pump
E4	Du Bordieu Inc.	Los Angeles County	4/3/1998	Add handicap ramp, remove door opening

E6	Du Bordieu Inc.	Los Angeles County	7/13/1998	Removal of existing wooden porch and stairs at south building elevation, new stucco color coat and landscape planters
E5	Du Bordieu Inc.	Los Angeles County	7/13/1998	New concrete block wall and chain link fence around ser [sic] area
E2	Du Bordieu Inc.	Los Angeles County	7/13/1998	New porch and stairs, stucco (on south side), hollow metal door
E3	Halco Const. Co.	Los Angeles County	5/12/1999	Construct new H.C. ramp, canopy, stucco south elevation
E2	Halco Const. Co.	Los Angeles County	5/12/1999	Replace wood steps and landing, construct canopy, stucco south elevation, concrete block planter
E1	Halco Const. Co.	Los Angeles County	5/12/1999	Replace existing wood landing with concrete

F BLOCK				
Building	Applicant	Owner	Date	Work Completed
F1	Henry B. Schnitger	Los Angeles County	9/15/1950	Kitchen & employee lockers - addition and alterations to Bldg F1
F9	Clyde M. Johnson	Los Angeles County	3/19/1968	Interior partitions for cardiovascular research library
F3	S. A. DiGiamaopolo	Los Angeles County	9/18/1969	Women's restroom addition
F3	S. A. DiGiamaopolo	Los Angeles County	4/28/1971	Carpenter shop addition
F9	S. A. DiGiamaopolo	Los Angeles County	6/2/1971	Additions/alterations for attending staff facilities (plan check only)
F9	Modern Air Conditioning Co	Harbor General Hospital	6/2/1971	1 - 2 horsepower boiler
F2	S. A. DiGiamaopolo	Los Angeles County	5/1/1972	600 sq.ft. addition for shower room and locker room
F9	Air Conditioning Systems, Inc	Harbor General Hospital	7/19/1972	2 - 60,000 BTU compressors
F7	S. A. DiGiamaopolo	Los Angeles County	2/14/1973	Convert restrooms to restroom and examination room
F7	S. A. DiGiamaopolo	Los Angeles County	6/18/1973	Office addition
F5	Frank Gallo	Los Angeles County	3/6/1974	Lab - interior partitions
F1	Nichols Sheet Metal and Air Co. Inc.	None listed	4/4/1974	1 combined unit - 80,000/50,000 BTUs
F5	Nichols Sheet Metal and Air Co. Inc.	None listed	5/10/1974	2 - 60,000 BTU forced air furnaces
F5	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	5/10/1974	1 compressor - 24M BTU cool, 60M Heating
F1	S. A. DiGiamaopolo	Los Angeles County	5/21/1974	Replace existing loading dock
F1	Ernest Garcia	Los Angeles County	6/26/1974	Ramp

F1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	2/14/1975	1 - 3 1/2 horsepower compressor
F7	S. A. DiGiamaopolo	Los Angeles County	3/4/1975	Add to office (plan check only)
F7	S. A. DiGiamaopolo	Los Angeles County	1/28/1976	Install 3'x6'8" door
F1	Bill Ferguson	Los Angeles County	5/11/1976	Install 1 sink and cabinet, add one wall and one door
F9	Bill Ferguson	Los Angeles County	7/26/1976	Change 6 windows to UL [illegible] and 1 SC Door
F9	S. A. DiGiamaopolo	Los Angeles County	11/15/1976	One hour fire wall (plan check only)
F8	Harbor General Hospital	Los Angeles County	1/7/1977	New addition to building F8, install a/c unit and duct work
F8	S. A. DiGiamaopolo	Los Angeles County	10/7/1977	Addition - Wood frame building with slab floor
F9	S. A. DiGiamaopolo	Los Angeles County	8/1/1978	Install partition wall (plan check only)
F2	S. A. DiGiamaopolo	Los Angeles County	5/2/1980	Install partitions and exterior ramps
F1	S. A. DiGiamaopolo	Los Angeles County	8/29/1980	Remodel rooms 1, 1A and 2C in Building F1
F3	S. A. DiGiamaopolo	Los Angeles County	10/22/1980	Enclose porch
F7	S. A. DiGiamaopolo	Los Angeles County	2/24/1981	Alter north end of building
F7	David Butcher	Harbor General Hospital	2/24/1981	Installation of auto sprinkler system
F9	S. A. DiGiamaopolo	Los Angeles County	7/22/1981	850 sq.ft. addition
F9	Western Auto Sprinkler	Harbor General Hospital	7/22/1981	Install fire sprinklers
F9	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County	7/22/1981	1 - 48,000 BTU compressor
F2	Nichols Sheet Metal and Air Co. Inc.	None listed	9/29/1982	1 - compressor

F5	Howell Barfoot	Los Angeles County	5/14/1983	Remove non-load bearing wall, rooms 9 and 10
F6	Graves & Son's	None listed	11/2/1983	2 - 60,000 BTU compressors; 15 - supplies
F7	Graves & Son's	None listed	11/2/1983	2 - 60,000 BTU compressors; 15 - supplies
F5	Halco Const.	Harbor-UCLA Medical Center	4/9/1986	Stucco exist..??
F3	None listed	Los Angeles County	5/29/1986	1 - 60,000 BTU compressor; 1 - 100,000 BTU furnace
F2	S. A. DiGiamaopolo	Los Angeles County	Illegible	Alteration to existing building (plan check only)

OTHER			
Building	Owner	Date	Work Completed
Paint Shop	Los Angeles County Harbor General Hospital	3/16/1971	Install paint-spray booth according to codes
H1	Harbor General Hospital	4/19/1972	Remodel H1
Cottage 16	Los Angeles County	1/29/1974	Fume hood vent

PCR Irvine

2121 Alton Parkway, Suite 100
Irvine, California 92606
TEL 949.753.7001
FAX 949.753.7002

PCR Santa Monica

201 Santa Monica Boulevard, Suite 500
Santa Monica, California 90401
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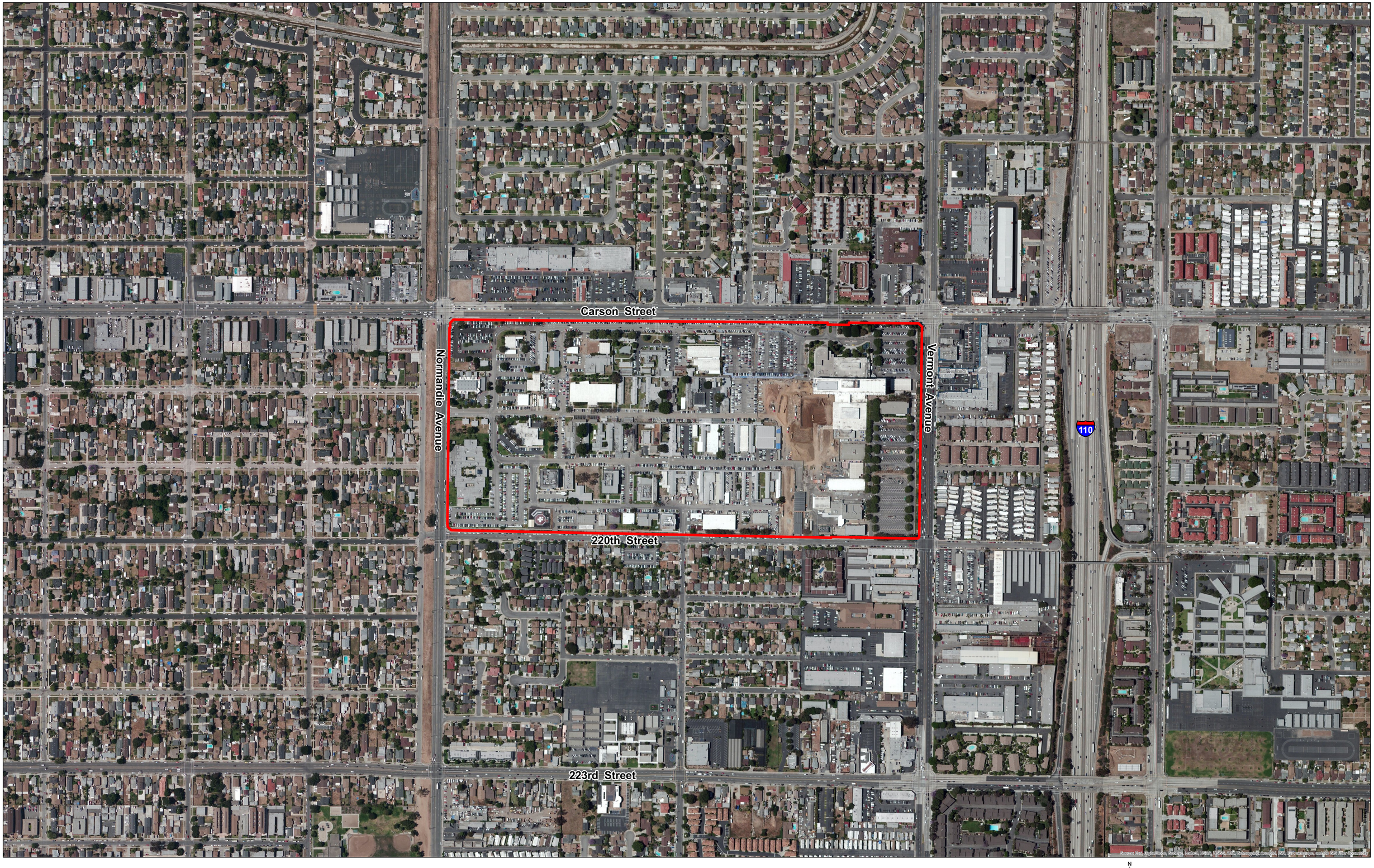
PCR Pasadena

80 South Lake Avenue, Suite 570
Pasadena, California 91101
TEL 626.204.6170
FAX 626.204.6171

pcrinfo@pcrnet.com
www.pcrnet.com

A-1.C SCOPING MEETING MATERIALS NOVEMBER 2014

Aerial Photograph



N

0 500 1,000 Feet

Environmental Issues to be Analyzed in the EIR

- Aesthetics
- Air Quality
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Noise
- Population/Housing
- Public Services (Fire, Police, Schools, Libraries, Parks)
- Recreation
- Transportation/Traffic
- Utilities and Services Systems (Water, Sewer, Solid Waste)
- Project Alternatives
- Growth Inducement

CEQA Process Flow Chart

Prepare Initial Study

↓

Prepare/Distribute
Notice of Preparation
(30-day review period)

↓

Current step in CEQA process

Scoping Meeting

↓

Design Draft EIR

↓

Prepare Draft EIR
(Fall 2014 – early Spring 2015)

↓

Prepare Public Notice
of Draft EIR Availability

↓

Public and Agency
Review of Draft EIR
(45 days)

↓

Prepare Final EIR
Including Responses to Comments
(Spring/early Summer 2015)

↓

Review of Responses by
Commenting Agencies

↓

Public Hearings
(Fall 2015)

↓

Formal County Decision

↓

File Notice of Determination

= Opportunities for Public Input

Existing Medical Campus Buildings



LEGEND

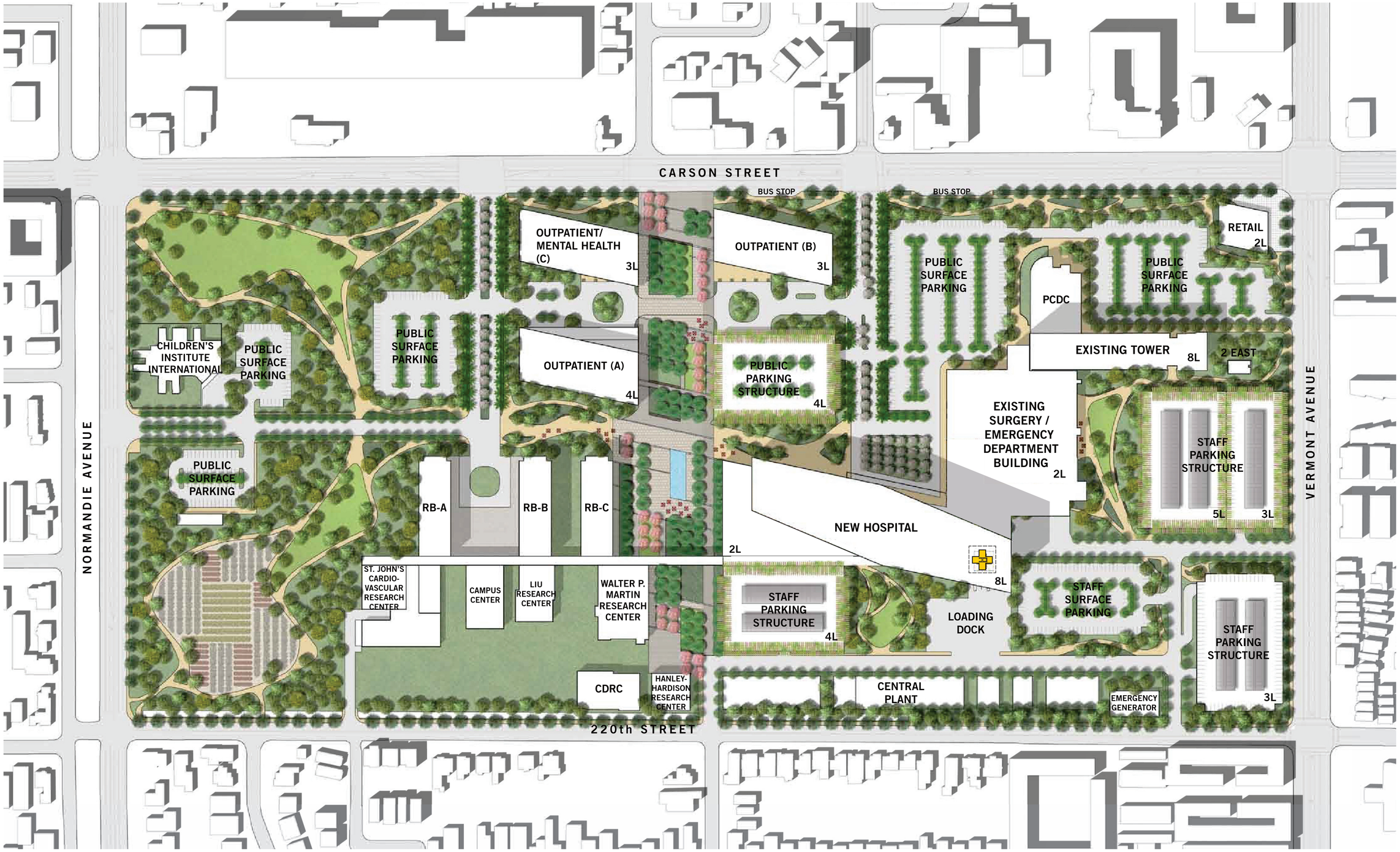
EXISTING CAMPUS USE PLAN

- LA BIOMED
- OUTPATIENT
- HOSPITAL
- HOSPITAL EXPANSION
- TREATMENT
- DIAGNOSTICS
- ADMINISTRATION
- EDUCATION
- MATERIALS MANAGEMENT
- FACILITIES MANAGEMENT
- UTILITIES
- PARKING
- CHILDREN'S INSTITUTE INT.
- LABIOMED SITE BOUNDARY
- PROPERTY LINE
- HELIPAD

0' 100' 200'

N

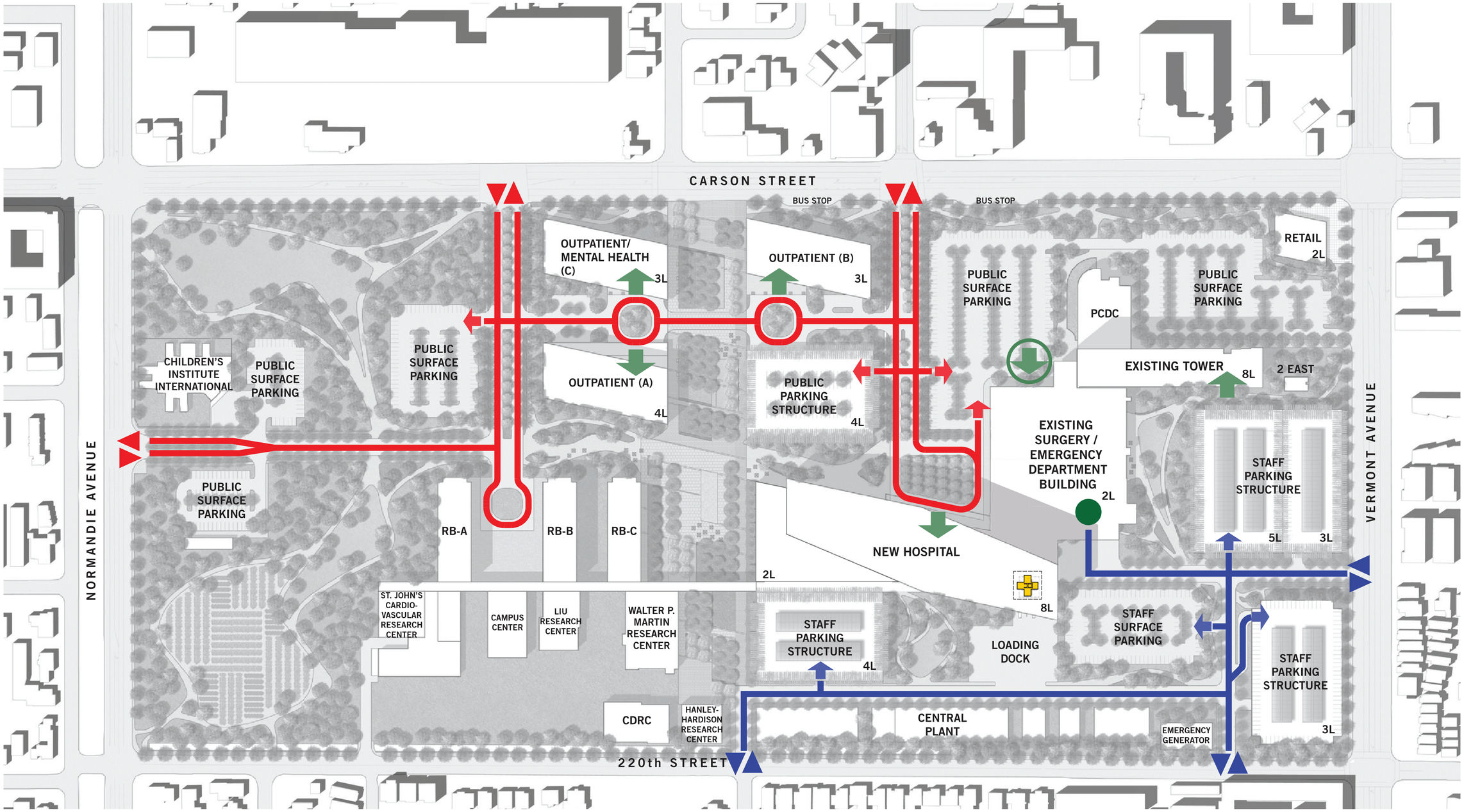
Proposed Project Site Plan



CAMPUS SITE PLAN

0’ 50’ 200’ N

Proposed Vehicular Circulation Plan



VEHICULAR CIRCULATION PLAN

LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- PRIMARY PUBLIC VEHICULAR CIRC.
- STAFF ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO PARKING
- PRIMARY STAFF VEHICULAR CIRC.
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- AMBULANCE EMERGENCY ENTRY

0' 50' 200' N

A-1.D NOP COMMENTS NOVEMBER 2014

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

Notice of Preparation

November 3, 2014

To: Reviewing Agencies

Re: Harbor UCLA Medical Center Campus Master Plan
SCH# 2014111004

Attached for your review and comment is the Notice of Preparation (NOP) for the Harbor UCLA Medical Center Campus Master Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Clarice Nash
Los Angeles County
Dept. of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS
NOV 12 2014
RECEIVED

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2014111004
Project Title Harbor UCLA Medical Center Campus Master Plan
Lead Agency Los Angeles County

Type NOP Notice of Preparation

Description The proposed Harbor UCLA Medical Center Campus Master Plan Project involves the multi-phased development of hospital, outpatient, research, and support facilities through the year 2030. The proposed project would expand development on the existing Harbor UCLA Medical Center Campus (Medical Campus) from the current developed total of ~1,050,000 sf to a ~1,900,000 sf of developed floor area, which would involve the demolition of some existing buildings, rehabilitation/re-use of a number of existing buildings, and construction of new buildings.

Lead Agency Contact

Name Clarice Nash
Agency Los Angeles County
Phone 626 300-2363 **Fax**
email
Address Dept. of Public Works
900 S. Fremont Avenue
City Alhambra **State** CA **Zip** 91803

Project Location

County Los Angeles
City Torrance
Region
Cross Streets Carson Street at S. Vermont Avenue
Lat / Long
Parcel No. 7344-001-901
Township **Range** **Section** **Base**

Proximity to:

Highways I-405, I-110
Airports
Railways UPRR, BNSF
Waterways Dominguez Channel
Schools Several
Land Use GP: Public and Semi-Public
Z: C-3 Unlimited Commercial/TOD

Project Issues Aesthetic/Visual; Air Quality; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Air Resources Board; Regional Water Quality Control Board, Region 4

Date Received 11/03/2014 **Start of Review** 11/03/2014 **End of Review** 12/02/2014

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: LOS Angeles **SCH#** 2014111004

Resources Agency

- [ ] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Nicole Wong
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Lisa Johansen
- [ ] **Dept. of Conservation**
  Elizabeth Carpenter
- [ ] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [ ] **Office of Historic Preservation**
  Ron Parsons
- [ ] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [ ] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Donald Koch
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [ ] **Fish & Wildlife Region 3**
  Charles Armor
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [ ] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Heidi Sickler
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Delta Stewardship Council**
  Kevan Samsam
- [ ] **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Michael Machado
- [ ] **OES (Office of Emergency Services)**
  Dennis Castrillo
- [ ] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Leo Wong
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- [ ] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- [ ] **Caltrans, District 4**
  Erik Alm
- [ ] **Caltrans, District 5**
  Larry Newland
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Mark Roberts
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- [ ] All Other Projects
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Jeffery Werth
  Division of Drinking Water
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____
- [ ] _____
  Conservancy

Last Updated 10/13/2014

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1337
www.dot.ca.gov

Serious drought.
Help save water!

November 20, 2014

Ms. Clarice Nash
Los Angeles County
Department of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

RE: Harbor UCLA Medical Center Campus
Master Plan SCH #2014111004
Vic. LA-110/PM 7.02, LA-213/PM 7.98
LA-405/PM 10.54
SCH # 2014111004
IGR/CEQA No. 141114AL-NOP

Dear Ms. Nash:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project would expand development on the existing Harbor UCLA Medical Center Campus (Medical Campus) from the current developed total of approximately 1,050,000 square feet to an approximately 1,900,000 square feet of developed floor area. It would involve the demolition of some existing buildings, rehabilitation/re-use of a number of existing buildings, and construction of new buildings.

To assist in evaluating the impacts of this project on State transportation facilities, a traffic study should be prepared prior to preparing the Draft Environmental Impact Report (DEIR). Please refer the project's traffic consultant to Caltrans' traffic study guide Website:

http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Listed below are some elements of what is generally expected in the traffic study:

1. Presentations of assumptions and methods used to develop trip generation, trip distribution, choice of travel mode, and assignments of trips to SR-213 (S. Western Ave.), I-405, and I-110, and all off ramps at the project vicinity including but not limit to Northbound (NB) I-110 at 220th St./Figueroa St. (Exit 7), Southbound (SB) I-110 at W.

Carson St. (Exit 7B), SB I-110 at W 223rd St. (Exit 7A), NB I-405 at E Carson St. (Exit 34), NB I-405 at Wilmington Ave. (Exit 33B), SB I-405 at Wilmington Ave. (Exist 33B). The traffic consultant should work with Caltrans to identify and confirm off ramp study locations prior to the preparation of the traffic study. The traffic study should also analyze the storage for left-turn pocket at on/off-ramps.

Caltrans is concerned with queuing of vehicles using off-ramps that may potentially back into the mainline through lanes. Caltrans is requesting that a queuing analysis for the off-ramp be performed to determine if there is adequate storage space to safely accommodate the project and cumulative project traffic. The off ramps should be analyzed utilizing the Highway Capacity Manual (HCM) 85th Percentile Queuing analysis methodology with the actual signal timings at the ramps' termini.

For a more accurate off-ramp queuing analysis, capacity of the off-ramp should be calculated by the actual length of the off-ramp between the terminuses to the gore point with 30 feet per car. Generally, the demand of the off-ramp should be calculated from the traffic counts, actual signal timing, and the percent of truck assignments to the ramp with a passenger car equivalent factor of 3.0 (worst case scenario).

2. Project travel modeling should be consistent with other regional and local modeling forecasts and travel data. Caltrans uses the indices to verify the results and any differences or inconsistencies must be thoroughly explained. Please submit modeling assumptions for Caltrans review and comment.

3. Trip generation rates for the project should be based on the nationally recognized recommendations contained in "Trip Generation" manual, 9th edition, published by the Institute of Transportation Engineers (ITE).

4. Analysis of ADT, AM and PM peak-hour volumes for both the existing and future conditions in the affected area with and without project. Utilization of transit lines and vehicles, and of all facilities, should be realistically estimated. Future conditions should include build-out of all projects and any plan-horizon years.

5. Include all appropriate traffic volumes. The analysis should include existing traffic, traffic generated by the project, cumulative traffic generated from all specific approved developments in the area, and traffic growth other than from the project and developments.

6. A discussion of mitigation measures appropriate to alleviate anticipated traffic impacts should also be included. Any mitigation involving transit or Transportation Demand Management (TDM) should be justified and the results conservatively estimated.

7. A fair share contribution toward pre-established or future improvements on the State Highway System is considered acceptable mitigation. (Please see Appendix "B" of the Guide for more information).

We look forward to reviewing the traffic study and expect to receive a copy from the State Clearinghouse when the DEIR is completed. Should you wish to expedite the review process or receive early feedback from the Department please feel free to send a copy of the DEIR directly to our office.

Per your phone conversation with Mr. Alan Lin of my staff, we would like to formally invite the Lead Agency and the traffic consultants to a formal scoping meeting to discuss preparation of traffic impact study, potential traffic direct/cumulative impacts, and possible traffic mitigation for the State facilities.

If you have any questions, please feel free to contact Mr. Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 141114AL.

Sincerely,

DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

December 5, 2014

AMENDED

Clarice Nash
Los Angeles County
Dept. of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

RE: SCH # 2014111004 Harbor UCLA Medical Center Campus Master Plan, Los Angeles County.

Dear Ms. Nash,

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

- ✓ Contact the appropriate regional archaeological Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check. **USGS 7.5-minute quadrangle name, township, range, and section required**
  - A list of appropriate Native American contacts for consultation concerning the project site and to assist in the mitigation measures. **Native American Contacts List attached.**
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) Guidelines §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered cultural items that are not burial associated, which are addressed in Public Resources Code (PRC) §5097.98, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, PRC §5097.98, and CEQA Guidelines §15064.5(e), address the process to be followed in the event of an accidental discovery of any human remains and associated grave goods in a location other than a dedicated cemetery.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Government Program Analyst

RECEIVED
DEC 16 2014
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

Native American Contacts
Los Angeles County
December 5, 2014

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
, Gabrielino Tongva
tattnlaw@gmail.com
(310) 570-6567

Gabrielino-Tongva Tribe
Bernie Acuna, Co-Chairperson
1999 Avenue of the Stars, Suite 1100 Gabrielino
Los Angeles , CA 90067

(310) 428-5690 Cell

Gabrieleno/Tongva San Gabriel Band of Mission Indian
Anthony Morales, Chairperson
P.O. Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell
(626) 286-1262 Fax

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
1999 Avenue of the Stars, Suite 1100 Gabrielino
Los Angeles , CA 90027
(626) 676-1184 Cell

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St. Gabrielino Tongva
Los Angeles , CA 90012
sgoad@gabrielino-tongva.com
(951) 807-0479

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@verizon.net
(562) 761-6417 Voice/Fax

Gabrielino-Tongva Tribe
Conrad Acuna
1999 Avenue of the Stars, Suite Gabrielino
Los Angeles , CA 90027

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed SCH # 2014111004 Harbor UCLA Medical Center Campus Master Plan, Los Angeles County.

Native American Contacts
Los Angeles County
December 5, 2014

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed SCH # 2014111004 Harbor UCLA Medical Center Campus Master Plan, Los Angeles County.

STATE OF CALIFORNIA Edmond G. Brown, Jr., *Governor*

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

November 24, 2014

Clarice Nash
Los Angeles County
Dept. of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

RE: SCH# 2014111004 Harbor UCLA Medical Center Campus Master Plan, Los Angeles County.

Dear Ms. Nash,

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) referenced above. The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resource, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA Guidelines 15064(b)). To comply with this provision the lead agency is required to assess whether the project will have an adverse impact on historical resources within the area of project effect (APE), and if so to mitigate that effect. To adequately assess and mitigate project-related impacts to archaeological resources, the NAHC recommends the following actions:

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  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
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Sincerely,

Katy Sanchez

Katy Sanchez
Associate Government Program Analyst

CC: State Clearinghouse

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

Main Office

818 West Seventh Street

12th Floor

Los Angeles, California

90017-3435

t (213) 236-1800

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www.scag.ca.gov

Officers

President
Carl Morehouse, San Buenaventura

First Vice President
Cheryl Viegas-Walker, El Centro

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Michele Martinez, Santa Ana

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Greg Pettis, Cathedral City

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Carl Morehouse, San Buenaventura

Policy Committee Chairs

Community, Economic and Human Development
Margaret Finlay, Duarte

Energy & Environment
Deborah Robertson, Rialto

Transportation
Alan Wapner, San Bernardino Associated Governments

December 2, 2014

Ms. Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 South Fremont Avenue
Alhambra, California 91803-1331
Telephone: (626) 300-2363
E-mail: cnash@dpw.lacounty.gov

RE: SCAG Comments on the Notice of Preparation of an Environmental Impact Report for the Harbor-UCLA Medical Center Campus Master Plan Project [SCAG NO. IGR8252]

Dear Ms. Nash:

Thank you for submitting the Notice of Preparation of an Environmental Impact Report for the Harbor-UCLA Medical Center Campus Master Plan Project ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of an Environmental Impact Report for Harbor-UCLA Medical Center Campus Master Plan Project. Located within the boundary of City of Los Angeles, the proposed project is an enhancement to the interactive relationship between the clinical, education, and research components of the Medical Campus. The proposed project would include construction of additional new facilities, thereby increasing the existing floor area of the Medical Campus by 850,000 square feet from approximately 1,050,000 square feet to 1,900,000 square feet of floor area.

When available, please send environmental documentation to SCAG's *office in Los Angeles or by email to sunl@scag.ca.gov* providing, at a minimum, the full comment period for review. If you have any questions regarding the attached comments, please contact Lijin Sun, Esq., Senior Regional Planner, at (213) 236-1882 or sunl@scag.ca.gov. Thank you.

Sincerely,

Ping Chang

Ping Chang,
Program Manager II, Compliance and Performance Assessment

[1] SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) *maintain the discretion and* will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

The Regional Council consists of 86 elected officials representing 191 cities, six counties, six County Transportation Commissions, one representative from the Transportation Corridor Agencies, one Tribal Government representative and one representative for the Air Districts within Southern California.

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**COMMENTS ON THE NOTICE OF PREPARATION OF
AN ENVIRONMENTAL IMPACT REPORT FOR
THE HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT
[SCAG NO. IGR8252]**

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

2012 RTP/SCS Goals

The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012. The 2012 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see http://rtpscs.scag.ca.gov). The goals included in the 2012 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012 RTP/SCS are the following:

SCAG 2012 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and non-motorized transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012 RTP/SCS Goals		
	Goal	**Analysis**
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness.*	*Consistent: Statement as to why* *Not-Consistent: Statement as to why* *or* *Not Applicable: Statement as to why* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region.*	*Consistent: Statement as to why* *Not-Consistent: Statement as to why* *or* *Not Applicable: Statement as to why* *DEIR page number reference*
etc.		etc.

RTP/SCS Strategies

To achieve the goals of the 2012 RTP/SCS, a wide range of strategies are included in SCS Chapter (starting on page 152) of the RTP/SCS focusing on four key areas: 1) Land Use Actions and Strategies; 2) Transportation Network Actions and Strategies; 3) Transportation Demand Management (TDM) Actions and Strategies and; 4) Transportation System Management (TSM) Actions and Strategies. If applicable to the proposed project, please refer to these strategies as guidance for considering the proposed project within the context of regional goals and policies. To access a listing of the strategies, please visit http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf (Tables 4.3 – 4.7, beginning on page 152).

Regional Growth Forecasts

At the time of this letter, the most recently adopted SCAG forecasts consists of the 2020 and 2035 RTP/SCS population, household and employment forecasts. To view them, please visit http://scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf. The forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts		**Adopted Unincorporated County of Los Angeles Forecasts**		**Adopted City of Los Angeles Forecasts**	
Forecast	**Year 2020**	**Year 2035**	**Year 2020**	**Year 2035**	**Year 2020**	**Year 2035**
Population	19,663,000	22,091,000	1,159,100	1,399,500	3,991,700	4,320,600
Households	6,458,000	7,325,000	336,100	405,500	1,455,700	1,626,600
Employment	8,414,000	9,441,000	266,100	318,100	1,817,700	1,906,800

MITIGATION

SCAG staff recommends that you review the SCAG 2012 RTP/SCS Final Program EIR Mitigation Measures for guidance, as appropriate. See Chapter 6 (beginning on page 143) at: http://rtpscs.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf

As referenced in Chapter 6, a comprehensive list of example mitigation measures that may be considered as appropriate is included in Appendix G: *Examples of Measures that Could Reduce Impacts from Planning, Development and Transportation Projects.* Appendix G can be accessed at: http://rtpscs.scag.ca.gov/Documents/peir/2012/final/2012fPEIR_AppendixG_ExampleMeasures.pdf

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

PUP2 605

November 12, 2014

Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
900 S. Fremont Ave.
Alhambra, CA 91803-1331

Notice of Preparation of a CEQA Document for the
Harbor-UCLA Medical Center Campus Master Plan Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the CEQA document upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is

recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies.
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at jbaker@aqmd.gov or call me at (909) 396-3176.

Sincerely,

Jillian Baker

Jillian Baker, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

LAC141105-02
Control Number

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NOV 19 2014
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

Nov. 19, 2014

Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave
Alhambra, CA 91803

RE: Notice of Preparation for the Harbor-UCLA Medical Center Campus Master Plan Environmental Impact Report (EIR)

Dear Ms. Nash,

Thank you for the opportunity to comment on the proposed Harbor-UCLA Medical Center Campus Master Plan Project. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency's statutory responsibility in relation to our facilities and services that may be affected by the proposed project.

Metro bus lines operate on South Vermont Ave, adjacent to the proposed project. Although the project is not expected to result in any long-term impacts on transit, the developer should be aware of the bus services that are present. Metro Bus Operations Control Special Events Coordinator should be contacted at 213-922-4632 regarding construction activities that may Impact Metro bus lines. (For closures that last more than six months, Metro's Stops and Zones Department will also need to be notified at 213-922-5188). Other municipal bus operators may also be impacted and should be included in construction outreach efforts.

Beyond impacts to Metro facilities and operations, LACMTA must also notify the applicant of state requirements. A Transportation Impact Analysis (TIA), with roadway and transit components, is required under the State of California Congestion Management Program (CMP) statute. The CMP TIA Guidelines are published in the "2010 Congestion Management Program for Los Angeles County", Appendix D (attached). The geographic area examined in the TIA must include the following, at a minimum:

1. All CMP arterial monitoring intersections, including monitored freeway on/off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hour (of adjacent street traffic).

2. If CMP arterial segments are being analyzed rather than intersections, the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections.

3. Mainline freeway-monitoring locations where the project will add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hour.

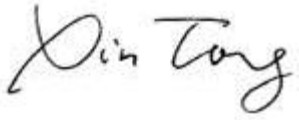
4. Caltrans must also be consulted through the NOP process to identify other specific locations to be analyzed on the state highway system.

The CMP TIA requirement also contains two separate impact studies covering roadways and transit, as outlined in Sections D.8.1 – D.9.4. If the TIA identifies no facilities for study based on the criteria above, no further traffic analysis is required. However, projects must still consider transit impacts. For all CMP TIA requirements please see the attached guidelines.

If you have any questions regarding this response, please contact Xin Tong at 213-922-8804 or by email at DevReview@metro.net. LACMTA looks forward to reviewing the Draft EIR. Please send it to the following address:

LACMTA Development Review
One Gateway Plaza MS 99-18-3
Los Angeles, CA 90012-2952

Sincerely,



Xin Tong
Development Review Coordinator, Countywide Planning

Attachment: CMP Appendix D: Guidelines for CMP Transportation Impact Analysis

APPENDIX

D

GUIDELINES FOR CMP TRANSPORTATION IMPACT ANALYSIS

Important Notice to User: This section provides detailed travel statistics for the Los Angeles area which will be updated on an ongoing basis. Updates will be distributed to all local jurisdictions when available. In order to ensure that impact analyses reflect the best available information, lead agencies may also contact MTA at the time of study initiation. Please contact MTA staff to request the most recent release of "Baseline Travel Data for CMP TIAs."

D.1 OBJECTIVE OF GUIDELINES

The following guidelines are intended to assist local agencies in evaluating impacts of land use decisions on the Congestion Management Program (CMP) system, through preparation of a regional transportation impact analysis (TIA). The following are the basic objectives of these guidelines:

- Promote consistency in the studies conducted by different jurisdictions, while maintaining flexibility for the variety of project types which could be affected by these guidelines.
- Establish procedures which can be implemented within existing project review processes and without ongoing review by MTA.
- Provide guidelines which can be implemented immediately, with the full intention of subsequent review and possible revision.

These guidelines are based on specific requirements of the Congestion Management Program, and travel data sources available specifically for Los Angeles County. References are listed in Section D.10 which provide additional information on possible methodologies and available resources for conducting TIAs.

D.2 GENERAL PROVISIONS

Exhibit D-7 provides the model resolution that local jurisdictions adopted containing CMP TIA procedures in 1993. TIA requirements should be fulfilled within the existing environmental review process, extending local traffic impact studies to include impacts to the regional system. In order to monitor activities affected by these requirements, Notices of Preparation (NOPs) must be submitted to MTA as a responsible agency. Formal MTA approval of individual TIAs is not required.

The following sections describe CMP TIA requirements in detail. In general, the competing objectives of consistency & flexibility have been addressed by specifying standard, or minimum, requirements and requiring documentation when a TIA varies from these standards.

D.3 PROJECTS SUBJECT TO ANALYSIS

In general a CMP TIA is required for all projects required to prepare an Environmental Impact Report (EIR) based on local determination. A TIA is not required if the lead agency for the EIR finds that traffic is not a significant issue, and does not require local or regional traffic impact analysis in the EIR. Please refer to Chapter 5 for more detailed information.

CMP TIA guidelines, particularly intersection analyses, are largely geared toward analysis of projects where land use types and design details are known. Where likely land uses are not defined (such as where project descriptions are limited to zoning designation and parcel size with no information on access location), the level of detail in the TIA may be adjusted accordingly. This may apply, for example, to some redevelopment areas and citywide general plans, or community level specific plans. In such cases, where project definition is insufficient for meaningful intersection level of service analysis, CMP arterial segment analysis may substitute for intersection analysis.

D.4 STUDY AREA

The geographic area examined in the TIA must include the following, at a minimum:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).
- If CMP arterial segments are being analyzed rather than intersections (see Section D.3), the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections.
- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.
- Caltrans must also be consulted through the Notice of Preparation (NOP) process to identify other specific locations to be analyzed on the state highway system.

If the TIA identifies no facilities for study based on these criteria, no further traffic analysis is required. However, projects must still consider transit impacts (Section D.8.4).

D.5 BACKGROUND TRAFFIC CONDITIONS

The following sections describe the procedures for documenting and estimating background, or non-project related traffic conditions. Note that for the purpose of a TIA, these background estimates must include traffic from all sources without regard to the exemptions specified in CMP statute (e.g., traffic generated by the provision of low and very low income housing, or trips originating outside Los Angeles County. Refer to Chapter 5, Section 5.2.3 for a complete list of exempted projects).

D.5.1 Existing Traffic Conditions. Existing traffic volumes and levels of service (LOS) on the CMP highway system within the study area must be documented. Traffic counts must

be less than one year old at the time the study is initiated, and collected in accordance with CMP highway monitoring requirements (see Appendix A). Section D.8.1 describes TIA LOS calculation requirements in greater detail. Freeway traffic volume and LOS data provided by Caltrans is also provided in Appendix A.

D.5.2 Selection of Horizon Year and Background Traffic Growth. Horizon year(s) selection is left to the lead agency, based on individual characteristics of the project being analyzed. In general, the horizon year should reflect a realistic estimate of the project completion date. For large developments phased over several years, review of intermediate milestones prior to buildout should also be considered.

At a minimum, horizon year background traffic growth estimates must use the generalized growth factors shown in Exhibit D-1. These growth factors are based on regional modeling efforts, and estimate the general effect of cumulative development and other socioeconomic changes on traffic throughout the region. Beyond this minimum, selection among the various methodologies available to estimate horizon year background traffic in greater detail is left to the lead agency. Suggested approaches include consultation with the jurisdiction in which the intersection under study is located, in order to obtain more detailed traffic estimates based on ongoing development in the vicinity.

D.6 PROPOSED PROJECT TRAFFIC GENERATION

Traffic generation estimates must conform to the procedures of the current edition of Trip Generation, by the Institute of Transportation Engineers (ITE). If an alternative methodology is used, the basis for this methodology must be fully documented.

Increases in site traffic generation may be reduced for existing land uses to be removed, if the existing use was operating during the year the traffic counts were collected. Current traffic generation should be substantiated by actual driveway counts; however, if infeasible, traffic may be estimated based on a methodology consistent with that used for the proposed use.

Regional transportation impact analysis also requires consideration of trip lengths. Total site traffic generation must therefore be divided into work and non-work-related trip purposes in order to reflect observed trip length differences. Exhibit D-2 provides factors which indicate trip purpose breakdowns for various land use types.

For lead agencies who also participate in CMP highway monitoring, it is recommended that any traffic counts on CMP facilities needed to prepare the TIA should be done in the manner outlined in Chapter 2 and Appendix A. If the TIA traffic counts are taken within one year of the deadline for submittal of CMP highway monitoring data, the local jurisdiction would save the cost of having to conduct the traffic counts twice.

D.7 TRIP DISTRIBUTION

For trip distribution by direct/manual assignment, generalized trip distribution factors are provided in Exhibit D-3, based on regional modeling efforts. These factors indicate Regional Statistical Area (RSA)-level tripmaking for work and non-work trip purposes.

(These RSAs are illustrated in Exhibit D-4.) For locations where it is difficult to determine the project site RSA, census tract/RSA correspondence tables are available from MTA.

Exhibit D-5 describes a general approach to applying the preceding factors. Project trip distribution must be consistent with these trip distribution and purpose factors; the basis for variation must be documented.

Local agency travel demand models disaggregated from the SCAG regional model are presumed to conform to this requirement, as long as the trip distribution functions are consistent with the regional distribution patterns. For retail commercial developments, alternative trip distribution factors may be appropriate based on the market area for the specific planned use. Such market area analysis must clearly identify the basis for the trip distribution pattern expected.

D.8 IMPACT ANALYSIS

CMP Transportation Impact Analyses contain two separate impact studies covering roadways and transit. Section Nos. D.8.1-D.8.3 cover required roadway analysis while Section No. D.8.4 covers the required transit impact analysis. Section Nos. D.9.1-D.9.4 define the requirement for discussion and evaluation of alternative mitigation measures.

D.8.1 Intersection Level of Service Analysis. The LA County CMP recognizes that individual jurisdictions have wide ranging experience with LOS analysis, reflecting the variety of community characteristics, traffic controls and street standards throughout the county. As a result, the CMP acknowledges the possibility that no single set of assumptions should be mandated for all TIAs within the county.

However, in order to promote consistency in the TIAs prepared by different jurisdictions, CMP TIAs must conduct intersection LOS calculations using either of the following methods:

- The Intersection Capacity Utilization (ICU) method as specified for CMP highway monitoring (see Appendix A); or
- The Critical Movement Analysis (CMA) / Circular 212 method.

Variation from the standard assumptions under either of these methods for circumstances at particular intersections must be fully documented.

TIAs using the 1985 or 1994 Highway Capacity Manual (HCM) operational analysis must provide converted volume-to-capacity based LOS values, as specified for CMP highway monitoring in Appendix A.

D.8.2 Arterial Segment Analysis. For TIAs involving arterial segment analysis, volume-to-capacity ratios must be calculated for each segment and LOS values assigned using the V/C-LOS equivalency specified for arterial intersections. A capacity of 800 vehicles per hour per through traffic lane must be used, unless localized conditions necessitate alternative values to approximate current intersection congestion levels.

D.8.3 Freeway Segment (Mainline) Analysis. For the purpose of CMP TIAs, a simplified analysis of freeway impacts is required. This analysis consists of a demand-to-capacity calculation for the affected segments, and is indicated in Exhibit D-6.

D.8.4 Transit Impact Review. CMP transit analysis requirements are met by completing and incorporating into an EIR the following transit impact analysis:

- ❑ Evidence that affected transit operators received the Notice of Preparation.
- ❑ A summary of existing transit services in the project area. Include local fixed-route services within a ¼ mile radius of the project; express bus routes within a 2 mile radius of the project, and; rail service within a 2 mile radius of the project.
- ❑ Information on trip generation and mode assignment for both AM and PM peak hour periods as well as for daily periods. Trips assigned to transit will also need to be calculated for the same peak hour and daily periods. Peak hours are defined as 7:30-8:30 AM and 4:30-5:30 PM. Both "peak hour" and "daily" refer to average weekdays, unless special seasonal variations are expected. If expected, seasonal variations should be described.
- ❑ Documentation of the assumption and analyses that were used to determine the number and percent of trips assigned to transit. Trips assigned to transit may be calculated along the following guidelines:
  - ➢ Multiply the total trips generated by 1.4 to convert vehicle trips to person trips;
  - ➢ For each time period, multiply the result by one of the following factors:

    3.5% of Total Person Trips Generated for most cases, except:

    10% primarily Residential within 1/4 mile of a CMP transit center
    15% primarily Commercial within 1/4 mile of a CMP transit center
    7% primarily Residential within 1/4 mile of a CMP multi-modal transportation center
    9% primarily Commercial within 1/4 mile of a CMP multi-modal transportation center
    5% primarily Residential within 1/4 mile of a CMP transit corridor
    7% primarily Commercial within 1/4 mile of a CMP transit corridor
    0% if no fixed route transit services operate within one mile of the project

  To determine whether a project is primarily residential or commercial in nature, please refer to the CMP land use categories listed and defined in Appendix E, *Guidelines for New Development Activity Tracking and Self Certification*. For projects that are only partially within the above one-quarter mile radius, the base rate (3.5% of total trips generated) should be applied to all of the project buildings that touch the radius perimeter.

- ❑ Information on facilities and/or programs that will be incorporated in the development plan that will encourage public transit use. Include not only the jurisdiction's TDM Ordinance measures, but other project specific measures.

- Analysis of expected project impacts on current and future transit services and proposed project mitigation measures, and;
- Selection of final mitigation measures remains at the discretion of the local jurisdiction/lead agency. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the existing mitigation monitoring requirements of CEQA.

D.9 IDENTIFICATION AND EVALUATION OF MITIGATION

D.9.1 Criteria for Determining a Significant Impact. For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$), causing LOS F ($V/C > 1.00$); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$). The lead agency may apply a more stringent criteria if desired.

D.9.2 Identification of Mitigation. Once the project has been determined to cause a significant impact, the lead agency must investigate measures which will mitigate the impact of the project. Mitigation measures proposed must clearly indicate the following:

- Cost estimates, indicating the fair share costs to mitigate the impact of the proposed project. If the improvement from a proposed mitigation measure will exceed the impact of the project, the TIA must indicate the proportion of total mitigation costs which is attributable to the project. This fulfills the statutory requirement to exclude the costs of mitigating inter-regional trips.
- Implementation responsibilities. Where the agency responsible for implementing mitigation is not the lead agency, the TIA must document consultation with the implementing agency regarding project impacts, mitigation feasibility and responsibility.

Final selection of mitigation measures remains at the discretion of the lead agency. The TIA must, however, provide a summary of impacts and mitigation measures. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the mitigation monitoring requirements contained in CEQA.

D.9.3 Project Contribution to Planned Regional Improvements. If the TIA concludes that project impacts will be mitigated by anticipated regional transportation improvements, such as rail transit or high occupancy vehicle facilities, the TIA must document:

- Any project contribution to the improvement, and
- The means by which trips generated at the site will access the regional facility.

D.9.4 Transportation Demand Management (TDM). If the TIA concludes or assumes that project impacts will be reduced through the implementation of TDM measures, the TIA must document specific actions to be implemented by the project which substantiate these conclusions.

D.10 REFERENCES

1. *Traffic Access and Impact Studies for Site Development: A Recommended Practice*, Institute of Transportation Engineers, 1991.
2. *Trip Generation*, 5th Edition, Institute of Transportation Engineers, 1991.
3. *Travel Forecast Summary: 1987 Base Model - Los Angeles Regional Transportation Study (LARTS)*, California State Department of Transportation (Caltrans), February 1990.
4. *Traffic Study Guidelines*, City of Los Angeles Department of Transportation (LADOT), July 1991.
5. *Traffic/Access Guidelines*, County of Los Angeles Department of Public Works.
6. *Building Better Communities*, Sourcebook, Coordinating Land Use and Transit Planning, American Public Transit Association.
7. *Design Guidelines for Bus Facilities*, Orange County Transit District, 2nd Edition, November 1987.
8. *Coordination of Transit and Project Development*, Orange County Transit District, 1988.
9. *Encouraging Public Transportation Through Effective Land Use Actions*, Municipality of Metropolitan Seattle, May 1987.

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

December 2, 2014

Ref File No.: 3133567

Ms. Clarice Nash, Project Manager
County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Dear Ms. Nash:

Harbor-UCLA Medical Campus Master Plan Project

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on November 3, 2014. The proposed development is located within the jurisdictional boundaries of District No. 8. We offer the following comments regarding sewerage service:

1. The Districts maintain sewerage facilities within the project area that may be affected by the proposed project. Approval to construct improvements within a Districts' sewer easement and/or over or near a Districts' sewer is required before construction may begin. For a copy of the Districts' buildover procedures and requirements go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Buildover Procedures and Requirements link. For more specific information regarding the buildover procedure, please contact Mr. Ed Stewart at (562) 908-4288, extension 2766.

2. The proposed project may require a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at (562) 908-4288, extension 2900, in order to reach a determination on this matter. If this permit is necessary, project developers will be required to forward copies of final plans and supporting information for the proposed project to the Districts for review and approval before beginning project construction. For additional Industrial Wastewater Discharge Permit information, go to http://www.lacsd.org/wastewater/industrial_waste/permit.asp.

3. The wastewater flow originating from the proposed project will discharge directly to either or both the Districts' Joint Outfall D Unit 8 Trunk Sewer, located in Carson Street west of Budlong Avenue, or the Joint Outfall D Unit 1D Replacement Trunk Sewer, located in Carson Street at Vermont Avenue. The 54–inch diameter Joint Outfall D Unit 8 Trunk Sewer has a design capacity of 28.4 million gallons per day (mgd) and conveyed a peak flow of 13.9 mgd when last measured in 2012. The 66–inch diameter Joint Outfall D Unit 1D Replacement Trunk Sewer has a design capacity of 56.5 mgd and conveyed a peak flow of 51.7 mgd when last measured in 2012. A 6-inch diameter or smaller direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. An 8-inch diameter or larger direct connection to a Districts' trunk sewer requires submittal of Sewer Plans for review and approval by the Districts. For additional information, please contact the Districts' Engineering Counter at extension 1205.

Recycled Paper

4. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 263.1 mgd.

5. The expected increase in average wastewater flow from the proposed project, an increase of 850,000 square feet to the existing Medical Campus, is 170,000 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link.

6. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

7. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Grace Robinson Hyde

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: E. Stewart
L. Shadler
M. Tremblay
J. Ganz

DOC: #3161209.D08

RECEIVED
DEC 04 2014
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

November 20, 2014

Clarice Nash, Project Manager
LA County Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803-1331

Dear Ms. Nash:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT, "HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT," PROPOSES THE HARBOR-UCLA PROJECT TO CONSIDER CURRENT CONDITIONS AND FUTURE NEED OF THE HAROR-UCLA, TO ENHANCE THE INTERACTIVE RELATIONSHIP BETWEEN THE CLINICAL, EDUCATIONAL AND RESEARCH COMPONENTS OF THE CAMPUS AND GROWTH OF THE REGION, 1000 WEST CARSON, TORRANCE (FFER 201400207)

The Notice of Preparation of an Environmental Impact Report has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION

1. We will reserve our comments for the Draft EIR.

LAND DEVELOPMENT UNIT:

1. The County of Los Angeles Fire Department's Land Development Unit's comments are only general requirements. Specific fire and life safety

requirements will be addressed at the building and fire plan check phase. There may be additional requirements during this time.

2. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

3. The proposed development may necessitate multiple ingress/egress access for the circulation of traffic and emergency response issues.

4. Every building constructed shall be accessible to the Fire Department's apparatus by way of access roadways with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

5. All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to and within 30 feet of an exterior wall on one side of the proposed structure.

6. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. The Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in-length and at the end of all cul-de-sacs.

7. All access devices and gates shall comply with California Code of Regulations, Title 19, Articles 3.05 and 3.16.

8. All access devices and gates shall meet the following requirements:

   a) Any single gated opening used for ingress and egress shall be a minimum of 28 feet in-width, clear-to-sky.

   b) Any divided gate opening (when each gate is used for a single direction of travel i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky.

   c) Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way and shall be provided with a turnaround having

a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device.

d) All limited access devices shall be of a type approved by the Fire Department.

e) Gate plans shall be submitted to the Fire Department prior to installation. These plans shall show all locations, widths, and details of the proposed gates.

9. All proposals for traffic calming measures (speed humps/bumps/cushions, traffic circles, roundabouts, etc.) shall be submitted to the County of Los Angeles Fire Department for review prior to implementation.

10. The development may require fire flows up to 8,000 gallons per minute at 20 per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used.

11. The fire hydrant spacing shall be 300 feet and shall meet the following requirements:

a) No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.

b) No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant.

c) Additional hydrants will be required if hydrant spacing exceeds specified distances.

d) When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner, and mid-block.

e) A cul-de-sac shall not be more than 500 feet in length when serving land zoned for commercial use.

12. An automatic fire sprinkler system is required for all future development.

13. If there are any questions regarding the Land Development Unit's response, please contact FPEA Wally Collins at (323) 890-4243 or at Wally.Collins@fire.lacounty.gov.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance.

HEALTH HAZARDOUS MATERIALS DIVISION

1. Based on the review of the "Initial Study," a Phase I should be prepared for the project site prior to construction and/or renovation activities. If the Phase I indicates to release or potential release of hazardous materials, a preliminary assessment should be completed at the impacted area(s). If the analytical data obtained during site assessment reveals significant contamination(s) that may present a public health or environmental hazard, the impacted area(s) must be assessed/mitigated under oversight of a local or State agency.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

Frank Vidales

FRANK VIDALES, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

FV: ad

Calrice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 Fremont Ave.
Alhambra, CA 91803-1331

November 26, 2014

Subject: City of Carson Comments on Harbor-UCLA Medical Center Campus Master Plan Initial Study

Dear Ms. Nash,

City of Carson appreciates the opportunity to comment on this Initial Study. We believe this is great project for the area; however, because of proximity and scale of this project, the project will have impacts on the City of Carson. The following are our comments:

The impacts on the City of Carson infrastructure and services need to be properly addressed in the DEIR. Specifically, fire, and police services will be impacted within the City. The DEIR needs to clearly state how the project is proposing to mitigate impacts to City services, facilities, and infrastructure. Alternative means of transportation needs to be explored in the DEIR to reduce traffic and air quality impacts from the project and to reduce reliance on single occupant automobiles. The DEIR needs to provide a complete package of all modes of transportation to encourage the employees not to use their cars including but not limited to necessary infrastructure and/or programs for pedestrians, bicycles, personal transportation vehicles, neighborhood electric vehicles, car sharing services, and transit services. There have been preliminary discussions on the future connection of the Blue Line to the proposed South Bay Metro Green Line extension through the City of Carson. The DEIR should discuss this potential connection and study possible alignments and stations.

The DEIR should include a discussion to identify, construct, establish, connect, use, manage, maintain, and promote a complete mobility package for the employees. In addition, the infrastructure, equipment, and management of this comprehensive network need to be discussed in the DEIR. If this complete transportation network is not established, managed, and used, this intensification would translate to more automobiles on City streets and associated impacts from this increase.

City of Carson appreciates the opportunity to comment on the General Plan Update DEIR. I can be reached at (310) 952-1761 or snaaseh@carson.ca.us if you have any questions.

Sincerely,

Saied Naaseh
Planning Manager

Anne Collins-Doehne

From: Nash, Clarice <CNash@dpw.lacounty.gov>
Sent: Monday, November 10, 2014 8:16 AM
To: David Crook
Cc: 'tholcombe@ceo.lacounty.gov'
Subject: Fw: Harbor UCLA Master Plan Project

FYI

Sent from Blackberry mobile device.

From: Michelle A [mailto:michellea0801@yahoo.com]
Sent: Friday, November 07, 2014 11:25 PM Pacific Standard Time
To: Nash, Clarice
Subject: Harbor UCLA Master Plan Project

To Whom It May Concern,

I am all for the renovation of Harbor UCLA's Medical Campus. I just hope that the county will perform construction during reasonable hours so as to minimize the noise disturbance it causes for local residents. As residents of the Vermonter Apartments on Vermont Ave and 220th, we are already subjected to constant police and ambulance sirens on a daily basis. Many of us are employees of Harbor UCLA and work night shifts. Please consider this when designating times for construction to take place. Thanks.

Michelle Allera

November 15, 2014

Clarice Nash, Project Manager
County of LA Dept. of Public Works
Project Management Division I
900 S. Freemont Avenue
Alhambra, CA 91803-1331

To Whom It May Concern:

Re: Notice of an Environment Impact Report, Harbor UCLA et al.

Please be advised that my MAILING address has changed to:

Mrs. Dail K. Paramore
38180 Del Webb Blvd., PMB 160
Palm Desert, CA 92211

All future mailings should be sent to the above address. Thank you for updating your records accordingly.

Sincerely,

Dail K. Paramore

(Mrs.) Dail K. Paramore
(760) 288-0879

PS Please be advised that Frank S. Paramore has been deceased as of June 30, 2014. Please adjust your records accordingly.

RECEIVED
NOV 20 2014
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

A-2 JUNE 2015 IS-NOP

A-2.A NOP JUNE 2015

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND NOTICE OF PUBLIC SCOPING MEETING

Date: June 29, 2015

To: State Clearinghouse, Responsible and Trustee Agencies, and Interested Individuals

From: County of Los Angeles c/o Department of Public Works

900 S. Fremont Ave, Alhambra, California 91803

Subject: Notice of Preparation of an Environmental Impact Report, Harbor-UCLA Medical Center Campus Master Plan Project and Notice of Public Scoping Meeting Date and Location

The County of Los Angeles (County), as the lead agency, has prepared an Initial Study and will be preparing an Environmental Impact Report (EIR) for the proposed project described below. The County of Los Angeles Department of Public Works (DPW), on behalf of the County, is soliciting input from responsible and trustee agencies, other agencies required to receive this notice, and the State Office of Planning and Research, and is also extending the outreach for early public consultation to other interested parties, members of the public, and organizations, on the scope and content of the information to be included and analyzed in the EIR. Agencies should comment on the elements of the environmental information that are relevant to their statutory responsibilities in connection with the proposed project. The EIR will be the environmental document for responsible and trustee agencies when considering any discretionary approvals.

The project description, location, and potential environmental effects of the proposed project are described in this Notice of Preparation and attached Initial Study.

The County requests that any potential responsible or trustee agencies responding to this NOP reply in a manner consistent with Section 15082(b) of the CEQA Guidelines, which allows for the submittal of any comments and/or inputs in response to this notice no later than 30 days after receipt of the NOP. The County will accept written comments from these agencies and others regarding this NOP through the close of business on **Tuesday, July 29, 2015**. Please send all written comments, including e-mailed comments, to Clarice Nash at the address below. Comments should include the name of a contact person.

Project Location: The Harbor-UCLA Medical Center Campus ("Medical Campus") is located at 1000 West Carson Street on approximately 72 acres of land owned by the County of Los Angeles and is surrounded by the City of Torrance, City of Carson, and the Harbor-Gateway community of the City of Los Angeles, in Los Angeles County. Specifically, the Medical Campus is bounded by Carson Street, Vermont Avenue, 220th Street, and Normandie Avenue. The Medical Campus is located west of the I-110 (Harbor) Freeway and south of the I-405 (San Diego) Freeway. Refer to **Figure 1**, *Regional and Vicinity Map*.

Project Description: Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project ("Project") to consider current conditions and future needs of the Harbor-UCLA Medical Center Hospital and Clinics, the LA Biomed Research Foundation ("LA Biomed") and the Department of Health Services at the Medical Campus. The purpose of the Project is to enhance the interactive relationship between the clinical, educational, and research components of the Medical Campus and to update it concurrent with growth in the region. The County-owned Medical Campus is a 72-acre property, located in unincorporated south Los Angeles County. The Project would incorporate the expansion of current services, the upgrading of aging facilities and buildings, redesign of the Medical Campus to improve access and internal circulation, and provide a cohesive design that would enhance the experience of staff, patients, and visitors to the Medical Campus. Implementation of the Project is expected to meet short-term needs as well as long-term needs beyond 2030. The Surgery and Emergency Building Replacement Project, totaling approximately 190,000 square feet, was recently completed on the Medical Campus and has been considered in the proposed Project.

The Project includes construction of additional new facilities, including a New Hospital Tower, outpatient facilities, Bioscience Tech Park, other services, and Medical Campus support. These new facilities would increase the existing floor area of the Medical Campus from approximately 1,050,000 square feet to approximately 2,150,000 square feet of floor area. The New Hospital Tower, which would be connected to the Surgery and Emergency Room Replacement Project building, is proposed to be the primary focal point of the Medical Campus. Outpatient facilities would be consolidated to allow proximity of these services to each other and the New Hospital Tower. LA BioMed would also develop new facilities, which would represent approximately 200,000 square feet of the overall proposed Project development program and which would be consolidated into an interior sub-campus near the proposed outpatient facilities and the New Hospital Tower. Open plazas, landscaped areas, and paths and sidewalks for pedestrian circulation would form the core of the Medical Campus and join the New Hospital Tower, Bioscience Tech Park, LA BioMed, and outpatient facilities. Other than the proposed Bioscience Tech Park, the remainder of the west side of the Medical Campus would be utilized for open space, surface parking, and other short-term uses, as needed, under the proposed Project.

Potential Environmental Effects: The Initial Study contains a preliminary analysis of the environmental impacts of the proposed Project in accordance with the CEQA Guidelines that identify 16 areas where impacts could occur. These impacts, which will be analyzed in detail in the EIR, include: aesthetics, air quality, energy, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, utilities and service systems, transportation/traffic, utilities and service systems, and mandatory findings of significance. The topical areas for which the Initial Study determined there would be no potentially significant impacts and which are therefore proposed not to be addressed in the EIR include: agriculture and forestry resources, biological resources, cultural resources, and mineral resources.

Copies of the Notice of Preparation/Initial Study are available for electronic download at http://dpw.lacounty.gov/landing/publicBuildings.cfm and for public review of hard copies at the following Public Library locations:

Carson Library 151 E. Carson Street Carson, CA 90745 (310) 830-0901	Harbor Gateway City Library 1555 Sepulveda Boulevard Torrance, CA 90501 (310) 548-7791	Southeast Branch Library 23115 Arlington Avenue Torrance, CA 90501 (310) 530-5044
Harbor Gateway Library 24000 S. Western Avenue Harbor City, CA 90710 (310) 534-9520	Lomita Library 24200 Narbonne Avenue Lomita, CA 90717 (310) 539-4515	Dr. Martin Luther King, Jr. Library 17906 S. Avalon Boulevard Carson, CA 90746 (310) 327-4830
Katy Geissert Civic Center Library 3301 Torrance Boulevard Torrance, CA 90503 (310) 618-5959	Wilmington Library 1300 N. Avalon Boulevard Wilmington, CA 90744 (310) 834-1082	Harbor-UCLA Medical Center Inpatient Tower Information Desk 1000 Carson Street Torrance, CA 90509-2910 (323) 409-1000

Interested parties may submit their written comments to:

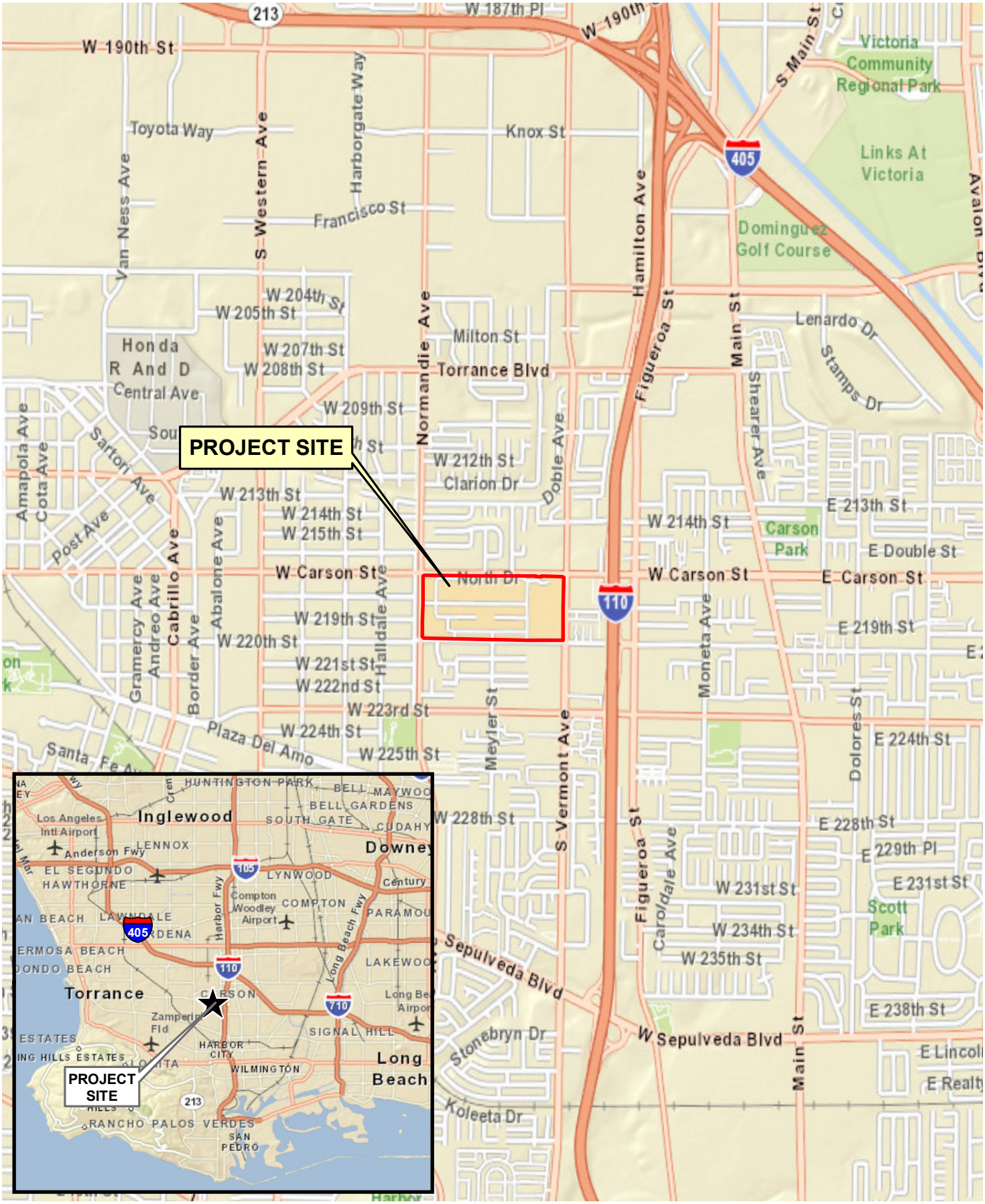
Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803-1331
E-mail: cnash@dpw.lacounty.gov

Questions regarding this notice should be directed to Clarice Nash at (626) 300-2363 or at the e-mail shown above, Monday through Thursday, between 7:30 a.m. and 6:00 p.m. All parties that are interested in receiving information in the future related to the Project may submit their name and mailing address with that request to the Project Manager listed above.

Public Scoping Meeting: A public scoping meeting will be held on July 15, 2015, from 5:30 p.m. to 7:30 p.m., to

solicit input from the public, trustee and responsible agencies and other interested parties on the scope and content of the Environmental Impact Report in conformance with Section 21083.9 of the Public Resources Code on scoping meetings. You may send a written response by the deadline date of July 29, 2015, without attending the scoping meeting, which provides an additional opportunity to discuss the EIR to be prepared for the proposed Project.

Location: Harbor-UCLA Medical Center
Parlow Library (to the north and east of the existing Hospital building)
1000 West Carson Street
Torrance, California 90509-2910
Free Parking in Lots A, B, and C (Refer to **Figure 2**, *Existing Medical Campus Map*)
(Please note that all visitors are subject to screening prior to entry)



PCR

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0 2,000 4,000 Feet

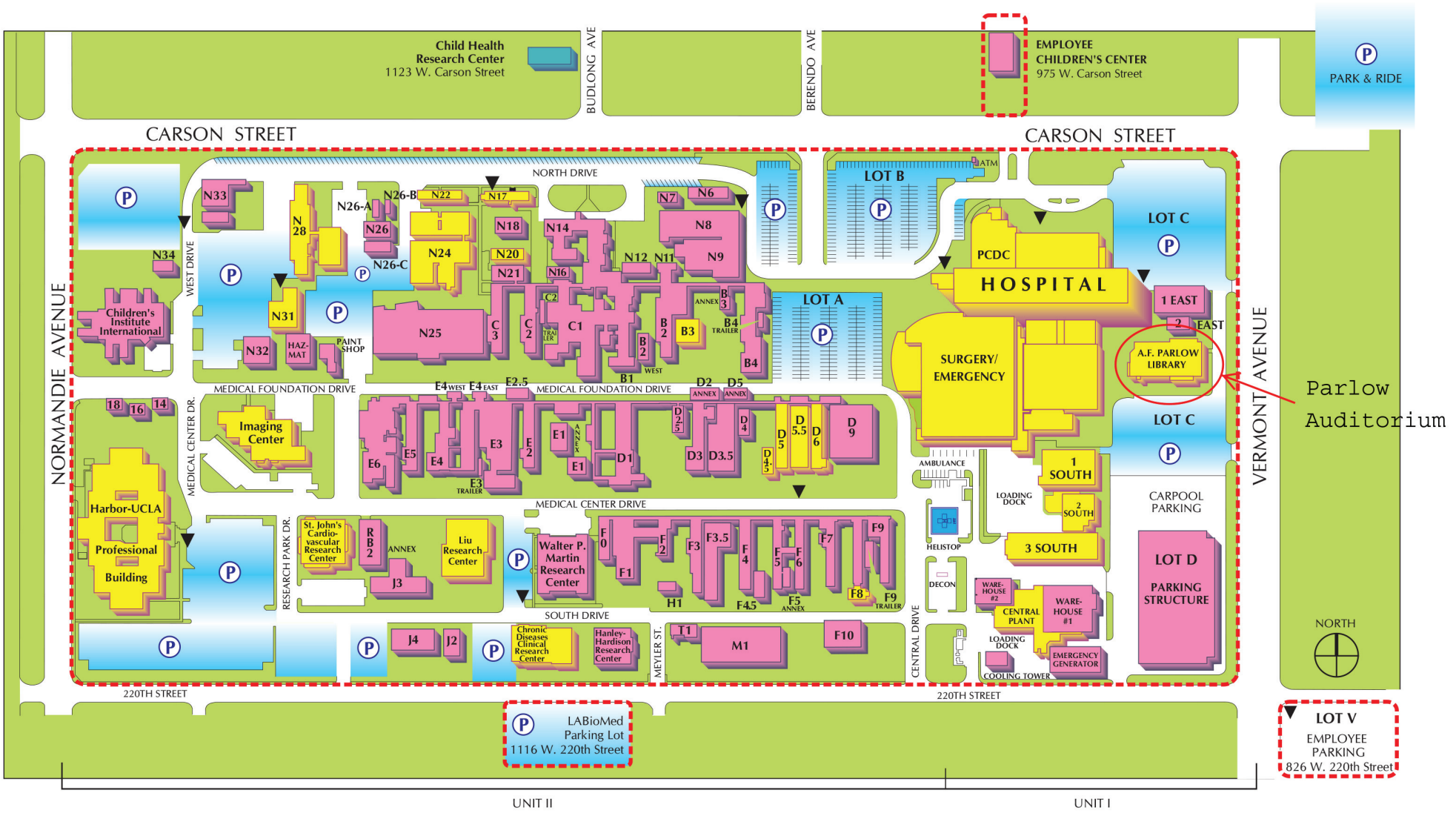
Regional and Vicinity Map

Harbor-UCLA Medical Center Campus Master Plan Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2014.

FIGURE

1



PCR

Existing Medical Campus Map

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Harbor-UCLA Medical Center, 2014.

FIGURE 2

A-2.B INITIAL STUDY JUNE 2015

INITIAL STUDY

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

CITY OF TORRANCE, CALIFORNIA

PCR

JUNE 2015

INITIAL STUDY

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT

CITY OF TORRANCE, CALIFORNIA

Prepared For:

County of Los Angeles
c/o Los Angeles County Department of Public Works
900 S. Fremont Avenue
Alhambra, California 91803
Tel: 626-300-2363
Contact: Clarice Nash, Project Manager, Project Management Division I

Prepared By:

PCR Services Corporation
2121 Alton Parkway, Suite 100
Irvine, California 92606

JUNE 2015

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Environmental Checklist

ENVIRONMENTAL CHECKLIST FORM

1. **Project title**

   Harbor-UCLA Medical Center Campus Master Plan Project

2. **Lead agency name and address:**

   County of Los Angeles

   c/o Los Angeles County Department of Public Works

   900 S. Fremont Avenue

   Alhambra, CA 91803

3. **Contact person and phone number:**

   Clarice Nash, Project Manager, Project Management Division I

   Phone: (626) 300-2363

4. **Project location:**

   1000 W. Carson Street

   Torrance, CA 90502

5. **Project sponsor's name and address:**

   County of Los Angeles

   900 S. Fremont Avenue

   Alhambra, CA 91803

6. **General plan designation:**

   Public and Semi Public

7. **Zoning:**

   C-3 Unlimited Commercial/TOD

8. **Description of project:**

   The proposed Harbor-UCLA Medical Center Campus Master Plan Project ("Project") involves the multi-phased development of hospital, outpatient, research, and support facilities through the year 2030 and beyond. The proposed Project would expand development on the existing Harbor-UCLA Medical Center Campus ("Medical Campus") from the current developed 1,050,000 square feet to approximately 2,150,000 square feet, which would involve the demolition of some existing buildings, rehabilitation/reuse of a number of existing buildings, and construction of new buildings.

9. **Surrounding land uses and setting:**

   The 72-acre County-owned Medical Campus is located in the unincorporated Los Angeles community of West Carson, which roughly encompasses the 2.3-square-mile area between the Harbor Freeway on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block east of the Medical Campus and the San Diego Freeway (I-405) is located

approximately 2 miles to the north and northeast. Surrounding communities include the Cities of Gardena, Lawndale, and Hawthorne to the north; the City of Carson, east of the Harbor Freeway; the Harbor Gateway community, part of the City of Los Angeles, and the City of Torrance to the west; and the Harbor City community, part of the City of Los Angeles, and the City of Lomita to the south.

10. Other public agencies whose approval is required

State of California

- California Office of Statewide Health Planning and Development (OSHPD)
- California Department of Transportation Division of Aeronautics

PURPOSE OF THE INITIAL STUDY

The proposed Harbor-UCLA Medical Center Campus Master Plan is analyzed in this Initial Study, in accordance with the California Environmental Quality Act (CEQA), to determine if approval of the Project may have a significant impact on the environment. This Initial Study has been prepared pursuant to the requirements of CEQA, under Public Resources Code 21000-21177, of the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387) and under the guidance of the County of Los Angeles Department of Public Works. The County of Los Angeles is the Lead Agency under CEQA .

The County has decided to prepare an Environmental Impact Report (EIR) rather than a Negative Declaration or Mitigated Negative Declaration for the project and therefore an Initial Study is not required. Notwithstanding the early decision to prepare an EIR, the County has also decided to complete an Initial Study to assist in the preparation of the EIR and to facilitate environmental assessment early in the design process. .

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☐ Biological Resources	☐ Cultural Resources	☒ Energy
☒ Geology/Soils	☒ Greenhouse Gas Emissions	☒ Hazards/Hazardous Materials
☒ Hydrology/Water Quality	☒ Land Use/Planning	☐ Mineral Resources
☒ Noise	☒ Population/Housing	☒ Public Services
☒ Recreation	☒ Transportation/Traffic	☒ Utilities and Service Systems
☒ Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

Printed Name For

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

2) A list of "Supporting Information Sources" should be attached, and other sources used or individuals contacted should be cited in the discussion.

3) Impact Columns Heading Definitions:

   - "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

   - "Less Than Significant Impact With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The mitigation measures must be described, along with a brief explanation of how they reduce the effect to a less than significant level.

   - "Less Than Significant Impact" applies where the project creates no significant impacts, only Less Than Significant impacts.

   - "No Impact" applies where a project does not create an impact in that category. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one proposed (e.g., the project falls outside of a

fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

4) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   - Earlier Analysis Used. Identify and state where they are available for review.

   - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   - Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

5) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

6) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire protection regarding the state's inventory of forest land, including the Forest and Range Assessment of and the Forest Legacy Assessment Project; and forest carbon measurements methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project::				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI. ENERGY – Would the project:				
a) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?	☒	☐	☐	☐
b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☒	☐	☐	☐
VII. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☒	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☒	☐	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☒	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
VIII. GREENHOUSE GAS EMISSIONS – Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?	☒	☐	☐	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☒	☐	☐	☐
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☒	☐	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alternation of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☒	☐	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XIII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☒	☐	☐	☐
Police protection?	☒	☐	☐	☐
Schools?	☒	☐	☐	☐
Parks?	☒	☐	☐	☐
Other public facilities?	☒	☐	☐	☐
XVI. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☒	☐	☐	☐
XVII. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☒	☐	☐	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities??	☒	☐	☐	☐
XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒	☐	☐	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☒	☐	☐	☐
h) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?	☒	☐	☐	☐
i) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☒	☐	☐	☐

Issues:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Attachment A: Project Description

ATTACHMENT A: PROJECT DESCRIPTION

A. INTRODUCTION

Los Angeles County proposes the Harbor-UCLA Medical Center Campus Master Plan Project ("Project") to address the future needs of the Harbor-UCLA Medical Center Campus ("Medical Campus"). The Project is based upon the Harbor-UCLA Medical Center Campus Master Plan, which was completed in June 2012 and will serve as a policy document "guideline" for the Project.

The Project includes the addition of a new hospital tower providing acute care services in compliance with seismic requirements which become effective beginning in 2030, renovation of the existing Hospital building for other uses, new biomedical research facilities in a biosciences campus area, parking facilities, replacement of other aging facilities and buildings, redesigned vehicular and pedestrian access and circulation, and implementation of a cohesive design that enhances the experience of staff, patients, and visitors. The Project is expected to meet short-term needs as well as long-term needs beyond 2030.

The existing Medical Campus contains approximately 1,050,000 square feet of floor area, including the recently completed Surgery and Emergency Room Replacement Project and recently approved expansion of the Los Angeles Biomedical Research Institute's ("LA BioMed") research facilities. At buildout, the Medical Campus will contain approximately 2,150,000 square feet of developed floor area. A new, centrally located Hospital Tower ("New Hospital Tower") would be the focal point of the Medical Campus. Outpatient facilities would be consolidated to allow proximity of these services to each other and the New Hospital Tower.

B. PROJECT LOCATION AND SURROUNDING USES

The 72-acre County–owned Medical Campus is located in the unincorporated Los Angeles community of West Carson, which encompasses a 2.3-square-mile area between the Harbor Freeway on the east and Normandie Avenue on the west, and Del Amo Boulevard on the north and Lomita Boulevard on the south. The Medical Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor Freeway (I-110) is located one block east of the Medical Campus and the San Diego Freeway (I-405) is located approximately 2 miles to the north and northeast. The Medical Campus location is illustrated in **Figure A-1**, *Regional and Vicinity Map*.

Surrounding communities include the Cities of Gardena, Lawndale, and Hawthorne to the north; the City of Carson east of the Harbor Freeway; the Harbor Gateway community, part of the City of Los Angeles, and the City of Torrance to the west; and the Harbor City community, part of the City of Los Angeles, and the City of Lomita to the south.

Figure A-2, *Aerial Photograph with Surrounding Land Uses*, is an aerial photograph of the Medical Campus and vicinity. Carson Street, to the north, is largely developed with commercial uses, primarily neighborhood retail businesses and medical/dental services. A multifamily residential apartment complex, Harbor Cove Villa, is located west of the intersection with Vermont Avenue. The area north of Carson Street is a

predominantly single-family residential neighborhood. Vermont Avenue, to the east, is developed with a mix of neighborhood retail uses and medical services, the Torrance Park Villas condominium complex, and Starlite Trailer Park and Rainbow Mobile Home Park. Wholesale and light industrial uses are located to the southeast along 220th Street. Residential neighborhoods border the Medical Campus to the south, across 220th Street, and west, across Normandie Avenue within the Harbor City community. Off-site parking serving LA BioMed is located across 220th Street from the Medical Campus.

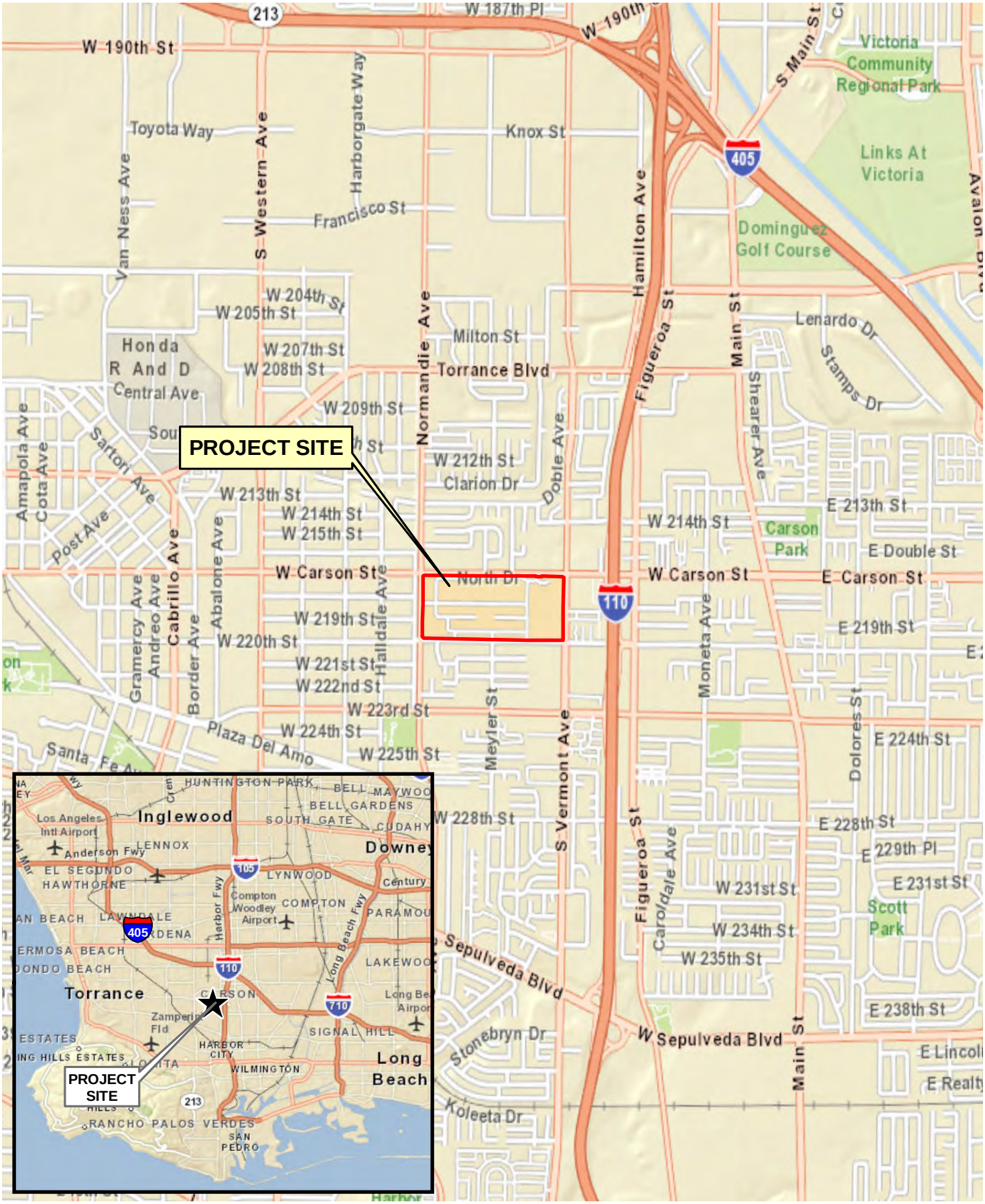
C. EXISTING CONDITIONS

1. Harbor-UCLA Medical Center Uses

The existing Medical Campus layout is illustrated in **Figure A-3**, *Existing Medical Campus Buildings*. The Main Hospital, related treatment facilities, and the majority of support facilities occupy the eastern quarter of the Medical Campus, while buildings occupied by LA BioMed take up the majority of the central Medical Campus, and the majority of outpatient services, including Harbor-UCLA Medical Foundation, Inc. ("MFI") and the related Imaging Center, Children's Institute International ("CII"), and other facilities, occupy the western end of the Medical Campus. Patient diagnostic facilities, administration offices, and additional functions are scattered throughout the Medical Campus. Most of the facilities in the central Medical Campus were constructed prior to 1960, including barracks and temporary/modular buildings that occupy much of the Medical Campus land area. The first major expansion of the existing 1962 Hospital building, the Surgery and Emergency Room Replacement Project, was completed in 2013. This project increased the size of the existing emergency room by 50,000 square feet and added 38 new emergency bays as well as 190,000 square feet of space containing surgery suites, adult and pediatric triage, and a new entrance lobby and waiting area. A new 544-space parking structure and heliport were also constructed.

LA BioMed presently occupies a number of older buildings throughout the Medical Campus and intends to consolidate its operations within a smaller 11.4-acre leasehold ("LA BioMed Campus") in the south-central portion of the Medical Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000, and in September 2014, the Los Angeles County Board of Supervisors approved a development plan for the LA BioMed Campus to meet LA BioMed's near-term facility needs. The LA BioMed development plan proposes the construction of approximately 70,700 net new square feet of floor area within the LA BioMed Campus to accommodate the relocation and consolidation of existing uses and operations from older buildings elsewhere on the Medical Campus, and does not constitute an expansion of LA BioMed operations. Potential future expansion of the LA BioMed Campus beyond the recently approved development plan, together with the disposition of older buildings on the Medical Campus to be eventually vacated by LA BioMed, are included in the overall development program for the Project.

Other newer facilities constructed on the Medical Campus since the 1980s include buildings housing Hospital-related outpatient services and major tenants MFI and CII at the western end of the Medical Campus. Overall, the existing layout of the Medical Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. In particular, the Main Hospital, Primary Care and Diagnostics Center ("PCDC"), and outpatient clinics are currently running at or near capacity and existing facilities provide no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.



PCR

N

0 2,000 4,000 Feet

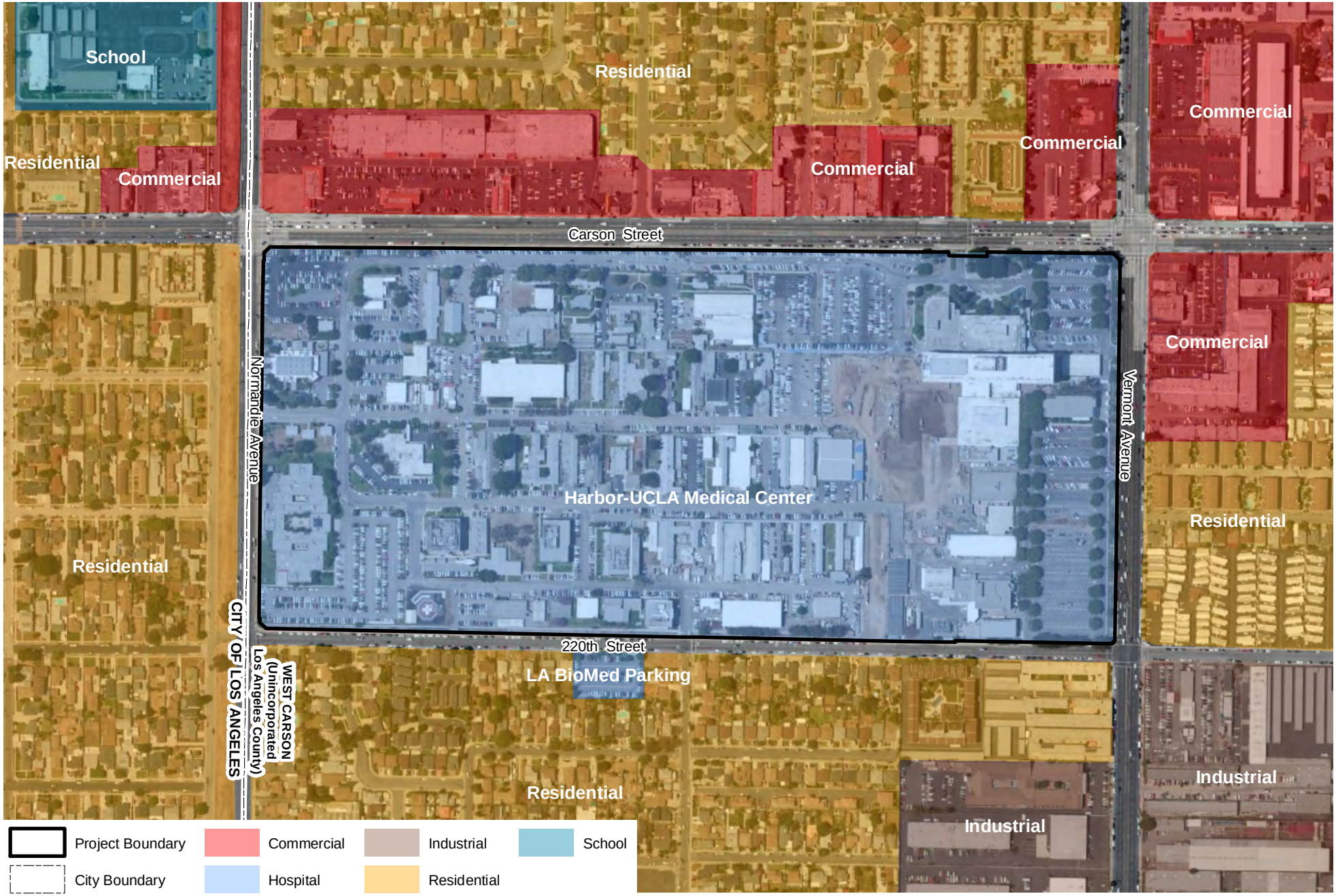
Regional and Vicinity Map

Harbor-UCLA Medical Center Campus Master Plan Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2014.

FIGURE

A-1



PCR

N

0 400 800 Feet

Aerial Photograph with Surrounding Land Uses

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2014.

FIGURE

A-2



LEGEND

- LA BIOMED
- OUTPATIENT
- HOSPITAL
- TREATMENT
- DIAGNOSTICS
- ADMINISTRATION
- MATERIALS MANAGEMENT
- FACILITIES MANAGEMENT
- UTILITIES
- CHILDREN'S INSTITUTE INT.
- LABIOMED SITE BOUNDARY
- PROPERTY LINE

PCR

N

0 400 Feet

Existing Medical Campus Buildings

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Perkins+Will, 2012.

FIGURE

A-3

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2. Circulation and Parking

Vehicular access to the Medical Campus is provided by the primary driveway on Carson Street, near the Main Hospital; two driveways on Vermont Avenue; five driveways on 220th Street; and one driveway on Normandie Avenue. Only the Carson Street driveway is signalized. Internal circulation follows the original grid layout established on the Medical Campus, with four east-west roadways and numerous short north-south connector roadways. Most internal intersections of two roadways or drive aisles are stop-sign controlled.

The parking supply on the Medical Campus totals 2,905 spaces, which exceeds the County's parking code requirement of 2,709 spaces.[1] This supply includes 2,168 standard spaces and 124 American with Disabilities Act ("ADA") spaces in designated surface parking lots and the new parking structure in the southeast corner of the Medical Campus, and 596 standard spaces and 17 ADA spaces along the internal streets. An additional 281 spaces (278 standard spaces and three ADA spaces) are provided in off-site parking facilities, and street parking is permitted along all or portions of the four public streets surrounding the Medical Campus.

D. PLANNING AND ZONING

The Medical Campus is designated for Public and Semi-Public use in the Los Angeles County General Plan and has a zoning designation of C-3 (Unlimited Commercial). The C-3 designation allows a broad range of commercial uses and allows a maximum floor area ratio ("FAR") of 13:1. Hospital and ancillary uses on the Medical Campus are consistent with the current zoning. In addition, the eastern portion of the Medical Campus is designated as a Transit Overlay District ("TOD") due to proximity to the Metro Transit Station on Carson Street approximately 0.10 miles to the east, adjacent to the Harbor Freeway. The purpose of the TOD zone designation is to create pedestrian-friendly and community-serving uses near transit stops that encourage walking, bicycling, and transit use.

E. DESCRIPTION OF THE PROPOSED PROJECT

1. Project Characteristics

(a) New Project Facilities

The Project proposes to place commercial and community-oriented services along the northern, publicly accessible edge of the Medical Campus and staff and support services in the southern half of the Medical Campus. The New Hospital Tower is intended as the primary focal point. Landscaping and a well-organized network of pedestrian walkways will accommodate circulation throughout the Medical Campus. The LA BioMed Campus will occupy the southern-central part of the Medical Campus, fronting on 220th Street. The CII Burton E. Green Campus will remain in the northwestern corner of the Medical Campus at the intersection of Carson Street and Normandie Avenue. A new Biomedical Research Facility ("Bioscience Tech Park") is also proposed in the central-western portion of the Medical Campus, while the remainder of the

[1] *Los Angeles County Code, Chapter 122.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and Group Homes for Children, which requires 2 spaces per bed, 1 space/250 square feet for outpatient facilities, and 1 space/400 square feet for research use.*

western end of the Medical Campus will be retained for future expansion opportunities, potentially beyond the 2030 Project buildout horizon. Until such time as programmatic needs for the remainder of the western end of the Medical Campus are defined, it will be utilized for open space, surface parking, and other short-term uses, as needed.

State law mandates that acute care services can no longer be provided after January 1, 2030 in buildings built before 1973, which includes the Main Hospital. This requirement has led to the proposed decommission of the Main Hospital for acute care services, except for the PCDC and recently constructed Surgery and Emergency Room Replacement Project facilities. As a result of the Main Hospital decommission, this building would no longer be licensed for inpatient acute care services and thus this space would be repurposed for non-acute care activities such as administrative offices and outpatient support services. Including these facilities, the Project would result in up to approximately 2,150,000 square feet of developed floor area within the Medical Campus, an increase of approximately 1,100,000 square feet over the current developed 1,050,000 square feet.

Project components broadly include the following: 1) the New Hospital Tower, 2) outpatient facilities, 3) Bioscience Tech Park; 4) other services and facilities, 5) LA BioMed Campus long-term buildout, and 6) Medical Campus support. The New Hospital Tower would contain up to 446 staffed patient beds, intervention services, and an inpatient imaging department. The existing Hospital and PCDC department would be retained and used for outpatient and hospital support, outpatient imaging, administrative offices, and other uses. The existing helipad near the existing Hospital and PCDC department would be relocated to a temporary location in the southwest portion of the Medical Campus until a new permanent helipad is constructed on the rooftop of the New Hospital Tower. Proposed outpatient facilities would include medical offices, ob/gyn, surgery, internal medicine, neurology, pediatrics, specialty clinic services, classrooms, labs, a library, and outpatient imaging including MRI and CT. Outpatient facilities would also contain mental health and social services but could also allocate space for other program uses, such as small-scale retail or community support functions. The proposed Bioscience Tech Park would include biomedical research facilities such as laboratories, administrative offices, meeting/conference rooms, and other support facilities, as well as a 1,000-space, seven-level above-ground parking structure.

Other new facilities could provide space for meetings, wellness training, post-medical care, nutrition classes, an herbal shop, bookstore, juice bar, yoga studio, massage therapy, aromatherapy, child care, health food market, fitness/exercise store, and similar uses. These uses would be contained in a new two-story building or contained in the ground floors of the new outpatient building(s), the renovated lobby of the existing Hospital, and ground levels of the new parking structures. Campus support would include a central plant (heating and cooling, emergency power, etc.), water treatment, warehouses/material management, and loading dock.

In order to accommodate new facilities and open space, many of the original and older buildings are proposed to be removed, including the original barracks and modular buildings, Warehouses #1 and #2, the central plant, and the Harbor-UCLA Professional Building and Imaging Center at the western end of the Medical Campus. However, several existing buildings would remain, including the Main Hospital, which would be decommissioned and reused for outpatient support and administration. The PCDC and the CII Burton E. Green Campus building at the western end of the Medical Campus would also remain, just west of the proposed Bioscience Tech Park. It should be noted that at this point in time it is not known whether or not the Parlow Library would be removed or retained on the Medical Campus; however, for the purposes of

this Initial Study, and in order to provide a conservative analysis, it is assumed that this structure would be retained. **Figure A-4**, *Proposed Medical Campus Plan*, illustrates the proposed layout of new and retained buildings, the pedestrian circulation network, landscaped areas, vehicular access and circulation, and parking.

As part of the Project, the County proposes to develop a publicly accessible interpretive program about the history of the Medical Campus as a whole. The program would be designed in consultation with a qualified architectural historian and may include such features as photographic and historical documentation, audiovisual displays, documentary film, and online accessible materials. The potential adaptive reuse of an original building on-site to house elements of the interpretive program will be reviewed as well, although the original WWII structures have been determined to have lost significant integrity and do not qualify as an historic district.

Proposed future buildout of the remainder of the LA BioMed Campus with up to 200,000 square feet of biomedical research space, laboratories, offices, and other support facilities, and disposition of the buildings that LA BioMed will vacate elsewhere on the Medical Campus, are considered part of the Project.

(b) Circulation and Parking

Project implementation would create clear distinctions between general public and staff entries and parking facilities. Staff entries and parking would be located in the southeast corner of the Medical Campus, while access for the general public would be provided from Carson Street along the northern perimeter. A new signalized public entrance on Carson Street and an additional unsignalized staff entrance on Vermont Avenue would be added. Sidewalk connections to public transit would be maintained and on-site sidewalks would be added between the main parking areas and the New Hospital Tower and Outpatient buildings. Pick-up/drop-off loading zones would be provided at the main entrances to the New Hospital Tower and Outpatient buildings. A comprehensive signage and wayfinding plan would aid visitors and patients in finding ultimate destinations and parking intended for those uses. The Project would provide sufficient parking to meet or exceed the County's minimum code parking requirement. Proposed vehicular access and parking are illustrated in **Figure A-5**, *Proposed Vehicular Circulation Plan*.

F. CONSTRUCTION PHASING

The Master Plan is intended as a long-term guide for future development on the Medical Campus. In order to make space for new development and to upgrade the quality of buildings, Project implementation would result in the demolition of some of the existing buildings. Construction of each proposed component would entail demolition, excavation and/or grading, construction, and finishing activities. Implementation of the Project is anticipated to occur in phases through the year 2030.

Material storage and equipment staging areas associated with construction activities for future implementation phases of the Project would be located on-site, while temporary construction worker parking would be provided either on the Medical Campus or at one or more off-site facilities, the specific location(s) of which would be determined prior to the start of individual construction phases. The location of off-site parking areas would be limited to off-street lots or parking structures in the vicinity of the Medical Campus, with adequate capacity to accommodate the parking demands of both the existing uses at each respective location and the demands of construction worker vehicles, such that parking shortages would not

occur. No on-street construction worker parking, material storage, or equipment staging would be permitted. Shuttle service for construction workers for transportation between off-site parking areas and the Medical Campus would be provided throughout construction for each implementation phase, as necessary.

G. REQUIRED APPROVALS

Implementation of the proposed Project would involve but not be limited to the following approvals:

1. County of Los Angeles

- Certification of the Final EIR and Project approval
- Approval of demolition, excavation, and building permits for buildings and other structures
- Approval of haul route

2. State of California

- California Office of Statewide Health Planning and Development (OSHPD)
- California Department of Transportation Division of Aeronautics

3. Regional

- South Coast Air Quality Management District



Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

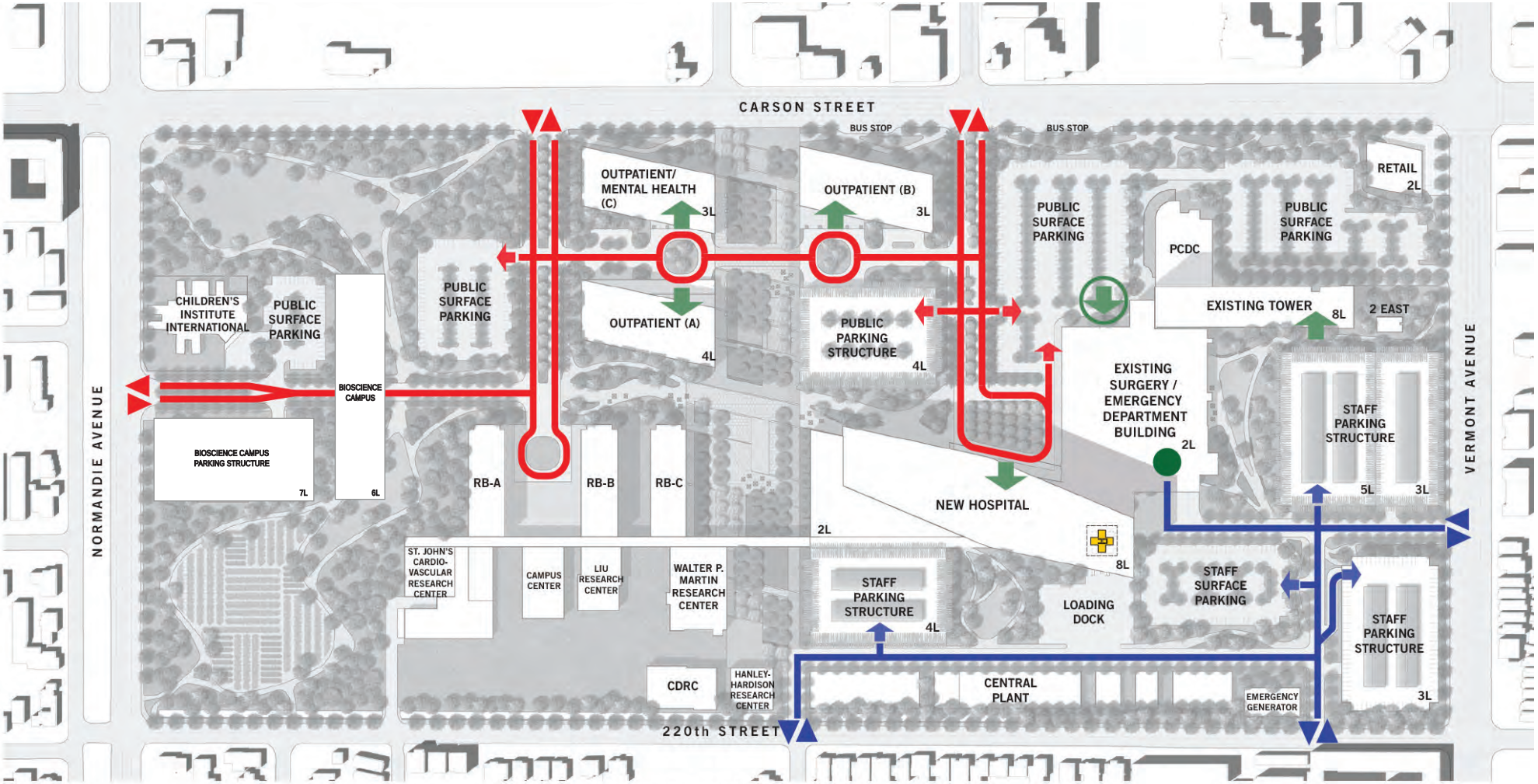
Proposed Medical Campus Plan

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Perkins+Will, 2012.

FIGURE

A-4



LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

Note: Plans shown are conceptual and representative of planned buildout of the Harbor-UCLA Medical Center Campus, subject to refinement during design development for specific building sites.

PCR

N

0 400 Feet

Proposed Vehicular Circulation Plan

Harbor-UCLA Medical Center Campus Master Plan Project

Source: Perkins+Will, 2012.

FIGURE

A-5

Attachment B: Explanation of Checklist Determinations

ATTACHMENT B
EXPLANATION OF CHECKLIST DETERMINATIONS

I. AESTHETICS

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. A scenic vista generally provides focal views of objects, settings, or features of visual interest, or panoramic views of large geographic areas of scenic quality, primarily from a given vantage point. Scenic vistas are generally associated with public vantages. Therefore, a significant impact could occur if the Project introduces incompatible visual elements within a field of view containing a scenic vista or substantially alters a view of a scenic vista. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development that partially obstruct any available views of scenic resources, including long-distance views of the San Gabriel and Santa Monica Mountains, under existing conditions. The Project would be built out in five phases through the year 2030, increasing the developed square footage on the Medical Campus by approximately 1,100,000 square feet to 2,150,000 square feet, which would substantially increase on-site development intensity and associated bulk and height of structures. This increased development intensity could obstruct views of scenic resources in the Project area. Therefore, it is recommended that this issue be analyzed further in an EIR.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?

Less Than Significant Impact. The closest state highways to the Medical Campus include the Harbor Freeway, less than 0.10 miles to the east, and the San Diego Freeway, approximately two miles to the north and east. Neither has been designated an official scenic highway by the California Department of Transportation on the California Scenic Highway Mapping System. The Medical Campus is therefore not visible from or located within the corridor of a designated state scenic highway. Although Project implementation would result in the removal over time of numerous trees and other landscaping throughout the Medical Campus, new landscaping, including trees, would be planted as part of the proposed improvements and would ultimately increase the amount of landscaping and number of trees compared to existing conditions. The Project would result in the demolition and replacement of 42 extant buildings on-site dating to the 1943 founding of the Los Angeles Port of Embarkation Station Hospital on the property. However, a comprehensive Historic Resources Report that evaluates the entire Medical Campus, included in this Initial Study as Appendix A, determined that the buildings are not historically significant (i.e., are not eligible for individual listing or listing as contributors to a historic district in the National Register or California Register, as discussed in Response V.a), and their removal would not constitute an impact on historic or scenic resources.[1]

[1] *GPA Consulting, Historic Resource Report, Los Angeles Biomedical Research Institute, 1000 W. Carson Street, Torrance, California, July 2013.*

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development. The existing visual character of the Medical Campus is generally characterized by aging, scattered facilities, including numerous one-story wood-frame barracks buildings remaining from the c. 1943 founding of the Los Angeles Port of Embarkation Station Hospital, and lacks a unified design. Landscaping is generally sparse and the Medical Campus perimeter is not uniformly demarcated. Finally, parking is scattered in distant surface lots and along internal roadways somewhat haphazardly, and pedestrian connections to buildings is inadequate. Project implementation would substantially modify the existing development pattern on the Medical Campus and would increase overall building height, bulk, and massing, throughout the Medical Campus. Building masses would be articulated through ground floor arcades, covered pathways, and the creation of open space courtyards, open turf areas, gardens, plazas, and a fitness trail for patients, staff, and the public. Although the Project is intended to improve the visual quality on the Medical Campus, its implementation would substantially alter the visual character of the Medical Campus, including its publicly visible perimeters. Therefore, it is recommended that this issue be analyzed further in an EIR.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Potentially Significant Impact. The Medical Campus is located within a highly urbanized area characterized by medium to high ambient nighttime artificial light levels. During nighttime hours, the surrounding commercial land uses typically display moderate to high levels of interior and exterior lighting for way-finding, security, parking, billboards, signage, architectural highlighting, and landscaping purposes. Traffic on local streets also contributes to overall ambient artificial light levels in the area. Similar to existing conditions, the Project would include nighttime illumination for architectural highlighting, parking, signage, and security, which may be visible from some nearby off-site vantages; thereby contributing to the lighting conditions in the area. In addition, the Project would introduce new building surface materials to the Medical Campus. Therefore, it is recommended that this issue be analyzed further in an EIR.

II. AGRICULTURAL AND FORESTRY RESOURCES

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown the maps prepared pursuant to the Farmland Mapping Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Medical Campus and surrounding area do not contain agricultural uses or related operations; refer to Figure 9.5, Agricultural Resource Areas Policy Map, of the County's Draft General Plan 2035. The Medical Campus is not located on designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program. Therefore, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of

Statewide Importance to non-agricultural uses, and no impact would occur in this regard. Further analysis of this issue in an EIR is not necessary.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Medical Campus is located in the C-3 Unlimited Commercial Zone and is designated for Public and Semi Public use in the Los Angeles County General Plan. Agricultural uses are not permitted within the C-3 zone and the Medical Campus is not within a designated Agricultural Opportunity Area or under a Williamson Act contract. Further, no agricultural zoning is present in the surrounding area and no nearby lands are enrolled under the Williamson Act. Therefore, the Project would not conflict with existing zoning for agricultural use within a designated Agricultural Opportunity Area or under a Williamson Act contract. Further analysis of this issue in an EIR is not necessary.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))??

No Impact. As described in Response II.b), the Medical Campus is not zoned for agricultural or forestry uses. No land zoned as forest land or timberland is present on the Medical Campus or in the surrounding area. As such, the Project would not conflict with existing zoning, or cause the rezoning of forest land, timberland, or timberland production land. Further analysis of this issue in an EIR is not necessary.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Medical Campus is fully developed with hospital and related uses and has been since the 1940s. No forest lands exist on the Medical Campus or in the Project vicinity. As such, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. Further analysis of this issue in an EIR is not necessary.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. No agricultural resources or related operations currently exist on or near the Medical Campus. Therefore, the Project would not involve changes in the existing environment that could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Further analysis of this issue in an EIR is not necessary.

III. AIR QUALITY

The significance criteria established by the South Coast Air Quality Management District (SCAQMD) may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the AQMP or Congestion Management Plan?

Potentially Significant Impact. The Medical Campus is located within the 6,600-square-mile South Coast Air Basin ("Basin"); refer to Figure 8.1, Air Basins, of the County's Draft General Plan 2035. The South Coast Air Quality Management District ("SCAQMD") is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in non-attainment (i.e., ozone, carbon monoxide, PM_{10}, and $PM_{2.5}$). The Project would be subject to the SCAQMD's Air Quality Management Plan ("AQMP"). The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments ("SCAG").

The Project would contribute to regional and local air emissions during construction and operation. Construction activities would produce emissions from construction equipment and fugitive dust. Project operations would increase the amount of traffic in the area and would consequently generate vehicle emissions that could affect implementation of the AQMP. As such, it is recommended that the Project's consistency with the AQMP be addressed in an EIR.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact. As discussed in Response III.a), the Medical Campus is located within the Basin, which is in non-attainment of several criteria pollutants. Implementation of the Project would increase emissions on both a short term (i.e., during construction) and long-term basis in a non-attainment area. Short-term construction emissions would result from a number of sources, including but not limited to the operation of heavy-duty construction equipment and on-site grading. Long-term emissions would result from helicopter activities and motor vehicles traveling to and from the Medical Campus once the Project is fully operational and stationary sources through the use of natural gas and electricity. As the Project would result in increased air emissions associated with construction and operation, it is recommended that this issue be analyzed further in an EIR.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment (ozone, carbon monoxide, & PM_{10}) under an applicable federal or state ambient air quality standard?

Potentially Significant Impact. Since the Project would result in increases in air emissions from construction (e.g., construction equipment, construction vehicle trips) and could result in increases from operations (e.g., helicopter trips as increasing number of patients arrive via helicopter, vehicle trips, stationary sources such as equipment, etc.) within the Basin, which is currently in non-attainment of Federal

and State air quality standards for ozone, carbon monoxide, PM_{10} and $PM_{2.5,}$ it is recommended that this issue be analyzed further in an EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. Construction activities and operation of proposed Project uses would increase air emissions compared to current levels. Land uses generally considered especially sensitive to air pollution are as follows: hospitals, schools, residences, playgrounds, child care centers, athletic facilities, and retirement/convalescent homes. Sensitive receptors in the vicinity of the Medical Campus include patients on the Medical Campus itself and single- and multi-family residences to the north, east, south, and west. Halldale Avenue Elementary School, Meyler Street Elementary School, Stephen M. White Middle School, and Caroldale Avenue Elementary School are located approximately 0.10 miles northwest, 0.15 miles south, 0.25 miles east, and 0.50 miles southeast of the Medical Campus, respectively. Normandale Recreation Center, Veterans Park, and Carson Park are located approximately 0.30 miles southwest, 0.60 miles southeast, and 0.70 miles northeast of the Medical Campus, respectively. Construction and operation of the Project could result in increased air emissions that could impact nearby sensitive receptors. Therefore, it is recommended that this issue be analyzed further in an EIR.

e) Create objectionable odors affecting a substantial number of people?

Potentially Significant Impact. The Project proposes the development of new medical buildings and uses on-site as well as the removal and/or modification of existing facilities. The Project would not introduce any additional major odor-producing uses that would have the potential to affect a substantial number of people. However, odors associated with Project operations may be incrementally increased by additional on-site waste generation and storage, cooking odors from the hospital cafeteria, operation of the Central Utility Plant, and the use of certain cleaning agents on the Medical Campus. Therefore, it is recommended that this issue be analyzed further in an EIR.

IV. BIOLOGICAL RESOURCES

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant With Mitigation Incorporated. The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. The Medical Campus contains several landscaped courtyards with mature specimen trees, but landscaping is generally sparse on the Medical Campus. The Medical Campus does not contain native trees that are regulated by the County, nor are other candidate, sensitive plant, or special status plant species present on-site. Mature trees on the Medical Campus may serve as habitat for migratory birds, which are not considered sensitive species but are regulated under the federal Migratory Bird Treaty Act; potential impacts on migratory birds resulting from tree removal are addressed in Response V.c) and Mitigation Measure BIO-1, below, which would reduce this

potential impact to a less than significant level. The Medical Campus does not otherwise provide habitat for sensitive wildlife species. Further analysis of this issue in an EIR is not necessary.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The Medical Campus is located in an urbanized area, and as such does not contain any riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetland or other sensitive natural communities as indicated in the County or in regulations by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. The Project is not located within a Significant Ecological Area ("SEA") or coastal resource area. Therefore, the Project would not have a substantial adverse effect on any sensitive natural communities. Further analysis of this issue in an EIR is not necessary.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. Neither the Medical Campus nor its surroundings contains wetlands as defined by Section 404 of the federal Clean Water Act. Therefore, the Project would not have an adverse effect on Federally protected wetlands. Further analysis of this issue in an EIR is not necessary.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?

Less Than Significant With Mitigation Incorporated. The Medical Campus and the surrounding area are completely developed and urbanized; therefore, the Medical Campus does not act as a migratory corridor or support resident terrestrial wildlife movement as it is surrounded by urban development that extends for miles. No aquatic habitat is present on or adjacent to the Medical Campus to support fish species. The highly developed conditions of the Medical Campus and surrounding area preclude its use as a native wildlife nursery site. Therefore, the Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or use of any native wildlife nursery site, and further analysis of this issue in an EIR is not necessary.

The Medical Campus contains ornamental trees, several of which are mature (i.e., greater than 12 inches in diameter at breast height). These mature trees could potentially provide nesting sites for migratory birds and therefore removal of on-site mature trees could result in a potentially significant impact. To ensure that impacts are reduced to a less than significant level, Mitigation Measure BIO-1 is prescribed below. This mitigation measure would require tree removal activities to be conducted in accordance with the federal Migratory Bird Treaty Act, in that tree removal would be scheduled between September 1 and February 14 to the extent possible. If tree removal is to occur outside this timeframe, mature trees would be surveyed for the presence of nests no more than seven (7) days prior to removal, and if nests are found, flagged with a buffer area until the nesting cycle has concluded or the nests have failed. With implementation of a

mitigation measure substantially similar to the one below to ensure compliance with the requirements of the MBTA, impacts to migratory bird species would be reduced to a less than significant level.

Mitigation Measures

BIO-1: If the nesting season cannot be avoided and construction or vegetation removal occurs between March 1st to September 15th (January 1st to July 31st for Raptors), the County shall do one of the following to avoid and minimize impacts to nesting birds[2]:

a) Implement a 300-foot minimum avoidance buffers for all passerine birds and 500 foot minimum avoidance buffer for all raptors species. The breeding habitat/nest site shall be fenced and/or flagged in all directions. The nest site area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project.[3]

b) Develop a project specific Nesting Bird Management Plan. The site-specific nest protection plan shall be submitted to CDFW for review. The Plan should include detailed methodologies and definitions to enable a CDFW-qualified avian biologist to monitor and implement nest-specific buffers based upon the life history of the individual species; species sensitivity to noise, vibration, and general disturbance; individual bird behavior; current site conditions (screening vegetation, topography, etc.), ambient levels of human activity; the various project-related activities necessary to construct the Project, and other features. This Nesting Bird Management Plan shall be supported by a Nest Log, which tracks each nest and its outcome. The Nest Log will be submitted to CDFW at the end of each week.

c) The County may propose an alternative plan for avoidance of nesting birds for submittal to CDFW.

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact. The Medical Campus and the surrounding area are completely developed and urbanized. No locally protected biological resources, such as Wildflower Reserve Areas, SEAs, sensitive environmental resource areas ("SERAs"), or oak trees protected under the Oak Tree Permits (Chapter 22.56 – Part 16) ("Oak Tree Ordinance") of the County Municipal Code ("Municipal Code"), exist on-site. The Project would incorporate a landscape plan which would include the planting of various species of trees (evergreen/semi-evergreens, palm trees, and flowering deciduous trees), and other ornamental plantings, including shrubs, turf, and groundcover, in courtyards, gardens, and other open space features. Therefore, the Project would not conflict with local policies or ordinances protecting biological resources. Further analysis of this issue in an EIR is not necessary.

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[2] *Qualified avian biologist shall establish the necessary buffers to avoid take of nest as defined in FGC 3503 and 3503.5*

[3] *NOTE: Buffer area may be increased if any endangered, threatened, or CDFW species of special concern are identified during protocol or pre-construction presence/absence surveys.*

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. As discussed above, the Medical Campus is not located within a SEA. Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in place for the Medical Campus. Therefore, implementation of the Project would not conflict with any Habitat Conservation Plans and no impacts would occur in this regard. Further analysis of this issue in an EIR is not necessary.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in significance of a historical resource as defined in State CEQA §15064.5?

Less Than Significant Impact. A comprehensive Historic Resource Report was prepared by GPA Consulting for the entire Medical Campus and is included as Appendix A of this Initial Study.[4] The following discussion summarizes the findings of the report.

The Medical Campus was initially founded and developed in 1943 by the U.S. Army to house the Los Angeles Port of Embarkation Station Hospital. Augmenting the state's original San Francisco Port of Embarkation, from which servicemen were deployed overseas, the Los Angeles Port of Embarkation encompassed the Station Hospital and other facilities in the Los Angeles area, including docks and warehouses at the Port of Los Angeles, a staging area and training center at Camp Anza in Riverside, and ammunition storage in Rialto. The Port of Embarkation provided military personnel with final training at the training facilities before deployment overseas, and, at the Station Hospital, received wounded military personnel upon their return, as well as providing medical services to servicemen and their families living in the South Bay area.

Between 1943 and 1946, the property was developed with a central administrative facility and 77 wood-framed barracks buildings that housed 600 patient beds and patient services. By 1946, with the end of the war, the hospital was no longer needed and the property was sold by the U.S. Army as war surplus to Los Angeles County. In 1947, the County converted the existing facilities into the Los Angeles County Harbor General Hospital, to provide hospital services and medical care for the growing South Bay population. The Historic Resource Technical Report therefore defined the period of significance for the Medical Campus as being from 1943-1946, the period during which the property was in use by the U.S. military. A total of 42 buildings of the original 77 remain on the Medical Campus, primarily in the central portion of the property.

The Medical Campus has not been evaluated or identified as significant in any previous historic resource surveys, nor is it currently designated a landmark at the national, state, or local levels. The property as a whole was evaluated as a potential historic district in the Historic Resource Report, and resources were

[4] *GPA Consulting. Historic Resource Report, Los Angeles Biomedical Research Institute, 1000 W. Carson Street, Torrance, California. July 2013.*

evaluated for individual eligibility as well. The Historic Resource Report concluded that the property is significant in the context of World War II military history in Los Angeles, since it was one of a small number of facilities constructed in the region to serve medical needs during World War II. However, the property is lacking in integrity – the ability to convey its significance – because there are not enough buildings remaining from the period of significance; the remaining buildings have been altered to the point that they no longer contribute to an historic district; and enough new buildings have been added that the property no longer represents an intact historic environment. With respect to the individual eligibility of buildings, while some buildings retain integrity from the period of significance, they do not effectively convey the history or significance of the Station Hospital on their own. As such, the property is not eligible for listing in the National Register or the California Register as a historic district, and none of the buildings are individually eligible for listing in the National Register or the California Register.

Although Project implementation would not result in significant impacts on historical resources, the Historic Resource Report prepared for the Medical Campus acknowledges its significance in the context of its association with World War II military history in Los Angeles. The report further notes that, despite its poor condition, Building N6 is the most intact remaining building, and, although the report indicates that retention of N6 is not required to avoid impacting an historic resource, it also recommends consideration of its preservation and rehabilitation. The County proposes to develop a publically accessible interpretive program addressing the history of the Medical Campus, as discussed in Attachment A, *Project Description*, of this Initial Study. The program would be designed in consultation with a qualified architectural historian and may include such features as photographic documentation, audiovisual displays, documentary film, and online accessible materials. In addition, the County will consider the potential relocation and adaptive reuse of all or a portion of Building N6 as part of its overall planning for the improvements at the Medical Campus.

Based on the analysis presented in the Historic Resource Report, implementation of the Project would result in a less than significant impact on historic resources. Further analysis of this issue in an EIR is not necessary.

b) Cause a substantial adverse change in significance of an archaeological resource pursuant to §15064.5?

Less Than Significant With Mitigation Incorporated. The Medical Campus is located within a highly urbanized area and has been subject to physical disruption over the course of several decades since it was first developed in 1943. For this reason, it is likely that any resources that may have been present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried archaeological resources could still exist on the property. Implementation of the Project would require grading, excavation, and trenching into native soils, which could result in direct impacts to undiscovered resources. The following mitigation measures are therefore recommended to ensure that impacts on any previously unknown archaeological resources discovered during Project construction would remain less than significant. Operations during and following Project buildout would have no impact on archaeological resources and further analysis of this issue in an EIR is not required.

CULT-1: If any archaeological materials are encountered during the course of the Project development, work in the area shall cease and deposits shall be treated in accordance with Federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2. As part of this effort, the services of an archaeologist

meeting the Secretary of the Interior Professional Qualification Standards for Archaeology shall be secured by contacting the California Historical Resources Information System South Central Coastal Information Center (CHRIS-SCCIC) at Cal State University Fullerton, or a member of the Register of Professional Archaeologists (RPA) to assess the resources and evaluate the impact. In addition, if it is determined that an archaeological site is a historic resource, the provisions of Section 21084.1 of the Public Resources Code and *CEQA Guidelines* Section 15064.5 would be implemented.

CULT-2: If any archaeological materials are encountered during the course of the Project development, a report on the archaeological findings shall be prepared by the qualified archaeologist. A copy of the report shall be submitted to the CHRIS-SCCIC.

CULT-3: If any archaeological materials are encountered during the course of the Project development, recovered archaeological materials shall be curated at an appropriate accredited curation facility. If the materials are prehistoric in nature, affiliated Native American groups (identified by the Native American Heritage Commission) may be consulted regarding selection of the curation facility.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant With Mitigation Incorporated. The Medical Campus has been subject to grading and building activities since it was first developed in 1943, and as with archaeological resources, it is likely that any paleontological resources once present on the property have been disturbed or removed. Nonetheless, previously undiscovered buried resources could still exist on the property. Development of the Project would require grading, excavation, and trenching into native soils that could contain undiscovered paleontological resources. The following mitigation measures are therefore recommended to ensure that impacts on any previously unknown paleontological resources discovered during Project construction would remain less than significant. Operations during and following Project buildout would have no impact on paleontological resources and further analysis of this issue in an EIR is not required.

CULT-4: If any paleontological materials are encountered during the course of Project development, work in the area shall be halted. The services of a qualified paleontologist shall be secured by contacting the Los Angeles County Natural History Museum to assess the resources. In addition, a report on the paleontological findings shall be prepared by the qualified paleontologist and a copy of the paleontological report shall be submitted to the Los Angeles County Natural History Museum.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Impact. As indicated in Response V.c), the Medical Campus has been previously graded and developed, and no known traditional burial sites or cemeteries have been identified on the property. Nonetheless, development of the Project would require grading, excavation, and trenching that may extend into native soils. While the uncovering of human remains is not anticipated, compliance with state law (i.e., Public Resources Code Section 5097.98, State Health and Safety Code Section 7050.5, and California Code of Regulations Section 15064.5(e)) would reduce potential impacts during Project construction to a less than significant level, and no mitigation measures are necessary. Operations during

and following Project buildout would not result in impacts on human remains. Further analysis of this issue in an EIR is not required.

VI. ENERGY

Would the project:

a) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?

Potentially Significant Impact. Implementation of the Medical Campus would require new construction and renovation of the existing Hospital building, which would be subject to the requirements of the County's Green Building Ordinance and Drought Tolerant Landscaping Ordinance. However, given the uncertainty regarding the future implementation of green building and landscaping requirements as part of Project implementation, it is recommended that the Project's consistency with the Green Building Ordinance and Drought Tolerant Landscaping Ordinance be analyzed further in an EIR.

b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?

Potentially Significant Impact. Implementation of the Medical Campus would result in the replacement of aging structures with new, more efficient structures, as well as renovation of the existing Hospital building, which would likely result in greater energy efficiency than under existing conditions. Nonetheless, despite the anticipated increase in energy efficiency per square foot of development, given the substantial overall increase in development intensity on the Medical Campus, it is recommended that this issue be analyzed further in an EIR.

VII. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. Fault rupture is the displacement that occurs along the surface of a fault during an earthquake. Based on criteria established by the California Geological Survey ("CGS"), faults can be classified as active, potentially active, or inactive. Active faults are those that have shown evidence of movement within the past 11,000 years (i.e., during the Holocene Epoch). Potentially active faults are those that have shown evidence of movement between 11,000 and 1.6 million years ago (i.e., during the Pleistocene Epoch). Inactive faults are those that have not exhibited displacement within the last 1.6 million years. Additionally, there are blind

thrust faults, which are low angle reverse faults with no surface exposure. Due to their buried nature, the existence of blind thrust faults is usually not known until they produce an earthquake.

The seismically active region of southern California is crossed by numerous active and potentially active faults and is underlain by several blind thrust faults. The CGS has established earthquake fault zones known as Alquist-Priolo Earthquake Fault Zones around the surface traces of active faults to assist cities and counties in planning, zoning, and building regulation functions. These zones identify areas where potential surface rupture along an active fault could prove hazardous and identify where special studies are required to characterize hazards to habitable structures. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismic or geotechnical hazard zone. Further, the Medical Campus is not located within a designated Alquist-Priolo Earthquake Fault Zone. As no known earthquake faults or Alquist-Priolo Earthquake Fault Zones exist on or near the Medical Campus, there would be no potential for surface fault rupture to affect future uses and further analysis of this issue in an EIR is not necessary

ii) Strong seismic ground shaking?

Potentially Significant Impact. The Medical Campus is located within the seismically active Southern California area. The nearest active fault, the Palos Verdes Fault, is located approximately 3.5 miles south of the Medical Campus. For these reasons, the Medical Campus could be subject to seismic ground shaking during earthquake events on any one of various active faults in the region. The proposed Project is being undertaken in part due to State law, which requires that all acute care facilities constructed prior to 1973 be decommissioned unless they can be retrofitted to meet current seismic safety requirements. As such, the County proposes to relocate acute care services from the existing Hospital building to the proposed new Hospital Tower and re-purpose the existing Hospital for sub-acute care uses. Although newly constructed future uses would be required to comply with State and County regulations related to seismic safety, given the Medical Campus's proximity to active faults in the region, impacts related to seismic ground shaking would be potentially significant. Therefore, it is recommended that this issue be analyzed further in an EIR.

iii) Seismic-related ground failure, including liquefaction?

Potentially Significant Impact. Liquefaction is a form of earthquake-induced ground failure that occurs primarily in relatively shallow, loose, granular, water-saturated soils. Liquefaction can occur when these types of soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Liquefaction usually results in horizontal and vertical movements from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. A shallow groundwater table, the presence of loose to medium dense sand and silty sand, and a long duration and high acceleration of seismic shaking are factors that contribute to the potential for liquefaction. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismically induced liquefaction zone. However, given the potential for seismic shaking and related secondary effects at the Medical Campus, it is recommended that liquefaction and lateral spreading be further evaluated in an EIR.

iv) Landslides?

No Impact. Similar to the surrounding region, the terrain of the Medical Campus is relatively flat. The proposed grading and development would not have an adverse effect on geologic stability on-site or off-site

in adjacent areas. According to Figure 12.1, Seismic and Geotechnical Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a seismically induced landslide zone and no sloped areas exist in the immediate area. Therefore, no impact would occur and further analysis of this issue in an EIR is not necessary.

b) Result in substantial soil erosion or the loss of topsoil?

Potentially Significant Impact. Implementation of the Medical Campus would require building, hardscape, and infrastructure demolition, site clearance, and grading and excavation, which would expose on-site soils. Construction activities associated with the Project, therefore, would have the potential to result in soil erosion during grading and construction activities. Thus, it is recommended that geologic hazards associated with soil erosion be analyzed further in an EIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?

Potentially Significant Impact. As discussed in Response VI.a.iv), above, the Project area is not susceptible to landslides. Subsidence occurs when fluids from the ground (such as petroleum and groundwater) are withdrawn. Since the Medical Campus is not located within a known oil field or groundwater extraction area, subsidence associated with extraction activities is not anticipated. However, evaluation of this issue in an EIR is recommended given the potential for seismic-related effects on proposed development and the extent of grading and excavation proposed.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Potentially Significant Impact. Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with repeated cycles of wetting and drying. The soils beneath the Medical Campus have not yet been formally characterized, and therefore it is assumed that the potential exists for expansive soils that may present a hazard to proposed development. Therefore, further analysis of this issue in an EIR is recommended.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Medical Campus is located in an urbanized area with wastewater infrastructure already in place. New development proposed as part of Project implementation would connect to existing off-site infrastructure and would not use septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur, and further analysis of this issue in an EIR is not necessary.

VIII. GREENHOUSE GASES

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

Potentially Significant Impact. Construction and operation of the Project would increase greenhouse gas emissions ("GHGs). which have the potential to either individually or cumulatively result to contribute to impacts on the environment. Therefore, this issue should be further evaluated in an EIR.

b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact. The Project would comply with the County's Green Building Ordinance (Chapter 22.52 – Part 20 of the Municipal Code) by conserving energy, water, and natural resources, and promoting a healthier environment. In conformance with the requirements of this ordinance, the Project would be designed to reduce GHG emissions through various energy conservation measures. In addition, the Project would implement applicable energy conservation measures to reduce GHG emissions, such as those described in the California Global Warming Solutions Act of 2006 (AB 32). However, to the extent that the Project could result in conflicts with applicable GHG reduction plans, policies, or regulations, impacts are considered potentially significant and it is recommended that this issue be analyzed further in an EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant Impact. The Project would include future development of medical buildings and uses on-site, as well as the removal, replacement, and modification of existing buildings. Construction of the Project would involve the temporary use of hazardous substances in the form of paint, adhesives, surface coatings and other finishing materials, and cleaning agents, fuels, and oils. Operation of the Project would involve the use and storage of limited quantities of potentially hazardous materials in the form of cleaning solvents, painting supplies, and pesticides for landscaping. Typical waste generated from hospital uses includes general waste, regulated medical waste, sharps containers, pharmaceutical waste, chemo waste, and pathological waste. Given the nature of proposed uses, construction and operation of the Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. It is recommended that this issue be analyzed further in an EIR.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Impact. As noted above, the Project would include future development of medical buildings and uses on-site, as well as the removal, replacement, and modification of existing buildings, which would involve the routine use, storage, transport, or disposal of limited quantities of hazardous materials. Additionally, short-term grading activities, including trenching and excavation, could expose construction workers or the public to unknown hazardous materials in on-site soil and/or groundwater, should such materials be present. As some of the buildings were built as early as 1943, it is possible that lead-based paint and paint residues are present in the buildings. If released into the environment, these materials could pose a significant hazard to construction workers or the public. Therefore, it is recommended that this issue be analyzed further in an EIR.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Potentially Significant Impact. Schools within one-quarter mile of the Medical Campus include Halldale Avenue Elementary School, Meyler Street Elementary School, and Stephen M. White Middle School. Project construction and operation could result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste. Because of the close proximity of the Medical Campus to these sensitive land uses, it is recommended that this issue be analyzed further in an EIR.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Potentially Significant Impact. The Medical Campus is located in a highly urbanized area surrounded by residential uses and commercial development. Given the potential presence of listed hazardous materials on-site, and associated potential for existing contamination to affect the proposed new uses on-site as well as surrounding off-site land uses, impacts related to the release of hazardous materials during construction and operation of the Project are considered potentially significant. A hazardous materials assessment will include a current database search of hazardous materials sites compiled pursuant to Government Code section 65962.5. It is recommended that the results of this search and analysis of potential impacts associated with hazardous materials sites be analyzed further in an EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Potentially Significant Impact. The Medical Campus is not within an airport land use plan or within two miles of a public use airport. The nearest public airports, Zamperini Field (3301 Airport Drive in Torrance), Hawthorne Municipal Airport (12101 S. Crenshaw Boulevard in Hawthorne), Compton/Woodley Airport (901 W. Alondra Boulevard in Compton), and Los Angeles International Airport ("LAX") (1 World Way in Los Angeles), are located approximately four miles, seven miles, nine miles, and eleven miles from the Medical

Campus, respectively. However, the Project proposes to relocate an existing helipad to a new permanent location atop the proposed new hospital building. It is recommended that future helicopter operations and associated safety hazards within and outside the Medical Campus be analyzed further in an EIR.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for the people residing or working in the area?

Potentially Significant Impact. There are no private airstrips in the vicinity of the Medical Campus, and the Medical Campus is not located within a designated airport hazard area. As discussed in Response VIII.e), the Project proposes to relocate an existing helipad to a permanent new location atop the proposed new hospital building. It is recommended that future helicopter operations and associated safety hazards for people residing or working in the area be analyzed further in an EIR.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The Medical Campus is bordered by Carson Street on the north, Vermont Avenue on the east, 220th Street on the south, and Normandie Avenue on the west. According to Figure 12.7, Disaster Routes, of the County's Draft General Plan 2035, the nearest freeway disaster routes to the Medical Campus are the Harbor Freeway and the San Diego Freeway, located approximately less than 0.10 miles east and two miles north and east of the Medical Campus, respectively. Implementation of the Project would not result in the physical changes to the freeways or any streets designated as an evacuation route in an adopted emergency response or evacuation plan.

While it is expected that the majority of construction activities and staging areas would occur entirely within the Medical Campus boundaries, short-term construction activities for sidewalk and infrastructure improvements may temporarily disrupt access on portions of the public rights-of-way. In these instances, the Project would implement traffic control measures (e.g., construction flagmen, signage, etc.) to maintain flow and access. Furthermore, development of the Project would comply with County's building and applicable fire and safety codes that require adequate access for fire personnel and equipment in and out of the Medical Campus. Similarly, access for doctors, staff, patients, and visitors would be maintained throughout future construction phases such that no interruption or reduction in the availability of medical care services would occur. Therefore, construction activities are not expected to result in inadequate emergency access.

The Project proposes to redesign the existing Medical Campus to improve vehicular access and internal circulation. Given the proposed improvements to Project ingress/egress and parking design, access and circulation at the Medical Campus are not anticipated to interfere with emergency vehicle access. An Emergency Evacuation Plan for the Project, as for the existing hospital, would be maintained, periodically updated, and implemented as necessary during emergency situations at the Medical Campus to ensure proper procedures are followed to protect human health and safety. For these reasons, construction and operation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant, and further analysis of this issue in an EIR is not necessary.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development. The Medical Campus is not located within an identified wildland fire hazard area or very high fire hazard severity zone, based on Figure 12.6, Fire Hazard Severity Zones Policy Map, of the County's Draft General Plan 2035. Further analysis of this issue in an EIR is not necessary.

X. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Potentially Significant Impact. Project construction would alter the quantity and composition of surface runoff through grading of hardscape surfaces, construction of impervious streets, building development, introduction of urban pollutants, and irrigation of newly landscaped areas. Additionally, operation of future uses could result in increases in pollutant discharges to receiving waters (including impaired water bodies pursuant to the Clean Water Act Section 303(d) list), significant alteration of receiving water quality during or following construction, or violation of water quality standards or waste discharge requirements. Impacts could be potentially significant and further analysis of this issue in an EIR is necessary.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned land uses for which permits have been granted)?

Potentially Significant Impact. The Project would not directly deplete groundwater supplies as no groundwater extraction activities are proposed. However, the Project would involve future development of medical buildings and uses on the Medical Campus, as well as the removal, replacement, and modification of existing buildings, circulation, and landscaping, which could increase impervious surface area on-site. The reduction in pervious surface area could potentially reduce the amount of water reaching groundwater aquifers beneath the Medical Campus. As such, impacts related to groundwater recharge would be potentially significant and it is recommended that this issue be analyzed further in an EIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact. Project implementation would substantially modify the existing drainage characteristics on the Medical Campus over the long-term, and is expected to result in an overall increase in pervious surface area and the installation or implementation of a range of water quality and drainage

features and practices. Nonetheless, given the magnitude of redevelopment proposed and the related modification of drainage patterns, impacts are considered potentially significant and it is recommended that this issue be analyzed further in an EIR.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Potentially Significant Impact. Refer to Response IX.c). The Project would modify the drainage patterns on the Medical Campus, and as such, it is recommended that this issue be analyzed further in an EIR.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Potentially Significant Impact. The Medical Campus is currently developed with urban uses and existing storm drain facilities currently provide stormwater drainage for on-site uses. The Project would be designed and constructed to comply with LA County's low impact development ("LID") standards for storm water management, but could potentially result in adverse impacts to downstream drainage facilities. To determine if the Project would create or contribute runoff that could exceed the capacity of storm drainage facilities in the area, and to identify appropriate LID compliance features and practices, it is recommended that this issue be analyzed further in an EIR.

f) Otherwise substantially degrade water quality?

Potentially Significant Impact. As discussed in Response IX.a), Project implementation could potentially substantially degrade water quality. This issue will be evaluated further in the EIR.

g) Place housing within a 100-year flood plain as mapped on federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to Figure 12.2, Flood Hazard Zones Policy Map, of the County's Draft General Plan 2035, the Medical Campus is not located within a 100-year flood hazard area. Therefore, the Project would not place housing within a 100-year flood plain, and no impact would occur in this regard. Further analysis of this issue in an EIR is not necessary.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As discussed in Response IX.g), the Medical Campus is not located within a FEMA-designated 100-year floodplain. Therefore, the Project would not place structures within a 100-year floodplain that would impede or redirect flood flows. Thus, no impact would occur with regard to floodplains and further analysis of this issue in an EIR is not necessary.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. As discussed in Response IX.g), the Medical Campus is not located within a 100-year floodplain. No dams or levees are present on or near the Medical Campus. According to Figure 12.4, Dam and Reservoir Inundation Areas, of the County's Draft General Plan 2035, the Medical Campus is not located within a flood hazard area due to failure of a dam or reservoir. Therefore, flooding resulting from a dam or levee failure would not occur. Further analysis of this issue in the EIR is not necessary.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of the sea floor associated with large, shallow earthquakes. Mudflows result from the down slope movement of soil and/or rock under the influence of gravity.

The Medical Center is not adjacent to any large body of water, and therefore there is no potential for seiche hazards. The Medical Campus is located approximately 5.2 miles east of the Pacific Ocean. According to Figure 12.3, Tsunami Hazard Areas, of the County's Draft General Plan 2035, the Medical Campus is not located within a tsunami hazard area. The Medical Campus is located within a relatively flat and highly urbanized area surrounded by residential uses and commercial development and as such is not in an area susceptible to mudflows. Further analysis of these issues in the EIR is not necessary.

XI. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The Medical Campus is located in an urbanized area surrounded by residential uses and commercial development. The Project involves future development of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification within the existing Medical Campus. The Project would result in the renovation and expansion of existing hospital, medical office, research, and related medical uses entirely within the existing Medical Campus boundaries, and therefore would not physically divide an established community. Thus, no impact would occur in this regard and further analysis of this issue in an EIR is not necessary.

b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Impact. Although the existing Hospital and related uses are consistent with the current designated land use and zoning designations for the Medical Campus and future uses would be

similarly consistent, the Project would substantially increase the intensity of on-site development. As such, impacts related to conflicts with applicable plans, policies, and regulations could occur. It is recommended that this issue be analyzed further in an EIR.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. As discussed above, the Medical Campus is not located within a Significant Ecological Area (SEA). Additionally, there is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan in place for the Medical Campus. Therefore, Project implementation would not conflict with any Habitat Conservation Plan, and no impacts would occur in this regard. Further analysis of this issue in an EIR is not required.

XII. MINERAL RESOURCES

Would the project:

a) Result in the loss or availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The Medical Campus is not located within a known mineral resource area and no mineral resources are known to exist at the Medical Campus or in the surrounding area, as shown in Figure 9.6, Natural Resource Areas, of the County's Draft General Plan 2035. Therefore, no impact to mineral resources would occur. Further analysis of this issue in an EIR is not necessary.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The Medical Campus is not located within a Mineral Resource Zone and there are no known designated locally-important mineral resources located on the Medical Campus or in the vicinity, as illustrated in Figure 9.6, Natural Resource Areas, of the County's Draft General Plan 2035. Therefore, no impact to mineral resources would occur. Further analysis of this issue in an EIR is not necessary.

XIII. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. Construction of the Project would require the use of heavy construction equipment (e.g., bulldozers, backhoes, cranes, loaders, etc.) that would generate noise on a short-term basis during each future development phase. Additionally, operations following Project buildout may increase

existing noise levels as a result of related traffic, emergency vehicles/ambulance sirens, helicopter operations, heating, ventilating, and air conditioning ("HVAC") systems, loading/unloading of trucks, and other activities on the Medical Campus. As such, nearby sensitive uses could potentially be affected. Noise-sensitive areas typically include residential areas, schools, convalescent hospitals, acute care facilities, and park and recreational areas. Sensitive receptors in the Project vicinity consist of single- and multi-family residences to the north, east, south, and west. Schools in the Project area include Halldale Avenue Elementary School, Meyler Street Elementary School, Stephen M. White Middle School, and Caroldale Avenue Elementary School, which arelocated approximately 0.10 miles northwest, 0.15 miles south, 0.25 miles east, and 0.50 miles southeast of the Medical Campus, respectively. The Carson Library is located approximately 0.75 miles east of the Medical Campus. Normandale Recreation Center, Veterans Park, and Carson Park are located approximately 0.30 miles southwest, 0.60 miles southeast, and 0.70 miles northeast of the Medical Campus, respectively. The Project would result in short-term construction and long-term operational noise level increases in the Project area that could exceed established noise standards at nearby sensitive receptors, which would be considered a potentially significant impact. It is recommended that the Project's potential to exceed noise standards be analyzed further in an EIR.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. Construction of the Project may generate groundborne vibration and noise due to site grading, clearing activities, and haul truck travel. In addition, Project construction may require pile driving. As such, the Project would have the potential to expose people to, or generate, excessive groundborne vibration and noise levels during short-term construction activities. Therefore, it is recommended that this issue be analyzed further in an EIR.

Additionally, operation of the Project's hospital-related uses could generate groundborne vibration or noise at levels beyond those that currently exist within the existing urbanized development setting. As such, operation of the Project could have the potential to expose people to excessive groundborne vibration or noise. Further analysis of operational groundborne vibration or noise in an EIR is recommended.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. As discussed in Response XII.a, above, operation of the Project may increase existing noise levels as a result of Project-related traffic, emergency vehicles/ambulance sirens, helicopter activities, HVAC systems, loading/unloading of trucks, and human activities on the Medical Campus. Therefore, it is recommended that potential impacts associated with a permanent increase in ambient noise levels be analyzed further in an EIR.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. As discussed in Response XII.a), construction of the Project would require the use of heavy construction equipment (e.g., bulldozers, backhoes, cranes, loaders, etc.) that would generate noise on a short-term basis during the various phases of Project construction. Therefore, it is

recommended that potential impacts associated with a temporary or periodic increase in ambient noise levels be analyzed further in an EIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impact. As discussed in Response VIII.e), the Medical Campus is not within an airport land use plan or within two miles of a public use airport. The nearest public airports, Zamperini Field, Hawthorne Municipal Airport, Compton/Woodley Airport, and LAX are located approximately four miles, seven miles, nine miles, and eleven miles from the Medical Campus, respectively. However, the Project proposes to relocate the existing helipad to a permanent helipad location atop the proposed new hospital building, and to relocate the existing helicopter pad to a temporary location on the Medical Campus for a period during construction. Future helicopter operations and associated noise generation within and outside the Medical Campus could result in potentially significant noise impacts to sensitive receptors in the area. As such, it is recommended that this issue be analyzed further in an EIR.

f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impact. As discussed in Response VIII.f), there are no private airstrips in the vicinity of the Medical Campus, and Medical Campus is not located within a designated airport hazard area. However, the Project proposes to relocate the existing helipad to a permanent helipad location atop the proposed new hospital building. Future helicopter operations and associated noise generation within and outside the Medical Campus could result in potentially significant noise impacts to sensitive receptors in the area. It is recommended that this issue be analyzed further in an EIR.

XIV. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Potentially Significant Impact. Population growth and future development projections are prepared by SCAG. SCAG provides current and projected population, housing and employment estimates for the region as a component of the Regional Transportation Plan ("RTP"). SCAG bases its estimates, in part, on anticipated development by County/City jurisdictions based on their General Plans, zoning and on-going development activity. The SCAG projections serve as the basis for providing infrastructure and public services by various jurisdictions and service agencies throughout the region.

There are no residential uses on the Medical Campus. The Project would not have indirect effects on growth through such mechanisms as the extension of roads and infrastructure. The Project would be built out in five

phases through the year 2030 increasing the Medical Campus square footage by approximately 1,100,000 square feet from the existing 1,050,000 square feet to 2,150,000 square feet. The Project involves future development of medical buildings and uses on-site as part of the proposed expansion, removal, replacement, and modification within the existing Medical Campus, which would increase the visitor, patient, and employment population on the Medical Campus. According to the proposed Project, the employee population currently on the Medical Campus is estimated to increase by almost 2,500 jobs, or 45 percent, at Project buildout. Therefore, the increased on-site population should be evaluated for consistency with SCAG projections and for the potential to induce substantial population growth. Accordingly, it is recommended that this issue be analyzed further in an EIR.

b) Displace substantial numbers of existing housing, necessitating the necessitating the construction of replacement housing elsewhere?

No Impact. There is no existing housing on the Medical Campus. Thus, the Project would not displace any housing or associated residential population. No impacts would occur and further analysis of this issue in an EIR is not necessary.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As indicated in Response XIII.a), there are no residential uses on the Medical Campus. According to the Master Plan, the number of jobs on the Medical Campus is estimated to increase by almost 2,500 or 45 percent at Project buildout. Thus, the Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. No impacts would occur. Further analysis of this issue in an EIR is not necessary.

XV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

Potentially Significant Impact. Los Angeles County Fire Station 36, located at 127 W. 223rd Street, Carson, is located approximately 0.65 miles southeast from the Medical Campus; refer to Figure 12.8, Fire Department Battalions and Stations, of the County's Draft General Plan 2035. The Project would increase visitor, patient, and employment populations to the Medical Campus. This increase of population could create a need for expanding existing facilities or staff, construction of a new facility, or adversely impact types of services provided. Therefore, the existing capacity of the County Fire Department to meet these demands must be determined and further analysis of the potential adverse physical impacts to the County Fire Department will be analyzed in the EIR.

ii) Police protection?

Potentially Significant Impact. Carson Sheriff Station, located at 21356 S. Avalon Boulevard, Carson, is located approximately 1.5 miles east from the Medical Campus, refer to Figure 12.9, Sheriff's Department Service Areas, of the County's Draft General Plan 2035. The Project would increase visitor, patient, and employment populations on the Medical Campus. This increase in population could create a need for expanding existing facilities or staff, construction of a new facility, or adversely impact types of services provided. Therefore, the existing capacity of County Sheriff Department to meet these demands must be determined and it is recommended that potential adverse physical impacts to the County Sheriff's Department be analyzed further in an EIR.

iii) Schools?

Potentially Significant Impact. The Medical Campus is located within proximity of Halldale Avenue Elementary School, Meyler Street Elementary School, Caroldale Avenue Elementary School, Van Deene Avenue Elementary School, Torrance Elementary School, Dolores Street Elementary School, St. Philomena School, Stephen M. White Middle School, Carson High School, and Sherry High School. The Project would increase visitor, patient, and employment population on the Medical Campus. Because the Project could attract new employees that might move to the area, it could generate new students and increase demand for school facilities and services. Therefore, it is recommended that the existing capacities of the nearby schools to meet these demands be determined, and that this issue be analyzed further in an EIR.

iv) Parks?

Potentially Significant Impact. The parks located nearest the Medical Campus include Normandale Recreation Center, 22400 Halldale Avenue, Torrance, located approximately 0.30 miles southwest; Veterans Park, 22400 Moneta Avenue, Carson, located approximately 0.60 miles southeast; and Carson Park, 21411 S. Orrick Avenue, Carson, located approximately 0.70 miles northeast of the Medical Campus. The Project would increase the number of visitors, patients, and staff on the Medical Campus. The Project does propose open space courtyards, open turf areas, gardens, plazas, and a fitness trail for patients, staff, and the public. However, this increase of population could create a need for expanding or existing facilities or staff, construction of a new facility, or adversely impact types of services provided and the existing capacity of the County, City, or other public parks and recreational facilities to meet these demands must be determined. It is recommended that this issue be analyzed further in an EIR.

v) Other public facilities?

Potentially Significant Impact. The County of Los Angeles Carson Public Library, located at 151 E. Carson Street, Carson, is located approximately 0.75 miles east of the Medical Campus; refer to Figure 13.2, Libraries, of the County's Draft General Plan 2035. The Project would increase the visitor, patient, and staff populations on the Medical Campus, and may attract new residents to the area in response to new employment opportunities. This increase could create a need to expand existing library facilities or staff or construct a new library facility, or could adversely impact types of services provided. Therefore, the existing capacity of public libraries to meet demand in the Project area must be determined. It is recommended that this issue be analyzed further in an EIR.

XVI. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Potentially Significant Impact. According to the County's Draft General Plan 2035, Chapter 10, Parks and Recreation Element, large areas of the County are underserved by parks and recreational facilities. The Element shows that the unincorporated areas of the County face a significant deficit in local parkland of 3,620 acres. Based on population projections, the unincorporated areas of the County would have deficits of 5,986 acres in local parkland and 5,046 acres in regional parkland by the year 2035 if no new parks are created. The County has an adopted standard of four acres of local parkland per 1,000 residents and six acres of regional parkland per 1,000 residents. This requirement may be met by dedication of land, payment of in lieu fees or a combination of both as defined by the County's requirements for residential projects. However, as the Project would not involve the provision of new housing, it is not subject to the County's parkland dedication or fee payment requirements.

As discussed in Response XIV.a.iv), the parks located nearest to the Medical Campus include Normandale Recreation Center, Veterans Park, and Carson Park, located approximately 0.30 miles southwest, 0.60 miles southeast, and 0.70 miles northeast of the Medical Campus, respectively. The Project would increase the visitor, patient, and staff populations on the Medical Campus, and may also attract new residents to the area in response to new employment opportunities. The Project proposes open space courtyards, open turf areas, gardens, plazas, and a fitness trail for patients, staff, and the public and it is anticipated that patients and employees of the Project would primarily utilize the Project's recreational facilities as well as nearby off-site recreational facilities. Although the Project has limited potential to result in increased use of off-site parks or other recreational facilities as a result of indirect population growth and employees, such that substantial deterioration of the facilities could occur or be accelerated, it is recommended that this issue be analyzed further in an EIR.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Potentially Significant Impact. The Project proposes open space courtyards, open turf areas, gardens, plazas, and a fitness trail for patients, staff, and the public. As the Project would increase the visitor, patient, and staff populations on the Medical Campus, it will be necessary for the EIR to determine if the Project's proposed recreational facilities and Project's population generation would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. It is recommended that this issue be analyzed further in an EIR

XVII. TRANSPORTATION AND CIRCULATION

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Potentially Significant Impact. The Project would be built out in multiple phases through the year 2030, increasing the Medical Campus square footage by approximately 1,100,000 square feet from the existing 1,050,000 square feet to approximately 2,150,000 square feet. The Project involves future development of medical buildings and uses on-site, as well as the removal, replacement, and modification of existing structures, circulation, and landscaping. These uses would add traffic to local and regional transportation systems. Thus, operation of the Project could adversely affect the existing capacity of the street system or exceed an established level of service ("LOS") standard. Construction of the Project would also result in a temporary increase in traffic due to construction-related truck trips and worker vehicle trips. Traffic impacts during construction could also adversely affect the street system. A traffic study will therefore be prepared for the Project. The analysis of traffic impacts will identify key intersections for analysis, quantify existing and future traffic conditions at those locations, identify impacts caused by the addition of Project-generated traffic, and identify mitigation measures to reduce potentially significant impacts generated by the Project, as appropriate and where feasible. In addition, construction activities could temporarily limit or otherwise alter access to public transit or other alternative transportation facilities or services (e.g., bike lanes, sidewalks, etc.), and operation of proposed uses could increase demands on such facilities and services, and impacts in this regard could also be potentially significant. As the Project has the potential to result in significant traffic and transportation-related impacts, it is recommended that this issue be analyzed further in an EIR.

The parking supply on the Medical Campus currently totals 2,905 spaces, exceeding the County's parking code requirement of 2,709 spaces.[5] An additional 278 spaces are provided off-site, and street parking is permitted along all or portions of the four public streets surrounding the Medical Campus. On-campus parking is scattered, with the majority of spaces contained in lots relegated to the perimeters of the Cam pus, sometimes far from the facilities they serve, and in sometimes makeshift fashion along internal streets. Moreover, pedestrian connections between parking lots and buildings generally poorly organized or marked. The availability of parking on-site also fluctuates over time during facility upgrades or construction. The Project proposes to reorganize the on-site parking supply, concentrating patient and visitor parking along the northern perimeter of the Medical Campus and staff parking in the southeast portion of the Medical Campus. The Project proposes to provide sufficient parking to meet or exceed the County's code requirement in the future; however, this may not be sufficient to meet actual future demand. It is recommended that this issue be analyzed further in an EIR.

[5] *Los Angeles County Code, Chapter 122.52.1120, Hospitals, Convalescent Hospitals, Adult Residential Facilities, and Group Homes for Children, which requires 2 spaces per bed, 1 space/250 square feet for outpatient facilities, and 1 space/400 square feet for research use.*

b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Potentially Significant Impact. The congestion management program ("CMP") for the County requires that the traffic impacts of individual development projects of potential regional significance be analyzed. The CMP system comprises a specific system of arterial roadways, plus all freeways. The closest roadway within the CMP system to the Medical Campus is the Harbor Freeway, less than 0.10 miles to the east, and the San Diego Freeway, approximately two miles to the north and east. According to the County CMP Traffic Impact Analysis Guidelines, a CMP traffic impact analysis is required if (1) a project would add 50 or more trips during A.M. or P.M. weekday peak hours to CMP arterial monitoring intersection, including freeway ramps; or (2) a project would add 150 or more trips during A.M. or P.M. weekday peak hours, in either direction, to CMP freeway monitoring locations. The Project could result in additional vehicle trips from operation of the proposed expansion of medical facilities. Accordingly, it is recommended that this issue be analyzed further in an EIR.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?

Potentially Significant Impact. The nearest airports, Zamperini Field, Hawthorne Municipal Airport Compton/Woodley Airport, and LAX, are located approximately four miles, seven miles, nine miles, and eleven miles from the Medical Campus, respectively. However, the Project proposes to relocate the existing helipad to a permanent helipad location atop the proposed new hospital building. As such, the Project could result in a change in air traffic patterns, including an increase in hospital-related air traffic levels and changes in landing and takeoff locations and flight paths. It is recommended that the potential for substantial safety risks be analyzed further in an EIR.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. The Medical Campus is located within a highly urbanized area surrounded by residential uses and commercial development. The Project does not propose uses that are incompatible with the Medical Campus or existing street system, and the roadways adjacent to the Medical Campus are part of an established urban roadway network and contain no sharp curves or dangerous intersections. However, the Project would alter the existing building configuration on-site, construct new access driveways and internal circulation, expand parking facilities, and create new pedestrian improvements. Additionally, the Project would result in an increase in traffic levels in the Project area. Considering these factors, the potential for hazardous conditions may increase over existing conditions under the Project. It is recommended that this issue be analyzed further in an EIR.

e) Result in inadequate emergency access?

Potentially Significant Impact. The Medical Campus would be designed to provide access to fire, ambulatory, and police vehicles from adjacent roadways. Access to the Medical Campus is provided by

Carson Street, 220th Street, Vermont Avenue, and Normandie Avenue. While it is expected that the majority of construction activities for the Project would be confined on-site, short-term construction activities may temporarily affect access on portions of adjacent streets during certain periods of the day. In addition, the Project would generate traffic in the vicinity and would result in some modifications to access from the streets that surround Medical Campus. It is recommended that this issue be analyzed further in an EIR.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Potentially Significant Impact. The Medical Campus is located in an area well served by public transportation. The Medical Campus is served by transit, which includes the Metro Bus Harbor Transitway on the Harbor Freeway. The Metro Express Line (Route 450) and local municipal bus line CE448 utilize the Harbor Freeway and the Carson Metro Transit Station, which is located less than 0.10 miles east of the Medical Campus. The transit station is located at the south side of Carson Street and public sidewalks are provided between the station and the Medical Campus. A LADOT Park and Ride lot is located to the west of the freeway at the north side of Carson Street. The Medical Campus is served by three public transit systems – LA Metro, Torrance Transit, and Gardena Municipal Bus Lines – and by its own on-Campus shuttle service. Metro Lines 202 and 550 travel along Vermont Avenue, with bus stops at the Carson Street intersection and near 220th Street. As the Project would change site access conditions and contribute additional population to the surrounding area, it is recommended that Project consistency with policies, plans, and programs supporting alternative transportation be analyzed further in an EIR.

XVIII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact. The sewer system in the public right-of-way is owned and maintained by the County of Los Angeles Sanitation District ("LACSD"). Several large trunk sewers are located around the perimeter of the Medical Campus. The Project involves future development of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities, and may increase the visitor, patient, and employment populations on the Medical Campus, in turn generating increased wastewater volumes. Increased wastewater volumes could potentially result in impacts with respect to wastewater treatment. Therefore, it is recommended that this issue be analyzed further in an EIR.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. The Project proposes the development of new medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Given the associated increase in demand for water service and wastewater treatment, the potential exists for the

Project to require the construction or expansion of water and/or wastewater treatment facilities. Therefore, it is recommended that this issue be analyzed further in an EIR.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Potentially Significant Impact. Refer to Section IX, above. Given the proposed changes to on-site drainage patterns, implementation of the Project would require the construction or expansion of storm water drainage facilities. Therefore, it is recommended that this issue be analyzed further in an EIR.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Potentially Significant Impact. The Project proposes the development of newmedical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of the existing Medical Campus. The Project would increase visitor, patient, and employment populations on the Medical Campus. Therefore, it is currently anticipated that the Project's proposed mix of land uses would generate demand for water that meets or exceeds the threshold requiring the preparation of a water supply assessment ("WSA") pursuant to Senate Bill ("SB") 610. Based on the WSA, the EIR will evaluate whether available water supplies can adequately accommodate the Project's increased demand for water. Changes in water availability and water regulations, as well as water conservation features and practices, are important considerations in the ability of the Project to support its on-site population. Therefore, it is recommended that this issue be analyzed further in an EIR.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Potentially Significant Impact. The Project involves the development of medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of the existing Medical Campus. As such, given the associated increase in demand for wastewater treatment, the potential exists for the Project to exceed the capacity of existing wastewater treatment facilities. Therefore, it is recommended that this issue be analyzed further in an EIR.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Potentially Significant Impact. The Project proposes the development of new medical buildings and uses on-site, as well as the expansion, removal, replacement, and modification of existing facilities. Construction associated with Project buildout would generate inert solid waste (e.g., export soils, construction and demolition debris) which would require disposal at an unclassified landfill. In addition, during future Project operation, medical uses would generate solid waste which would be disposed of at the landfill(s) serving the County. All jurisdictions, including the County, are required to divert or recycle up to 50 percent of solid waste generated, to reduce the volume of waste requiring disposal in landfills. Although recycling would

extend the life of the landfill(s) serving the Project area, implementation of the Project would increase demand for landfill services and potentially accelerate projected landfill closures. Therefore, it is recommended that Project impacts related to solid waste disposal be analyzed further in an EIR.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Potentially Significant Impact. The California Integrated Waste Management Act of 1989, also known as Assembly Bill ("AB") 939, mandates jurisdictions to meet a diversion goal of 50 percent by 2000 and thereafter. In addition, each county is required to prepare and administer a Countywide Integrated Waste Management Plan ("CoIWMP"). This plan is comprised of the county's and the cities' solid waste reduction planning documents plus an Integrated Waste Management Summary Plan ("Summary Plan") and a Countywide Siting Element ("CSE"). For Los Angeles County, the County's Department of Public Works ("Public Works") is responsible for preparing and administering the Summary Plan and the CSE. These documents were approved by the County, a majority of the cities within the County containing a majority of the cities' population, the County Board of Supervisors, and the California Department of Resources Recycling and Recovery ("CalRecycle"). The Summary Plan, approved by CalRecycle on June 23, 1999, describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. In addition, Los Angeles County continually evaluates landfill disposal needs and capacity through preparation of CoIWMP Annual Reports. Within each annual report, future landfill disposal needs over the next 15-year planning horizon are addressed in part by determining the available landfill capacity.

As described above, there are a number of State and County plans and policies that address the availability of sufficient landfill capacity and the diversion/recycling of waste debris, with which the Project could potentially conflict. Therefore, it is recommended that Project consistency with plans and policies related to solid waste be analyzed further in an EIR.

h) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?

Potentially Significant Impact. Long-term sustainability is one of the key principles guiding the Project. The Project would be required to comply with the County's Green Building Ordinance (Chapter 22.52 – Part 20 of the Municipal Code) by conserving energy, water, natural resources, and promoting a healthier environment. Green building techniques that accommodate new technology and green building practices would be integrated into all building design, construction, and occupancy and integrated with Medical Campus infrastructure and include integrated stormwater and wastewater treatment. In addition, the implementation of the Project would utilize a standardized approach to third party certification systems (i.e., LEED), and all future development would be required by contract specifications to achieve a minimum LEED Silver certification (though incentives could result in higher levels of LEED certification). Project landscaping installed would be compliant with the County's Drought Tolerant Landscaping Ordinance (Chapter 22.52 – Part 21) of the Municipal Code. Further, the Project would be developed in compliance with all state and local regulations related to energy conservation. Nonetheless, it is recommended that this issue be analyzed further in an EIR.

i) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?

Potentially Significant Impact. As indicated in Response XVII.h), the Project would implement a wide variety of sustainability features throughout the Medical Campus and thus would not involve inefficient use of energy resources. The Project would include installation of energy efficient HVAC units, windows, a lighting control system that is Title 24 compliant, tank less hot water heaters, low flow plumbing fixtures, irrigation systems, and drought tolerant landscaping (where feasible). Therefore, the Project would not result in an inefficient use of energy resources. Nonetheless, it is recommended that this issue be analyzed further in an EIR.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. As analyzed in previous sections of this Initial Study, the Project could result in environmental impacts that could degrade the quality of the environment. As such, it this issue will be analyzed further in an EIR.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

Potentially Significant Impact. As discussed above, the Project could potentially result in significant individually limited, but cumulatively considerable, impacts regarding aesthetics, air quality, geology/soils, GHG emissions, hazards/hazardous materials, hydrology/water quality, land use/planning, noise, population/housing, public services, recreation, traffic/transportation, and utilities/services. Therefore, the EIR will evaluate potential individually limited but cumulatively considerable impacts associated with these issues.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Due to the potentially significant impacts associated with implementation of the Project, the Project has the potential to cause substantial adverse effects on human beings, either

directly or indirectly. Thus, a potentially significant impact associated with this issue could occur, and this issue will be analyzed further in an EIR.

Appendix A

Historic Resources Report

LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE
1000 W. CARSON STREET
Torrance, California

Historic Resource Report



Prepared by:

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July 2013

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EXECUTIVE SUMMARY

This report presents the results of a historic resource evaluation of the property located at 1000 W. Carson Street in the City of Torrance. The assessor's parcel number for the property is 734-001-901. The property was developed as a military station hospital by the U.S. Army in 1943 and became Los Angeles County Harbor General Hospital in 1947. It is now called Harbor-UCLA Medical Center. The Los Angeles Biomedical Research Institute is also located on the campus.

The property is not currently designated a landmark at the national or state levels, nor has it been identified or evaluated as significant in any previous historic resource surveys. GPA Consulting (GPA) was retained to complete this evaluation as part of the environmental review of a proposed project on the property in compliance with the California Environmental Quality Act (CEQA).

The property was evaluated in this report using the National Register of Historic Places (National Register) and California Register of Historical Resources (California Register) criteria. The primary contexts used in the evaluation were World War II military history and the history of public health in the Los Angeles area. After careful research and evaluation, GPA concludes that the property is not eligible for listing in the National or California Registers. While it is significant in the context of World War II military history in the Los Angeles area, it is lacking in integrity. GPA also concludes that none of the buildings on the property are individually eligible at the federal or state levels. Therefore, the property is not a historic resource subject to CEQA. As the project will have no impact on historic resources, no further study is required. While it is not required, the preservation and rehabilitation of Building N6 is recommended. It is the most intact building remaining on the property.

1. INTRODUCTION

1.1 Purpose and Qualifications

The purpose of this report is to determine and set forth whether or not a proposed project will impact historic resources. The project site is located on a single parcel of land at 1000 W. Carson Street in the City of Torrance. The assessor's parcel number for the 77-acre property is 734-001-901. The subject property was developed as a military station hospital by the U.S. Army in 1943 and became Los Angeles County Harbor General Hospital in 1947. The property is now called Harbor-UCLA Medical Center, and is still owned by the County of Los Angeles. A modern hospital facility occupies the eastern end of the property, while the Los Angeles Biomedical Research Institute (LA BioMed) operates in a series of World War II era barracks, recently constructed buildings, and modular buildings in the center portion of the property.

Harbor-UCLA Medical Center is in the process of preparing a master plan for the Medical Center portion of the property. LA BioMed is in the process of securing a master lease from the County for an 11-acre portion of the property to be devoted exclusively to LA BioMed. LA BioMed plans for the construction of two new research buildings, which require the removal of some of the existing World War II era buildings, and likely the removal of many of the remaining buildings in the 11-acre lease premises. As many of the existing buildings are over 50 years of age, LA BioMed commissioned this Historic Resource Report to determine if they are historic resources subject to CEQA.

Teresa Grimes, Principal Architectural Historian with GPA, was responsible for the preparation of this report. She fulfills the qualifications for historic preservation professionals outlined in Title 36 of the Code of Federal Regulations, Part 61. Amanda Yoder, Architectural Historian at GPA assisted with the preparation of the report. Their résumés are available upon request.

1.2 Methodology

In conducting the analysis of potential historic resources and project impacts, the following tasks were performed:

1. Conducted a preliminary field inspection of the project site and surrounding area to determine the study area for the report and to identify potential historic resources. The study area was identified as the entire 77-acre parcel, because it is a single parcel with a common history and use. The study area was not larger because the proposed project would have no potential to impact known or unknown historic resources in the vicinity of the property. Potential historic resources were considered buildings or structures 50 years of age or older. While the modern hospital facility on the eastern end of the property owned and operated by the Harbor-UCLA Medical Center was originally constructed in 1963, making it 50 years of age, it was not identified or evaluated as a potential historic resource because the proposed project would have no potential to impact it.

2. Conducted an intensive field inspection of the buildings identified as potential historic resources to establish their general condition and physical integrity. Digital photographs were taken of each potential historic resource within the study area during this field inspection.

3. Researched the property to determine whether or not it is currently listed as a landmark at the national, state, or local levels and whether or not it has been previously identified or evaluated as a historic resource. This involved a records search at the South Central Coastal Information Center at California State University, Fullerton. It revealed no previously recorded built-environment or archaeological resources within the study area. However, the property is included in the California Historical Resources Inventory System (CHRIS) with an evaluation code of 6J. This evaluation appears to be incorrectly applied as it means California Historical Landmarks or Points of Historical Interest found ineligible for designation by the State Historical Resources Commission. As the property is not and has never been designated at Landmark or Point of Interest, this evaluation is nonsensical. Further investigation by GPA determined that the State Office of Historic Preservation provided a cursory evaluation of the property for the Department of State Architect in 1995 in response to a request for funding by the County of Los Angeles.

4. Obtained building permit records from the Los Angeles County Department of Public Works website and reviewed the available documents. There were no original permits for the buildings constructed by the U.S. Army. However, there are aerial photographs from 1943 and 1952 that document the presence of the buildings during that period and the original layout of the campus. Building permit records were used to help document the dates the buildings were altered. For a full list of permitted alterations, please see the permit tables in Appendix II.

5. Researched the property and surrounding area at local libraries and archives to establish the general history and the contexts in which it should be evaluated. This included a review of the relevant databases, newspapers, books, and articles.

6. Reviewed and analyzed ordinances, statutes, regulations, bulletins, and technical materials relating to federal, state and local historic preservation designations, and assessment processes and programs.

2. REGULATORY ENVIRONMENT

Generally, a lead agency must consider a property a historic resource under CEQA if it is eligible for listing in the California Register of Historical Resources. The California Register is modeled after the National Register of Historic Places. Furthermore, a property is presumed to be historically significant if it is listed in a local register of historic resources or has been identified as historically significant in a historic resources survey (provided certain criteria and requirements are satisfied) unless a preponderance of evidence demonstrates that the property is not historically or culturally significant.[1] The national and state designation programs are described below.

2.1 NATIONAL REGISTER OF HISTORIC PLACES

The National Register is "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[2]

[1] Public Resources Code Section 5024.1 and 14 CCR Section 4850.
[2] Title 36 Code of Federal Regulations Part 60.2.

Criteria

To be eligible for listing in the National Register, a property must be at least 50 years of age and possess significance in American history and culture, architecture, or archaeology.[3] A property of potential significance must meet one or more of four established criteria:[4]

A. Associated with events that have made a significant contribution to the broad patterns of our history; or

B. Associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Yield, or may be likely to yield, information important in prehistory or history.

Physical Integrity

According to *National Register Bulletin #15*, "to be eligible for listing in the National Register, a property must not only be shown to be significant under National Register criteria, but it also must have integrity."[5] Integrity is defined in *National Register Bulletin #15* as "the ability of a property to convey its significance."[6] Within the concept of integrity, the National Register recognizes seven aspects or qualities that in various combinations define integrity. They are feeling, association, workmanship, location, design, setting, and materials, and they are defined by *National Register Bulletin #15* as follows:[7]

- Location is the place where the historic property was constructed or the place where the historic event occurred.
- Design is the combination of elements that create the form, plan, space, structure, and style of a property.
- Setting is the physical environment of a historic property.
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.

[3] Title 36 Code of Federal Regulations Part 60.4.
[4] Title 36 Code of Federal Regulations Part 60.4.
[5] *National Register Bulletin #15*, p. 44.
[6] *National Register Bulletin #15*, pp. 44-45.
[7] *National Register Bulletin #15*, pp. 44-45.

- Association is the direct link between an important historic event or person and a historic property.

Context

To be eligible for listing in the National Register, a property must also be significant within a historic context. *National Register Bulletin #15* states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are "those patterns, themes, or trends in history by which a specific...property or site is understood and its meaning...is made clear."[8] A property must represent an important aspect of the area's history or prehistory and possess the requisite integrity to qualify for the National Register.

Historic Districts

The National Register includes significant properties, which are classified as buildings, sites, districts, structures, or objects. A historic district "derives its importance from being a unified entity, even though it is often composed of a variety of resources. The identity of a district results from the interrelationship of its resources, which can be an arrangement of historically or functionally related properties."[9]

A district is defined as a geographically definable area of land containing a significant concentration of buildings, sites, structures, or objects united by past events or aesthetically by plan or physical development.[10] A district's significance and historic integrity should help determine the boundaries. Other factors include:

- Visual barriers that mark a change in the historic character of the area or that break the continuity of the district, such as new construction, highways, or development of a different character;

- Visual changes in the character of the area due to different architectural styles, types, or periods, or to a decline in the concentration of contributing resources;

- Boundaries at a specific time in history, such as the original city limits or the legally recorded boundaries of a housing subdivision, estate, or ranch; and

- Clearly differentiated patterns of historical development, such as commercial versus residential or industrial.[11]

Within historic districts, properties are identified as contributing and noncontributing. A contributing building, site, structure, or object adds to the historic associations, historic architectural qualities, or archeological values for which a district is significant because:

- It was present during the period of significance, relates to the significance of the district, and retains its physical integrity; or

- It independently meets the criterion for listing in the National Register.[12]

[8] *National Register Bulletin #15*, p. 7.
[9] Ibid, p. 5.
[10] Title 36 Code of Federal Regulations Part 60.3(d).
[11] *National Register Bulletin #21*, p. 12.

2.2 California Register of Historical Resources

In 1992, Governor Wilson signed Assembly Bill 2881 into law establishing the California Register. The California Register is an authoritative guide used by state and local agencies, private groups and citizens to identify historic resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse impacts.

The California Register consists of properties that are listed automatically, as well as those that must be nominated through an application and public hearing process.[13] The California Register automatically includes the following:

- California properties listed in the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 0770 onward; and
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

The criteria for eligibility of listing in the California Register are based upon National Register criteria, but are identified as 1-4 instead of A-D. To be eligible for listing in the California Register, a property must be at least 50 years of age and possess significance at the local, state, or national level, under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

Historic resources eligible for listing in the California Register may include buildings, sites, structures, objects, and historic districts. Resources less than 50 years of age may be eligible if it can be demonstrated that sufficient time has passed to understand its historical importance. While the enabling legislation for the California Register is less rigorous with regard to the issue of integrity, there is the expectation that properties reflect their appearance during their period of significance.[14]

[9] *National Register Bulletin #16*, p. 16.
[13] Public Resources Code Section 5024.1.
[14] Public Resources Code Section 4852.

The California Register may also include properties identified during historic resource surveys. However, the survey must meet all of the following criteria:[15]

1. The survey has been or will be included in the State Historic Resources Inventory.

2. The survey and the survey documentation were prepared in accordance with office (OHP) procedures and requirements.

3. The resource is evaluated and determined by the office (OHP) to have a significance rating of Category 1 to 5 on a DPR Form 523.

4. If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

OHP Survey Methodology

The evaluation instructions and classification system proscribed by OHP in its *Instructions for Recording Historical Resources* provide a three-digit evaluation code for use in classifying potential historic resources. In 2003, the codes were revised to address the California Register. The first digit indicates the general category of evaluation. The second digit is a letter code to indicate whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number, which is coded to describe some of the circumstances or conditions of the evaluation. The general evaluation categories are as follows:

1. Listed in the National Register or the California Register.

2. Determined eligible for listing in the National Register or the California Register.

3. Appears eligible for listing in the National Register or the California Register through survey evaluation.

4. Appears eligible for listing in the National Register or the California Register through other evaluation.

5. Recognized as historically significant by local government.

6. Not eligible for listing or designation as specified.

7. Not evaluated or needs re-evaluation.

[15] Public Resources Code Section 5024.1.

3. ENVIRONMENTAL SETTING

3.1 Historic Contexts

U.S. Military History in Los Angeles Leading up to World War II

Los Angeles was captured by American forces from Mexican militia in the summer of 1846, and became part of the United States in 1850 when California joined the union. In order to consolidate their conquest the U.S. military constructed Forts Hill and Moore, as well as a naval base in San Pedro. Fort Hill was positioned atop a hill overlooking El Pueblo. Six weeks later Fort Moore was constructed on the very same hill near the present-day intersection of North Hill Street and Cesar Chavez Avenue. The military has maintained a presence in San Pedro ever since, while all that remains of Fort Moore is a memorial.

During the Civil War, California provided 17,000 volunteers despite the fact that a significant portion of the state's population emigrated from southern states.[16] Many of these men served in battalions in the east, but others served in Arizona. Because of the large amount of Confederate sympathizers in Southern California, the federal government maintained a strong military presence in the state. Through the Civil War several camps were established to house the Union Army. Among them were Camp Latham, Camp La Cienega, and Camp Drum.[17]

In the early 20th century, Los Angeles established its official port at San Pedro. This port would quickly become the largest port on the West Coast.[18] The military quickly realized that such an important port should not be vulnerable to attack and constructed Fort MacArthur. Large gun batteries were added to the fort during World War I and removed after World War II. During the Cold War the fort became part of the Nike surface-to-air missile defense system. In the late 1970s part of the fort was declared surplus property. It was purchased by the City of Los Angeles and converted into Angel's Gate Park. The remainder of the fort became an air force base, which is what it remains today.[19]

U.S. Military History in the Los Angeles Area During World War II

World War II was a very different war for Los Angeles residents. Unlike previous wars, Los Angeles was under the threat of real attack. The American Civil War and World War I had both been fought far away from the city, but Los Angeles' position on the Pacific Coast meant that many Angelinos would experience much more drastic effects of war. An example of this was the Battle of Los Angeles. The battle was actually a false alarm caused by the sighting of unidentified aircraft. The defense forces of Southern California took the threat seriously and sounded air raid sirens, ordered blackouts, and began shooting flak into the skies.[20] Despite no enemy aircraft being confirmed, the event still showcased the Army's level of preparedness for a real attack.

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[16] California State Military Museum, "California and the Civil War," accessed June 24, 2013, http://www.militarymuseum.org/HistoryCW.html

[17] ASM Affiliates, *SurveyLA Historic Context Statement, Context: Institutional Development: Government and Private, Theme: Military Institutions and Activities*, 2012.

[18] Ibid.

[19] Fort MacArthur Museum, "The History of Fort MacArthur," accessed June 27, 2013, http://www.ftmac.org/Fmhist.htm

[20] Ibid.

At the outset of the war, Los Angeles became a major center for aircraft and ship production and repair. Before the war San Pedro shipyards employed approximately 20,000 workers. During the war that number more than quadrupled. The city also became a hub for the construction of aircraft for the war effort. Los Angeles' shipyards and factories incentivized the Army to increase the city's defenses.

Early in the war the Navy did not have enough ships to patrol the entire West Coast. Thus, they commandeered all manner of ships in order to patrol the coast until enough warships could be manufactured. This included all yachts in California as well as a large number of tuna fishing boats.[21]

Airbases were constructed next to the Los Angeles International Airport and in Santa Ana, and air units were placed in other airports such as the 146th tactical airlift wing at the Van Nuys Airport.[22] In the desert, anti-aircraft gunners were trained to defend the skies around Los Angeles region at Camp Haan. At another desert camp soldiers practiced tank warfare.[23]

After the attack on Pearl Harbor, the organization and movement of troops to the Pacific Theater became one of the primary objectives of the U.S. Army. The Port of Embarkation in San Francisco, established in 1898 during the Spanish-American War, became the nerve center for the transportation of men and materials across the Pacific Ocean. However, it was quickly overwhelmed by such a large mission, so the Army established new ports of embarkation in Los Angeles, Seattle, and Portland.

The Los Angeles Port of Embarkation included docks and warehouses in Los Angeles Harbor, a hospital in Torrance, Camp Anza in Riverside, and ammunition storage in Rialto. Peak employment was over 15,000 personnel.[24] The Port of Embarkation served as the first and last point of entry for military troops; men would receive their final training at the staging areas or be hospitalized upon their return.[25]

The Army constructed the Los Angeles Port of Embarkation Station Hospital in 1943 in Torrance. The hospital provided health services to the families of servicemen in the area, as well as wounded servicemen returning from the Pacific Theater. The site consisted of 77 one-story wood-framed barracks buildings organized into neat rows. In 1946, the site was declared Army surplus and purchased by the County of Los Angeles for $48,271.[26] The hospital was converted into the Los Angeles County Harbor General Hospital to serve the civilians in the South Bay. In 1951, the hospital became affiliated with the UCLA School of Medicine.

Both civilians and military personal used other hospitals during the war. In Van Nuys the Army built Birmingham General Hospital named after Brigadier General Henry Patrick Birmingham. The buildings followed the same plan as the station hospital in Torrance: dozens of wood-framed barracks situated in rows. The hospital had 1,777 beds,

[21] Roger W. Lotchin, *Bad City in the Good War* (Indiana: Indiana University Press), p. 8.
[22] Ibid, p. 9.
[23] Ibid.
[24] No Author, "Port of Embarkation Posts 'Closed' Signs," *Los Angeles Times,* March 30, 1946, accessed June 10, 2013 via ProQuest.
[25] No Author, "Army's Gigantic Transport Corps Two Years Old," *Los Angeles Times,* July 31, 1944, accessed June 10, 2013 via ProQuest.
[26] California State Military Museum, "Historic California Posts, Stations and Airfields Los Angeles Port of Embarkation Station Hospital," accessed June 26, 2013, http://www.militarymuseum.org/LAPEStnHosp.html.

approximately half of which were reserved for returning soldiers. The hospital's location near Hollywood meant that movie and radio stars frequented the hospital. The site was even the filming location for Fred Zimmerman's "The Men." In 1953, the majority of the hospital was torn down and replaced by the Birmingham Junior High School (now the Birmingham Community Charter High School). The rest of the site was retained by the Army and used as a missile defense battalion during the Cold War. These barracks survive and are now used by the Daniel Pearl Magnet High School.

One of the more unusual military hospitals developed by the Army was the Pasadena Area Station Hospital, also referred to as the McCormack General Hospital. The hospital was originally the Vista del Arroyo Hotel and Bungalows. In the 1880s, a small inn occupied the site overlooking the Arroyo Seco. Hotel tycoon, Daniel M. Linnard purchased the inn in 1919 and demolished it to make way for the existing buildings, which were constructed during the 1920s and 1930s.[27] In 1943, the Army acquired the property and began using it as a hospital, as well as offices. It primarily served as a convalescent hospital for Army officers. It continued to function as a hospital until 1949. The building was once again put to federal use as the U.S. Court of Appeals and Federal Building in 1985.

Another important military hospital was part of the Long Beach Naval Base at Terminal Island. The base had been established in 1917, but when the war began the base expanded beyond Terminal Island and the Terminal Island Dry Dock Facility was constructed. Because of the limited size of the island, the dry dock was never the permanent home for any of the Navy's ships, instead the dry dock was mainly used for ship repair. In addition to the dry dock the Navy built barracks, large cranes, a boiler shop, a plate shop, massive above-ground and underground fuel storage facilities, a net depot, an ammunition depot, a large hospital, a prison, a degaussing range, a radio station, and an airfield.[28] After the war the facility played a large part in the demilitarization process by decommissioning several warships. The hospital was located on East Carson Street and continued to function until 1994 when it officially closed. It was eventually demolished and replaced with a shopping center.

History of Public Heath in the Los Angeles Area[29]

In the 1960s, the Los Angeles City Health Department merged into the Los Angeles County Health Department. In 1972, the Los Angeles County departments of hospitals, public health, and mental health, along with the veterinarians' office, were merged into the Department of Health Services (DHS) to provide integrated health services.

DHS currently operates four hospitals: Los Angeles County-USC Medical Center, Olive View-UCLA Medical Center, Martin Luther King Jr. Community Hospital, and Harbor-UCLA Medical Center. In addition the Rancho Los Amigos National Rehabilitation Center provides physical therapy services to individuals around the county. The oldest of these is Los Angeles County-USC Medical Center, originally called Los Angeles County General Hospital.

[27] California State Military Museum, "Historic California Posts McCornack General Hospital (Pasadena Area Station Hospital)," accessed June 26, 2013, http://www.militarymuseum.org/McCormackGenHosp.html.
[28] California State Military Museum, "Naval Station Long Beach", accessed July 1, 2013, http://www.militarymuseum.org/NOBLongBeach.html.
[29] This context was largely derived from the article by Michael R Cousineau and Robert E. Tranquada, "Crisis & Commitment: 150 Years of Service by Los Angeles County Public Hospitals," in *American Journal of Public Health* (April 2007) accessed June 26, 2013, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1829364/.

Los Angeles County's health care system began in 1856, when six Daughters of Charity of St. Vincent DePaul traveled to Los Angeles from Emmitsburg, Maryland, to open a hospital. Their eight-bed facility later became St. Vincent's Hospital, from which the County purchased medical services for indigent patients at a cost of $1.22 a day. It was not long before the cost of caring for the indigent became an issue in Los Angeles, and in 1878, the County opened its own 100-bed Los Angeles County Hospital and Poor Farm as a way of lowering costs to the County. This facility in Downey evolved into the Rancho Los Amigos National Rehabilitation Center.

The Los Angeles County health care system was built under changing and sometimes conflicting social policies governing both public health and welfare for the poor. Although public health laws contributed to the evolution of the DHS, the Los Angeles County health care system emerged largely from the county's responsibility to provide for the health and welfare of its indigent population. The Pauper Act of 1855, adopted shortly after California achieved statehood, evolved to become Section 17000 of the state Welfare and Institutions Code. Passed in 1935, Section 17000 delegated the health and welfare responsibilities of the indigent to the counties. Counties appropriated a portion of their tax base to health care, and by 1966, 66 public hospitals were distributed across all but nine of the 58 counties in California.

Until 1915, public health activities and administration were centered primarily in the City of Los Angeles, which had operated a health department since 1879. The city's first health officer, Walter Lindley, used his office to attract health seekers, individuals who might be lured to Southern California by its warm climate and lifestyle. Families from the East Coast and Midwest came to Southern California, and the population surged. The growing economy also attracted immigrants from Asia and Mexico, who came to Los Angeles searching for employment opportunities.

New communities of immigrants formed outside the city limits of Los Angeles. High rates of infant mortality and infectious disease were reported in the media and discussed by both City and County officials. Residents' fears of communicable disease grew as the number of immigrant families in the area grew, introducing a new dimension to the struggle to expand the Los Angeles County health care system.

In 1915, the Los Angeles County Public Health Department, which had jurisdiction over smaller cities and unincorporated regions, appointed John Larabee Pomeroy, who, as the County's first health officer, confronted high infectious-disease rates among immigrant families. Pomeroy developed a series of 12 free health clinics strategically placed throughout the county that would provide a new front against communicable diseases and alleviate some of the patient care demands at General Hospital.

However, throughout the early years of the Great Depression, private physicians in the county opposed these clinics, fearing they would draw paying patients away from their offices. Under this pressure they were closed by the County's Board of Supervisors. Poor and immigrant families in Los Angeles County had little access to private health care, however, and with the growing concern that immigrants would spread infectious diseases to others, physicians eventually dropped their opposition, facilitating the expansion of public health clinics in the 1940s and 1950s.

The growing rates of infectious diseases contributed to Los Angeles County's decision to build a new facility on the General Hospital campus in the 1920s. Infectious diseases even influenced the design of the new facility, with its vertical stacks of wards separated by

stairwells and elevators to reduce the flow of patients, visitors, and staff, and the spread of infectious agents.

Fear of communicable diseases did not ease the concerns of taxpayers, who were wary of the cost of building the new hospital. An initial bond measure failed and a second narrowly passed in 1923, authorizing a $5 million bond, later augmented by a 10-cent property tax surcharge, to acquire the land and construct the hospital. Actress Mary Pickford dedicated the hospital's eight-ton cornerstone on December 7, 1930, and the 1,680-bed Los Angeles County General Hospital opened in December 1933. Its size was one million square feet, and its cost was $12 million.

As infectious diseases subsided, many of the Los Angeles County General Hospital campus facilities and ancillary hospitals built to treat infectious disease were converted to provide general acute care or even specialty care. Several miles south of Los Angeles County General Hospital, Rancho Los Amigos was started in 1890 as a poor farm and became an internationally recognized rehabilitation institute, but only after the poliomyelitis epidemic pressed it into service as a respiratory center.

Changes in types of health problems facing Los Angeles were not the only factors affecting change in public hospitals. Facilities were added or expanded in response to changing demographic and social forces and events. In 1942, the capacity of the General Hospital was expanded to nearly 3,800 beds to accommodate injured military personnel returning from World War II. At the end of the war, the County acquired two military hospitals: the Los Angeles Port of Embarkation Station Hospital in Torrance (now Harbor-UCLA Medical Center) and a hospital in Long Beach, which was later closed. A 265-bed psychiatric hospital was built next to the General Hospital in 1955, in part as a response to the closures of state psychiatric hospitals. New educational institutions became part of the Los Angeles County Hospital, including the College of Medical Evangelists, which later moved to Loma Linda University, and the California College of Medicine, which moved to become the University of California, Irvine School of Medicine.

Postwar population growth in Los Angeles County and suburbanization had a profound impact on Los Angeles and its health care system. Up to this time, the General Hospital served not only the poor but also some of the middle-income working class who lived in central and east Los Angeles. These communities were thriving, with industries, jobs, and neighborhoods with single-family dwellings. During the postwar population surge of the 1950s, industries, jobs, and money followed the mostly White families to the growing suburban communities. The previously prospering central and east Los Angeles communities became home to a growing number of low-income families who were predominantly Black and Latino.

As employment-related, private health insurance expanded and private hospitals were built to serve growing middle-class suburban communities, health care for the poor became the prominent domain of the Los Angeles County General Hospital. By the 1960s, the hospital had become a medical complex that included the General Hospital, the Pediatric Pavilion, the Psychiatric Hospital, and the Women's and Children's Hospital. It was renamed the Los Angeles County-USC Medical Center.

The social and economic neglect of south-central Los Angeles, capped by police racism, culminated in urban unrest and the Watts riots of 1965, a seminal point in the history of Los Angeles. An independent commission's report on the causes of the Watts

riots identified the lack of health care in south-central Los Angeles and led to the building of the Martin Luther King Jr. Medical Center and the Charles R. Drew Postgraduate Medical School (later to become the Charles R. Drew University of Medicine and Science). Both opened in 1972.

3.2 History and Description of the Study Area

The property located at 1000 W. Carson Street is a medical campus spanning 77 acres. It is bounded by Carson Street on the north, 220th Street to the south, and Vermont and Normandie Avenues to the east and west, respectively. The property is completely flat. There are a number of surface parking lots, roads, and sidewalks scattered throughout the site, though most of the buildings are surrounded by patches of lawn. There are a number of mature trees and shrubs, although a regular planting pattern is not evident.

The property was originally a military station hospital, constructed as part of the Los Angeles Port of Embarkation.[30] The hospital was completed in 1943 and equipped with 600 beds and medical, surgical, and dental facilities in 77 barracks. The original plan also included a theater, sports fields, recreation rooms, and two mess halls.[31] Research did not indicate if these planned recreational facilities were ever constructed.

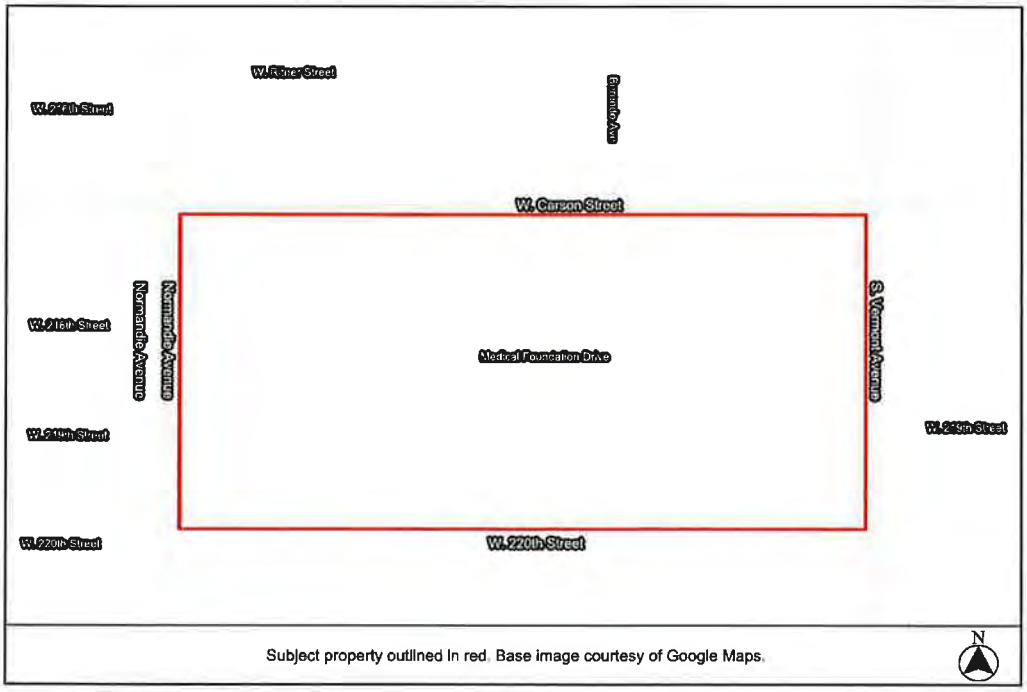

Figure 1: Location Map. Source: Google Maps.

The site consisted primarily of one-story rectangular buildings with gabled roofs and wood clapboard siding. The barracks had multi-light double-hung windows and partially-glazed paneled doors. The majority of the long, thin buildings were oriented facing north-south with covered walkways that connected the buildings running east to west. At the

[30] No Author, "Army's Gigantic Transport Corps Two Years Old," *Los Angeles Times*, July 31, 1944, accessed June 10, 2013, via ProQuest.
[31] No Author, "Army 600 Bed Hospital Ready," *Los Angeles Times*, August 27, 1943, accessed June 4, 2013, via ProQuest.

west end of the site, there was a grouping of small cottages: single-story, square buildings with gabled roofs that were likely used for staff housing.

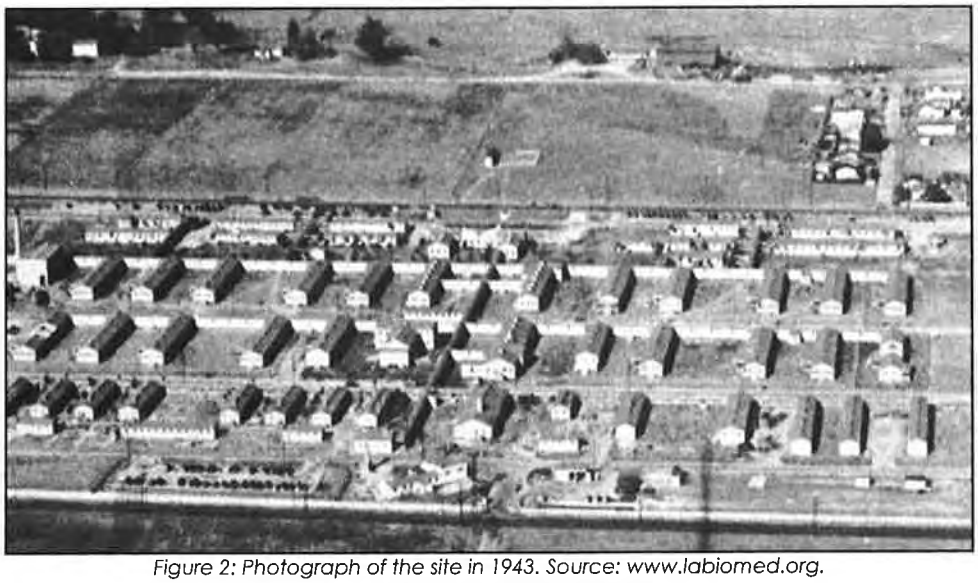

Figure 2: Photograph of the site in 1943. Source: www.labiomed.org.

After the war ended, the last patient to receive treatment at the hospital was discharged in February of 1946.[32] The site was officially closed by the military the following month. [33] At that time Los Angeles County made plans to purchase it to relieve overcrowding at Los Angeles County General Hospital near Downtown Los Angeles. The County purchased the property in June for $48,271 and renamed it Harbor General Hospital.[34]

Harbor General Hospital opened in July of 1946, equipped with 60 beds and 70 employees.[35] Prior to the opening of Harbor General, the South Bay area was sparsely populated and did not require a hospital. Depending on the seriousness of their condition, patients would either be treated at a clinic in nearby San Pedro or at Los Angeles County General Hospital near Downtown Los Angeles.[36] When factories began to spring up in the area to produce materials for the war, those looking for work quickly settled in the area.[37] Tracts of single-family residences were constructed to answer the need for housing. Harbor General operated out of the military barracks, seemingly at a fraction of the original military station hospital's capacity. Harbor General left the site relatively unchanged aside from the addition of just three buildings, as seen on a 1952 aerial photograph of the site. Only one (Building N24, the Outpatient Clinic) of these three early postwar buildings remains.

[32] Harbor-UCLA Medical Center. "Celebrating 50 Years of Caring: The Beginning." Accessed June 19, 2013. http://www.humc.edu/calendar/cabegin.html.
[33] No Author, "County Eyes U.S. Hospital in Torrance," *Los Angeles Times,* February18, 1946, accessed June 10, 2013, via ProQuest.
[34] Harbor-UCLA Medical Center. "Celebrating 50 Years of Caring: The Beginning." Accessed June 19, 2013. http://www.humc.edu/calendar/cabegin.html
[35] Harbor-UCLA Medical Center, "Celebrating 50 Years of Caring: The 1940s-1950s," accessed June 19, 2013, http://www.humc.edu/calendar/ca4050.html.
[36] Harbor-UCLA Medical Center. "Celebrating 50 Years of Caring: The Beginning." Accessed June 19, 2013. http://www.humc.edu/calendar/cabegin.html
[37] Harbor-UCLA Pediatrics. "History of Harbor-UCLA Medical Center," accessed June 26, 2013. http://harborpeds.org/aboutus/ourhistory.

The hospital's first patient arrived in August of 1946 after a plane crash in a nearby field. Later that year, tuberculosis patients were transferred to Harbor General from Los Angeles County General Hospital and were treated in isolation wards. In 1948, Harbor General would also serve as a rehabilitation facility for patients suffering from the polio epidemic.[38]

Harbor General's affiliation with UCLA began in 1951. The Veteran's Administration ruled that hospitals would receive compensation for providing training, encouraging hospitals to introduce residency programs. Soon after, in 1948, the County Board of Supervisors allowed an informal affiliation between UCLA's School of Medicine and Harbor General. UCLA's medical school was founded in 1945, but did not have access to facilities in which to practice. In 1951, UCLA admitted its first medical students and Harbor General served as the medical school's southern campus.[39]

In 1956, a bond measure provided funds for the construction of a new hospital facility. The project consisted of an eight-story hospital and an adjacent two-story wing for outpatient services. The two facilities were designed as a joint effort between architects Welton Becket, Adrian Wilson, Paul R. Williams, and Francis J. Heusel.[40] The hospital was constructed on the east end of the site, which was vacant land with the exception of four barracks at the south end. These barracks were removed for the construction of the new hospital.

The new Harbor General Hospital was completed, and began accepting patients in 1963. No longer necessary for the hospital, the barracks were vacated and slated for demolition. Despite the fact that the barracks were only meant to last seven years,[41] Sherman Mellinkoff, then Dean of the UCLA School of Medicine, saw their potential for additional research space and convinced the County to retain the buildings.[42]

Medical research began at Harbor General in the early 1950s with the formation of the Research Committee under Dr. Walter P. Martin and the Attending Staff Association (ASA).[43] In 1963, the ASA hired a full-time research administrator, Frank J. DeSantis, who sought out grants and contracts for research. In 1973, the Attending Staff Association became the Professional Staff Association, and by 1981, what was then called the Harbor-UCLA Research and Education Institute was established as a separate, non-profit entity. Today the barracks are occupied by the Los Angeles Biomedical Research Institute, commonly known as LA BioMed, which traces its roots back to the ASA.[44]

Based on aerial photographs (please refer to Figures 4-7 below), the site remained much the same from 1943 to 1980. Today, only 42 of the World War II era buildings remain, concentrated in the center of the site. Many of the original buildings have been demolished and replaced with more modern facilities, constructed primarily at the south

[38] Ibid.
[39] Ibid.
[40] No Author, "Furtherance of County Hospital's Set: New Structures Represent Cost of $14,100,000," *Los Angeles Times*, December 28, 1958, accessed June 4, 2013, via ProQuest.
[41] Harbor-UCLA Medical Center, "Celebrating 50 Years of Caring: The 1960s-1970s," accessed June 19, 2013, http://www.humc.edu/calendar/ca6070.html.
[42] LA BioMed, "Our Historical Timeline: Vacated Barracks Become Research Space," accessed June 21, 2013, http://www.labiomed.org/history/.
[43] Harbor-UCLA Medical Center, "Celebrating 50 Years of Caring: Research and Education Institute," accessed June 19, 2013, http://www.humc.edu/calendar/carei.html.
[44] Ibid.

and western portions of the site. The new construction does not follow a unified campus plan and seems to have been constructed randomly, and likely on an as-needed basis.

Some remaining buildings are freestanding, such as Building N14, while others in the B, C, D, E, and F blocks are connected by the original covered walkways. However, some buildings connected to these walkways have been demolished, leaving crude scars such as exposed framing or gable remnants. Thus, the once regular pattern of barracks now has missing pieces, and new buildings have filled some of the gaps.



Figure 3: Building N6, north elevation, view looking southwest. Source: GPA.

The most intact building that remains is Building N6, at the north end of the site. Although it is in generally poor condition, it provides the most insight into how the original buildings appeared in 1943. Building N6 is a rectangular building with a gabled roof and flush eaves. The original roof material is not known and has been replaced with a composition shingle. There are louvered attic vents at the gable ends. At the center of the gable ridge is a wood cupola; the cupola has a gabled roof and is clad in horizontal clapboard with louvered vents on its north- and south-facing sides. The exterior of the building is clad in wide, horizontal clapboards with simple wood corner boards and trim. The building has no foundation and is elevated above ground level by concrete piers. A plywood skirt now encloses the open space beneath the building. The original entrances, based on evidence from Buildings N14 and N6, were partially glazed wood panel doors with sidelights, accessed by wood steps. The windows on Building N6 are eight-over-eight double-hung wood windows surrounded by simple wood trim. Portions of original buildings were identified by the GPA project team based on these characteristics. For descriptions of the other buildings on the site, please see the state historic resource inventory forms (DPR 523 forms) located in Appendix I. For a list of buildings on the site over 50 years of age, please see Table I on the following pages.

TABLE I – BUILDINGS OVER 50 YEARS OF AGE

BUILDING NAME	DEPARTMENT	BUILD DATE
B	Walkway connecting B buildings	1943
B1	LA BioMed – Medicine/Pathology	1943
B2	LA BioMed - Surgery	1943
B3 Annex	Medical Records	1943
B4	LA BioMed – Pediatrics/Psychiatry	1943
C1	LA BioMed - Medicine	1943
C2	LA BioMed – Medicine/Obstetrics	1943
C3	LA BioMed - Surgery	1943
D	Walkway connecting D buildings	1943
D1	LA BioMed	1943
D3	LA BioMed – Obstetrics and Gynecology/Medicine	1943
D5	Outpatient Psychiatry	1943
D6	Outpatient Psychiatry	1943
E	Walkway connecting E buildings	1943
E2	LA BioMed - Medicine	1943
E3	LA BioMed – Pituitary Hormone Center	1943
E4	LA BioMed – Pediatrics	1943
E5	LA BioMed – Medicine/Clinical Trials	1943
E6	LA BioMed – Anesthesiology/Medicine/Pathology/Surgery	1943
F	Walkway connecting F buildings	1943
F1	LA BioMed	1943
F2	LA BioMed	1943
F3	Facilities Management	1943
F4	Facilities Management/Hospital Plan. & Arch.	1943
F5	Storage	1943
F6	Storage	1943
F7	Surgery	1943
F8	Resource Center/Sleep Rooms	1943
F9	Storage	1943
H1	LA County Transportation	1943
N	Walkway connecting N buildings	1943
N6	Medical Records	1943
N14	LA BioMed – Administration	1943
N17	Patient Resource Center/Snack Bar	1943
N22	Clinical Social Work/Outpatient Pharmacy	1943
N24	Outpatient Clinics	1950
N28	Women's Health Care Clinic	1943/50
N34	DHS – Child Health Disability & Prevention	1943

BUILDING NAME	DEPARTMENT	BUILD DATE
T1	Facilities Management	1943
Cottage #14	Public Health	1943
Cottage #16	Nursing – Home Health Care	1943
Cottage #18	Medical Records	1943
Paint Shop	Facilities Management	1943

Common alterations to the buildings include: incompatible additions; the replacement of the original cladding with T1-11 siding or stucco in part or entirely; the removal of the corner boards; the replacement of the foundation skirts with plywood; the replacement of original doors and windows and in some cases, removal of door and window openings entirely; the addition and then removal of wall mounted air conditioning units; the addition of newer heating and air conditioning equipment and ducts which are exposed on the exteriors; and the addition of handicapped access ramps. For a full list of permitted alterations, please see the permit tables in Appendix II.

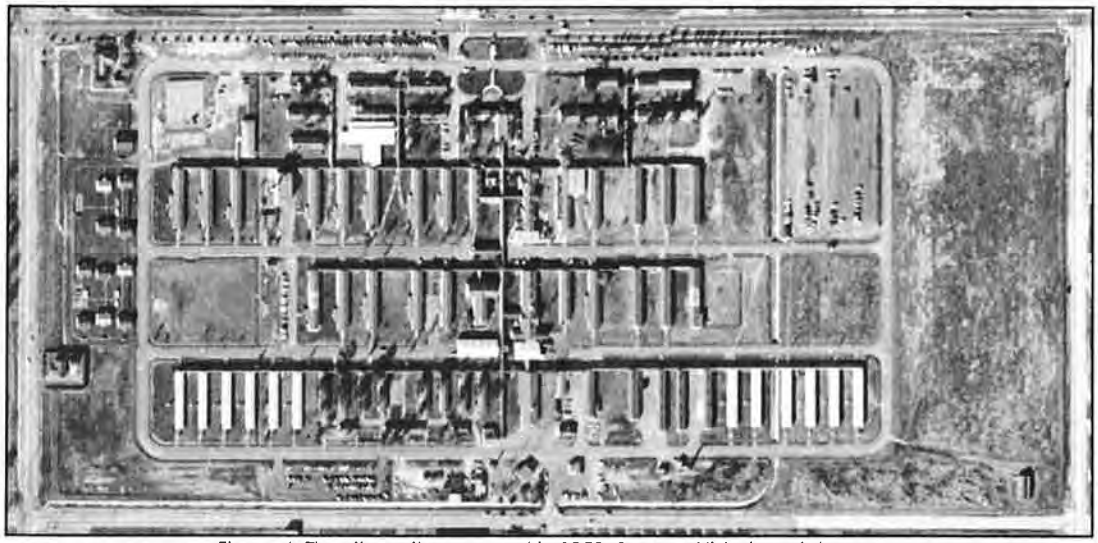

Figure 4: The site as it appeared in 1952. Source: Historicaerials.com

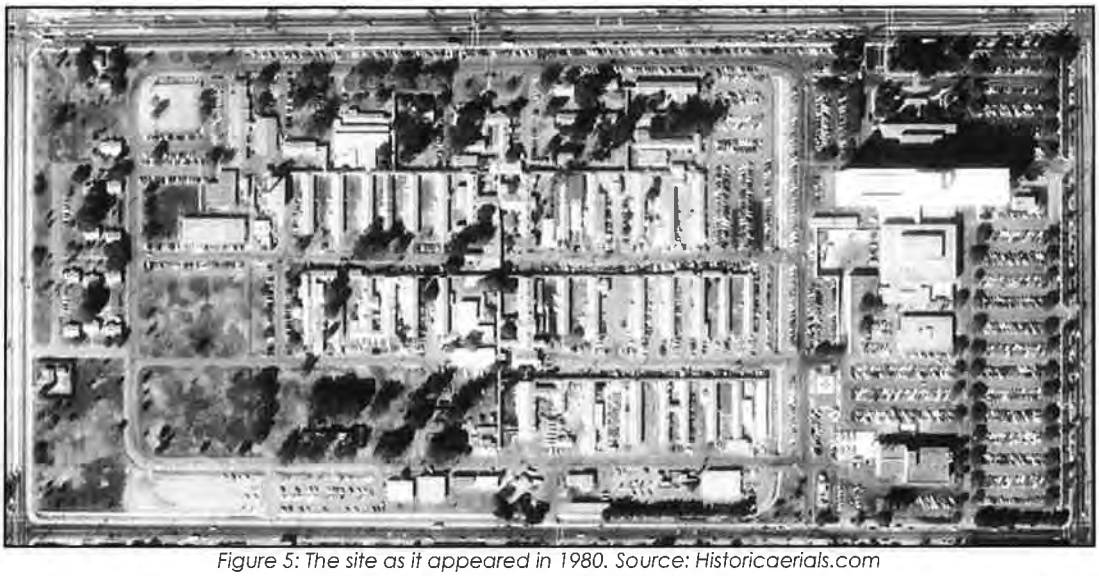

Figure 5: The site as it appeared in 1980. Source: Historicaerials.com

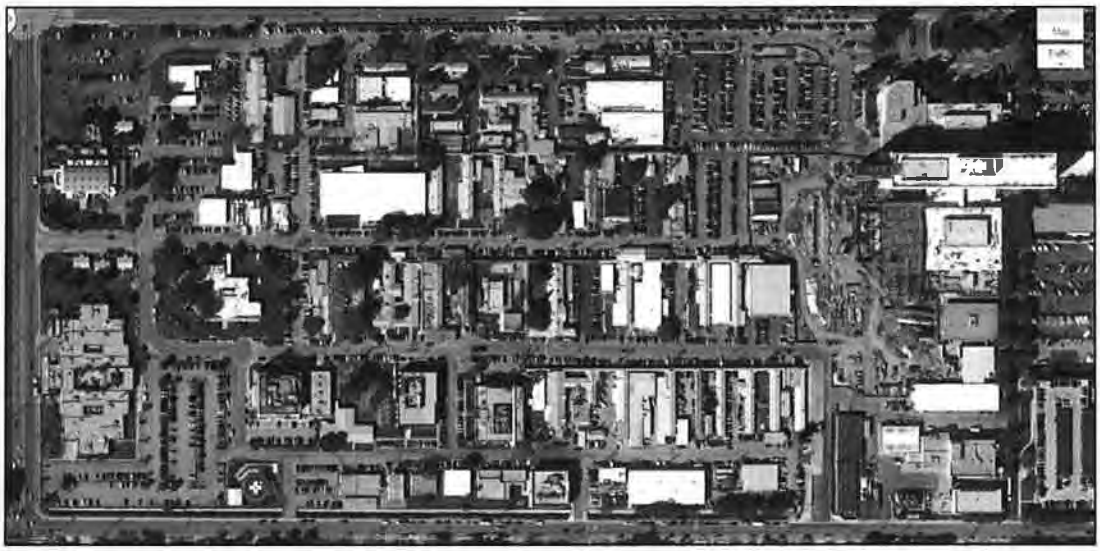

Figure 6: The site as it appears today. Source: Google Maps.

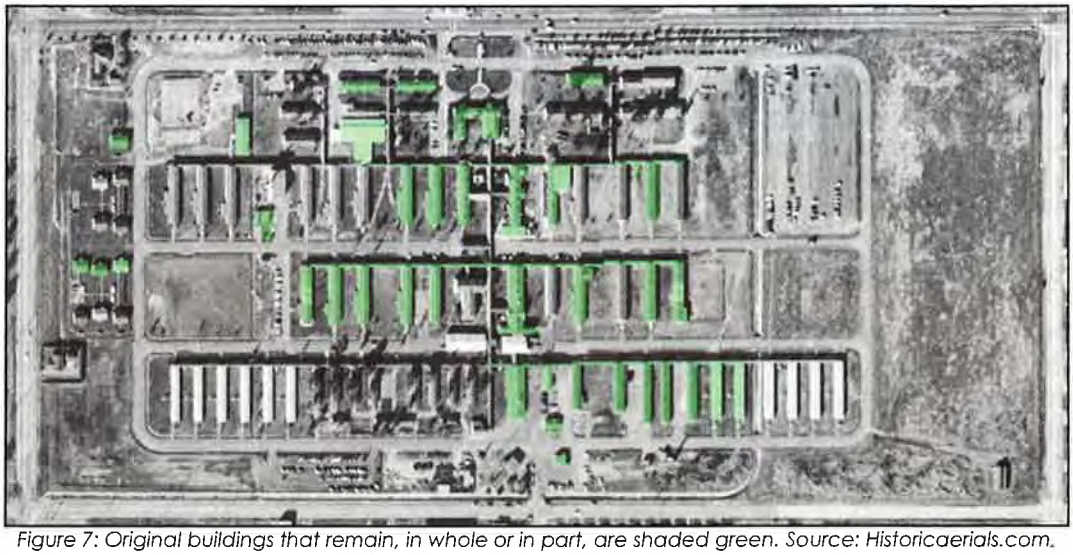

Figure 7: Original buildings that remain, in whole or in part, are shaded green. Source: Historicaerials.com.

4. EVALUATION OF ELIGIBILITY

The medical campus at 1000 W. Carson Street was evaluated for listing in the National and California Registers. The contexts and themes considered in these evaluations included military history during World War II and the history of public health in the Los Angeles area.

4.1 National Register

Large properties with multiple buildings and structures from the same period of time and multiple buildings or structures with a common history and use are typically evaluated to determine if such buildings constitute a historic district. As such, the medical campus was evaluated to determine if it constitutes a historic district. Historic districts usually meet the last portion of Criterion C, "a distinguishable entity whose components may lack individual distinction." However, they must also be significant within a historic context. As such, historic districts may also be historically significant under Criterion A, B, or D, or architecturally significant under other portions of Criterion C.

Criterion A

In order to qualify under Criterion A, a property must be associated with events or trends that have made a significant contribution to the broad patterns of our history. The first context considered under this criterion is World War II military history in the Los Angeles area. World War II had a major impact on the Los Angeles area. The military dramatically increased its presence in the area with the construction of new military facilities, expansion of existing military facilities, and adaptation of existing civilian facilities for military use. These facilities included forts, camps, airfields, shipping yards, submarine bases, and hospitals. Thousands of people relocated to the Los Angeles area during the period for jobs in the defense industry.

In order to create staging areas for soldiers being deployed to the Pacific Theater, the construction of military camps in California accelerated. Two troop embarkation points were designated, a main one in San Francisco and a sub-port in Los Angeles. By 1944, Los Angeles was elevated to a full port. The Los Angeles Port of Embarkation expanded

the historic military presence in the Los Angeles Harbor, especially in Wilmington. It is unknown if there are any properties remaining from the period in Wilmington. Because of the lack of available land in the Los Angeles area, the Army constructed Camp Anza on a ranch in Riverside County near the March Air Base. Camp Anza became the main processing center for soldiers waiting to be deployed. Camp Anza is largely gone. There are a few individual buildings remaining, some of which were converted to single-family residences. The station hospital in Torrance was a key component of the Los Angeles Port of Embarkation, because it provided critical medical care to servicemen returning from the Pacific Theater.

The subject property is significant under Criterion A in the context of World War II military history in the Los Angeles area. The property has a direct and significant association with the military build up in the Los Angeles area, because it was expressly constructed to serve military medical needs during World War II and was one of only a few such facilities in the area. The property played an important role in the Port of Embarkation through which over 600,000 military personnel traveled to the Pacific Theater. The period of significance for the property in this context is 1943 to 1946, the duration it was used by the U.S. military.

The second context considered under this criterion is the history of public health in the Los Angeles area, specifically Los Angeles County. The history of public health in Los Angeles County reaches back to the 19th century. By the postwar era it had become a large network of hospitals and clinics serving millions of individuals. The main purpose of the system was and still is to ensure the general health of the citizens, prevent the spread of infectious diseases, and provide critical care to low-income individuals in Los Angeles County. The County of Los Angeles purchased the subject property in 1946 to increase access to medical care in the southern portion of the county. However, the newly founded Los Angeles County Harbor General Hospital remained relatively small, using only a small portion of the military station hospital buildings. As the population in the South Bay continued to grow during the 1950s, the County began to plan for a new hospital facility, which was completed on the eastern portion of the campus in 1963. Therefore, with regard to the evaluation of the original station hospital as a historic resource, the period of significance for this context would be 1946 to 1962.

The property is associated with the history of public health in Los Angeles County. However, as *National Register Bulletin # 15* points out: "Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A: the property's specific association must be considered important as well."[45] The property is not significant under National Register Criterion A because it does not have a specific and important association with this context. It was not constructed specifically as a public health facility, but rather an existing facility that was taken over after World War II. It was created to assist in the decentralization of public health services in the county during the postwar period. Therefore, it is not any more or less important than any other facility in the network created after World War II. Furthermore, there is no evidence that there were any advances made in public health on the property during the period of significance. The programs, for which the hospital is well known, specifically the programs in women's health care and emergency medicine, were not established until 1969.

[45] *National Register Bulletin #15*, p. 12.

Criterion B

To be eligible for listing in the National Register under Criterion B, a property must be associated with the lives of persons significant in our past. As a hospital (whether it was operated by the U.S. Army or the County of Los Angeles) thousands of individuals have worked at and even more have received medical care on the campus. There is no doubt that among these employees were some particularly accomplished doctors, nurses, and healthcare professionals. However, their collective achievements would be better understood within the contexts of World War II military history and the history of public health in the Los Angeles area under Criterion A. Additionally, research did not reveal any particular individuals, significant or otherwise, who were directly associated with the property. Therefore, the property does not appear to be significant under Criterion B.

Criterion C

To be eligible for listing under Criterion C, a property must embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.

The property, in its original form, was a typical example of an Army hospital constructed for the mobilization of military personnel during World War II. During World War II, the Army constructed temporary hospitals in the United States, as permanent hospitals on military bases did not have the capacity to care for the massive increase in personnel. These temporary hospitals were much like cantonments (temporary garrisons and training camps) in that they included a complement of buildings that were quickly constructed.

At the beginning of the 20th century the Army developed standards for mobilization camps. The standards remained unchanged through World War I. As late as 1930, the *Handbook for Quartermasters* contained construction documents for single-story unpainted wood-framed buildings with gabled roofs and wood-sash windows. These documents evolved into the Series 700 barracks that accounted for the majority of Army buildings erected between 1940 and 1941. The World War II buildings were painted, doors were moved from side elevations to gable ends, and ventilators were added to gable ends in buildings with ceilings. Interiors remained unpainted and uninsulated in most cases. Concrete piers and footings replaced treated timber posts, which helped to prolong the life of World War II era temporary buildings. Concrete slabs were poured for showers and latrines, which remained separate buildings. The Series 800 barracks were introduced in 1941 and further modified by the Army Corps of Engineers in 1942. The design of barracks could be adjusted for a variety of uses, such as mess halls; however, detailed plans were also developed for specialized buildings such as field houses for recreational activities. Security against armed attack was not a consideration in the layout of cantonments or hospitals. Therefore, buildings were generally organized into evenly spaced rows.[46]

The property is not significant in the context of military architecture or planning. Not enough of the original layout remains, but more importantly the original layout was not unique in any way. The barracks and other buildings were mostly situated in rows that

[46] John S. Garner. *World War II Temporary Military Buildings: A Brief History of Cantonments and Training Stations in the United States* (Champaign, IL: U.S. Army Construction Engineering Research Laboratories), pp. 35-39.

resulted in a mundane and repetitive plan with no central feature. The buildings are not collectively or individually significant for their architecture as they merely followed the standards that were dictated by the Army and used throughout the country. Therefore, the property does not represent a significant distinguishable entity whose components may lack individual distinction, and the buildings do not represent the work of a master architect, embody the distinctive characteristics of a type, period, or method of construction, or possess high artistic values. Therefore, the property and its buildings do not appear to be significant under Criterion C.

Criterion D

Criterion D was not considered in this report, as it generally applies to archeological resources; however, there is no reason to believe that the property has yielded or will yield information important to the prehistory or history of the local area, state, or nation.

Assessment of Integrity

To be eligible for listing in the National Register, a property must not only be shown to be significant under the National Register criteria, but it must also have integrity. Integrity is the ability of a property to convey its significance. While some factors of integrity are more important than others depending on the property, a majority of the seven should be retained.

To be eligible for listing in the National Register, historic districts must retain integrity as a whole. For a district to retain integrity as a whole, the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished.[47] In other words, the integrity of each building within a potential historic district is also evaluated to determine if it is contributing or non-contributing. Only those buildings that were present during the period of significance and retain their integrity are counted as contributing. In addition, the relationships among the district's components must be substantially unchanged since the period of significance.[48] According to National Register Bulletin #15:

> *When evaluating the impact of intrusions upon the district's integrity, take into consideration the relative number, size, scale, design, and location of the components that do not contribute to the significance. A district is not eligible if it contains so many alterations or new intrusions that it no longer conveys the sense of a historic environment.*

Regardless of the significance of the potential historic district in the context of the military history of Los Angeles during World War II, it does not retain integrity as a whole because there are not enough buildings remaining from the period of significance (1943-46). Furthermore, most of the remaining buildings are so altered that they do not retain sufficient integrity to contribute to the potential historic district.

There are roughly 100 buildings on the property, not including sheds and some small temporary buildings. There are 42 buildings on the property remaining from the period of significance. All of them have been altered to some extent. In some cases, the alterations are limited to the replacement of doors and the addition of handicapped

[47] *National Register Bulletin #15*, p. 46.
[48] Ibid.

access ramps. But in most cases the buildings have been engulfed by additions such that their original form, material, and design are no longer evident. Table II below identifies potential contributing and non-contributing buildings to provide an idea of how much change has taken place since the end of the period of significance and to illustrate the lack of historic integrity.

TABLE II – WOULD-BE CONTRIBUTING AND NON-CONTRIBUTING BUILDINGS

BUILDING NAME	CONTRIBUTING NON - CONTRIBUTING	REASON
B Walkway	Contributing	Doors replaced and some windows removed but retains historic cladding, windows, and plan.
B2	Contributing	Cladding replaced but only in the gable ends. Otherwise, retains most of the historic features including windows and clapboards.
B3 Annex	Contributing	Retains almost all historic features including windows and clapboards, aside from a small patch of T1-11 on a side elevation.
C1	Contributing	Retains most of the historic features including windows, clapboards, and cupolas, despite side additions.
D Walkway	Contributing	Retains most of the historic clapboards and windows, some wings removed and doors replaced.
D3	Contributing	Retains almost all of the historic features including clapboards and windows. The side elevation addition is distinct from the original construction.
D5	Contributing	Retains almost all of the historic features including clapboards and windows. The side elevation addition is very distinct from the original construction.
D6	Contributing	Retains almost all of the historic features including clapboards and windows. The side elevation addition is very distinct from the original construction.
E Walkway	Contributing	Retains almost all of the historic features including clapboards and windows. The doors have been replaced, although the original door openings remain.
F8	Contributing	This building, while different from the others, does not appear to have undergone any major alterations. It retains historic metal cladding, metal casements, and paneled entry door.
N Walkway	Contributing	Does not appear to have undergone any major alterations.
N28	Contributing	N28 consists of two historic buildings attached in the center by new construction. The historic portions retain the historic clapboards and windows.
N34	Contributing	All cladding replaced, but retains doors and windows and original plan.
N6	Contributing	Retains almost all of the historic features including clapboards and windows. The doors have been replaced, although one original door opening remains.
B1	Non-contributing	Heavily altered, notably the south elevation. The south

BUILDING NAME	CONTRIBUTING NON - CONTRIBUTING	REASON
		elevation has been stuccoed and the doors and windows have been replaced. The side elevations, while more intact, are almost entirely covered by machinery and equipment.
B4	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed and the doors and windows have been replaced. Most windows on the side elevations have been replaced with metal sliders.
C2	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed and the doors and windows have been replaced. All but three window openings on the side elevations have been boarded up.
C3	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed and the doors and windows have been replaced. Some window openings on the side elevations have been boarded up.
Cottage 14	Non-contributing	All cladding and all windows replaced.
Cottage 16	Non-contributing	All cladding and all windows replaced.
Cottage 18	Non-contributing	All cladding and all windows replaced.
D1	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed and the doors and windows have been replaced. D1 has a number of additions, and many window openings have been boarded up.
E2	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed, large portions of cladding have been replaced and many windows have been replaced.
E3	Non-contributing	South and west elevations are not at all visible due to additions. On the east elevation, the doors have been replaced and the windows have been boarded up, taken up by A/C units, or obscured by security bars.
E4	Non-contributing	Heavily altered, notably the south elevation. The south elevation has been stuccoed, a new porch entrance has been constructed and the doors and windows have been replaced. A large portion of cladding has been replaced with stucco and many windows have been replaced with vinyl.
E5	Non-contributing	All cladding and all windows replaced. A new porch entrance has been constructed on the south elevation.
E6	Non-contributing	Completely surrounded by additions.
F Walkway	Non-contributing	Cladding replaced with stucco.
F1	Non-contributing	All cladding and doors replaced, all window openings in filled, south end truncated and loading dock

BUILDING NAME	CONTRIBUTING NON - CONTRIBUTING	REASON
		installed.
F2	Non-contributing	Very little is visible as F2 is enclosed by a fence; based on what is visible, the original cladding and doors have been replaced.
F3	Non-contributing	All cladding and all windows replaced.
F4	Non-contributing	Large portions of original cladding and windows have been replaced and door openings have been removed.
F5	Non-contributing	All cladding and all doors replaced.
F6	Non-contributing	All cladding and all doors replaced, some windows replaced.
F7	Non-contributing	All cladding replaced, many windows and doors replaced.
F9	Non-contributing	Surrounded by additions, the only visible portion has been stuccoed and the windows have been replaced.
H1	Non-contributing	All cladding, doors and windows have been replaced.
N14	Non-contributing	Retains a good portion of original material including windows and clapboards; however, there are numerous additions.
N17	Non-contributing	All cladding replaced, some windows replaced, some doors replaced.
N22	Non-contributing	All cladding replaced, some windows replaced, some doors replaced.
Paint Shop	Non-contributing	All cladding and doors replaced, some windows replaced.
T1	Non-contributing	All cladding and doors replaced, original window openings and vehicular entrances replaced.

As illustrated in Table II and Figure 8 on the following page, of the 42 buildings remaining from the period of significance, only 14 retain sufficient integrity to be considered contributing to the potential historic district. These buildings are generally scattered throughout the property, and they have been joined by new buildings that were constructed on the campus beginning in the early 1980s. Indeed, so many buildings have been added to the campus that it no longer conveys its sense as an historic environment. (Select photographs of the buildings on the property are located in Section 7: Additional Figures).



Figure 8: Would-be contributing buildings are shaded yellow. Source: Google Maps.

A detailed analysis of the integrity of the potential historic district is set forth below:

Location – The place where the historic property was constructed or the place where the historic event occurred.

While many of the buildings from the period of significance have been altered or demolished, they have not been moved to or from another location. Therefore, the integrity of location has been retained.

Setting – The physical environment of the historic property.

The setting of the potential historic district has been greatly diminished by the demolition of the World War II era buildings and the addition of new buildings. Nearly half of the World War II era buildings have been demolished and 87 new buildings have been added to the campus in the last 50 years. Most of the new buildings are incompatible with the World War II era buildings in scale, massing, design, and materials, and their location and orientation do not follow the original plan for the campus. Moreover, the new buildings do not seem to follow a new plan for the campus. Rather, they appear to have been constructed wherever space was available at the time, and each appears to have been designed by a different architect. Therefore, the integrity of setting has been lost.

Materials – The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

The primary material used within the potential historic district is wood, because there were restrictions on the use of metal and other materials during World War II. Metal and petroleum-based building materials were diverted from domestic use to the war effort for the manufacturing of ammunition, as well as military equipment and vehicles. Wood, therefore, was used in the fabrication of the clapboard siding, windows, and doors. On many of the individual buildings, these elements have been removed and replaced or covered by incompatible additions. For example, the original wood cladding has been replaced with T-11 siding or stucco in part or entirely; wood windows have been

removed and replaced, most often with aluminum windows; and wood doors have been replaced with metal doors. Furthermore, the original materials that remain are in fair to poor condition due to moisture penetration. The buildings and their component parts have gone unpainted for so long that bare wood is exposed. As such, the integrity of the materials has been compromised.

Design – The combination of elements that create the form, plan, space, structure, and style of a property.

The design of the potential historic district does not reflect the original use of the property as military station hospital. According to the research, the property included 77 barracks, as well as a theater, sports fields, recreation rooms, and two mess halls. There are 43 buildings remaining from the period of significance.[49] Although they are primarily concentrated in the central portion of the property, they lack cohesion as a grouping. The very distinctive pattern of long rectangular barracks connected by walkways has been lost by the seemingly random demolition of barracks. The pattern of development has been further disrupted by the addition of numerous buildings constructed on the property beginning in the early 1980s. The design of these new buildings is inconsistent with the design of the original buildings. While the original buildings were all one story in height with gabled roofs, multi-light wood windows, and clapboard exteriors, the new buildings have multiple stories with flat roofs, fixed and banded aluminum windows, and mostly stucco exteriors. Moreover, many of the 43 World War II era buildings remaining are lacking in integrity of design, because they have been enveloped by additions that post-date the period of significance for the potential historic district. Therefore, the design integrity of the campus as a whole has been lost.

Workmanship – The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

The potential historic district does not include a high-degree of craftsmanship. The World War II era buildings were constructed very quickly and were only meant to last for seven years. As previously stated, nearly half of the World War II era buildings have been demolished and those that remain have been extensively altered. Therefore, the integrity of workmanship has been lost because there is so little remaining of it from the period of significance.

Feeling – A property's expression of the aesthetic or historic sense of a particular period of time.

In the case of the potential historic district, the concept of feeling would be its reflection of a World War II era military station hospital. While the property is still used as a medical campus, it no longer reflects the period of time when it was constructed and used as a military station hospital. The demolition and alteration of original buildings and the construction of new buildings has negatively affected the feeling of the property. Therefore, the integrity of feeling in the potential historic district is poor.

Association – The direct link between an important event or person and a historic property.

[49] Please note that the east-west walkways connecting the north-south barracks are being counted as individual buildings.

The property does not retain its integrity of association because it is not sufficiently intact to convey its relationship to World War II military history. It does not retain its quality of association as a military station hospital because of the demolition and alteration of original buildings and the construction of new buildings.

Summary of Eligibility

The subject property is not eligible for listing in the National Register. Although it is significant under Criterion A in the context of the military history of Los Angeles during World War II, it does not retain sufficient integrity to convey its significance. While some of the individual buildings retain their integrity from the period of significance, they do not effectively convey the history or significance of the military station hospital on their own. One building on the site was not any more important than another. Therefore none of the buildings on the property are individually eligible for listing in the National Register.

4.2 California Register

Because the California Register criteria mirror those of the National Register, the property at 1000 W. Carson Street is ineligible for listing in the California Register for the same reasons outlined under the National Register evaluation.

5. CONCLUSIONS AND RECOMMENDATIONS

The property at 1000 W. Carson Street is not currently designated a landmark at the national, state, or local levels, nor has it been identified or evaluated as significant in any previous historic resource surveys. The property was evaluated in this report as part of the CEQA compliance process. The property as a whole was evaluated as a potential historic district, but it does not appear to be eligible for listing in the National Register or California Register. While it is significant in the context of World War II military history in the Los Angeles area, it is lacking in integrity. None of the buildings on the property are individually significant because one building alone cannot convey the significance of the former military hospital. The recommended evaluation code for the property is 6Z ineligible for designation at the national, state, and local levels through survey evaluation. Therefore, the property is not a historic resource subject to CEQA. As the project will have no impact on historic resources, no further study is required.

While it is not required, the preservation and rehabilitation of Building N6 is recommended. It is the most intact building remaining on the property. The building could be preserved in place or moved to another location on the campus. If moved, its orientation should be strictly east-west or north-south. The building could continue to function as a part of the medical campus or it could be used for an educational exhibit on the history of the property.

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7. ADDITIONAL FIGURES



Figure 9: Imaging Center, view looking northeast. Source: GPA



Figure 10: Chronic Diseases Clinical Research Center. Source: GPA.



Figure 11: Hanley-Hardison Research Center, north and east elevations, view looking southwest. Source: GPA.



Figure 12: Example of temporary trailers. Source: GPA



Figure 13: Hospital, north and west elevations, view looking southeast. Source: GPA

APPENDIX I: DPR 523 FORMS

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) B Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; 1/4 of 1/4 of Se ; B.M

c. Address B Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Removal of Building B3 leaving behind a scar, original doors replaced.

Notes: Long, narrow building that houses an interior hallway connecting "B" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☐ Building ☑ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

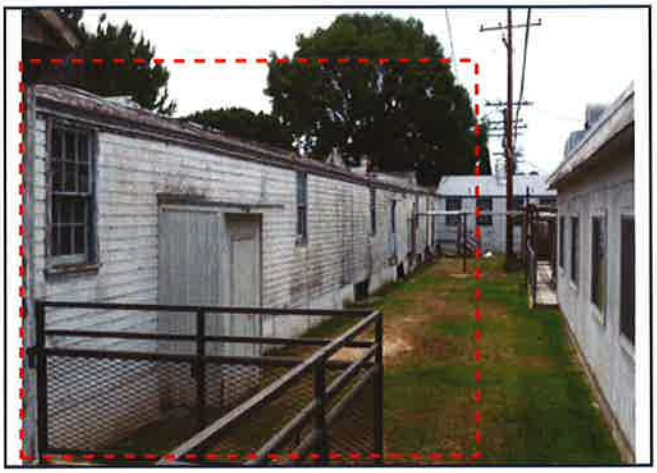
*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) B Walkway - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South elevation, building scar. 6/11/13.



North elevation, view looking southwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Irregular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Cupolas, gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Clapboard, stucco
Primary Elevation: None

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 8-over-8 double-hung
Window Material(s): Wood

Alterations: South elevation cladding replaced, HVAC ducts at east elevation, concrete ADA-accessible ramps with metal handrails at south elevation, plywood skirt around perimeter of building, original doors replaced.

Notes: Entrances on projecting bays, canopies over some entrances, wood steps to entrances on projecting bays, much of the building is surrounded by machinery/equipment.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B1 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South elevation, view looking north. 6/11/13.



West elevation, south end, view looking northeast. 6/11/13.



West elevation, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: L-shaped
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: South

Door Type(s): Slab, partially glazed slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions, south elevation door opening altered, ADA-accessible concrete ramp with metal handrail, plywood skirt around perimeter of building, original doors replaced, some original cladding replaced with T1-11.

Notes: Wood steps to south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B2 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking northwest. 6/11/13.



South elevation, view looking north. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B3 Annex - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B3 Annex - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: None

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 2-over-2 double-hung
Window Material(s): Wood

Alterations: Some original cladding replaced with T1-11, concrete ADA-accessible ramp with metal handrails on east elevation, original door replaced.

Notes: B3 Annex was an annex to Building B3 which has since been demolished. Canopy over south elevation entrance, wood steps to south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B3 Annex - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building B4 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building B4 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush, open
Roof Material: Composition shingle
Exterior Materials: Wood clapboard,stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, slider
Window Material(s): Wood, aluminum

Alterations: Addition to west elevation, some original windows replaced, HVAC ducts added to west elevation, door opening removed, entrance porch partially demolished, some original cladding replaced with stucco, concrete ADA-accessible ramp at south elevation, plywood skirt around perimeter of building, north elevation door opening altered, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building B4 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



Entrance through B Walkway, view looking south. 6/11/13.



West elevation, view looking northeast. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building C1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building C1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Cupolas
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): Multilight awning or hopper, 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions to south and west elevations, HVAC ducts added to west elevation, free-standing water heater shed at west elevation, some window openings boarded up, plywood skirt around perimeter of building, visible doors replaced.

Notes: Wood steps to south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building C1 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking east. 6/11/13.



South elevation, door. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building C2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building C2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, single-hung
Window Material(s): Wood, vinyl

Alterations: Some window openings boarded up, some windows replaced in original openings, concrete ADA-accessible ramp at south elevation entrance, south elevation cladding replaced, addition of gabled projection over south elevation entrance, HVAC ducts added to west elevation, some cladding patched, plywood skirt around perimeter of building, original doors replaced.

Notes: Wood steps at east and west elevation entrances, entrance porch at north end of west elevation supported and enclosed by wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building C2 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.



West elevation, view looking northeast. 6/11/13.



East elevation, view looking northwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building C3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building C3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: South

Door Type(s): Partially-glazed slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung, multi-light hopper, single-hung, slider
Window Material(s): Wood, vinyl, aluminum

Alterations: Some windows boarded up, some windows replaced in original openings, HVAC ducts added to west elevation, some original cladding replaced with T1-11 or stucco, concrete ADA-accessible ramp with metal handrails at south elevation entrance, addition of gabled projection over south elevation entrance, security bars added to some windows, plywood skirt around perimeter of building, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building C3 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.



West elevation, view looking northeast. 6/11/13.



East elevation, view looking southwest. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building D1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Cross-gabled
Roof Features: Gable-end attic vents, cupolas
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: None

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 12-over-12 and 9-over-9 double-hung
Window Material(s): Wood

Alterations: Additions to south and west elevations, the majority of windows boarded up, vent openings sealed, concrete ADA-accessible ramps with metal handrails on south elevation, original doors replaced.

Notes: Canopy over east elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking west. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building D1 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking north. 6/11/13.



South elevation, view looking north. 6/11/13.



West elevation, view looking east. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building D3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab, partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, slider
Window Material(s): Wood, aluminum

Alterations: Additions to south and west elevations, some windows replaced, HVAC ducts added to west elevation, some original doors replaced.

Notes: Wood ADA-accessible ramp on south elevation, wood porch steps on south and west elevation entrances. Large entry porch on west elevation, supported and enclosed by thin wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and west elevations, view looking northeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building D3 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking east. 6/11/13.



Original windows, south elevation. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D5 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building D5 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab door with sidelights
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions on south and west elevations, HVAC ducts added to west elevation, A/C units added to windows, concrete porch steps with metal handrails at south elevation entrance, plywood skirt around perimeter of original building, original door replaced within original opening.

Notes: Entry porch at west elevation supported and enclosed by wood posts, canopy over south elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, view looking northeast. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building D5 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South elevation, view looking north. 6/11/13.



West elevation, entrance porch. 6/11/13.



Southeast corner detail. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building D6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** _____ **Date** _____ **T** _____ ; **R** _____ ; _____ **1/4 of** _____ **1/4 of Se** _____ ; _____ **B.M**

c. Address Building D6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone _____ ; _____ mE/ _____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

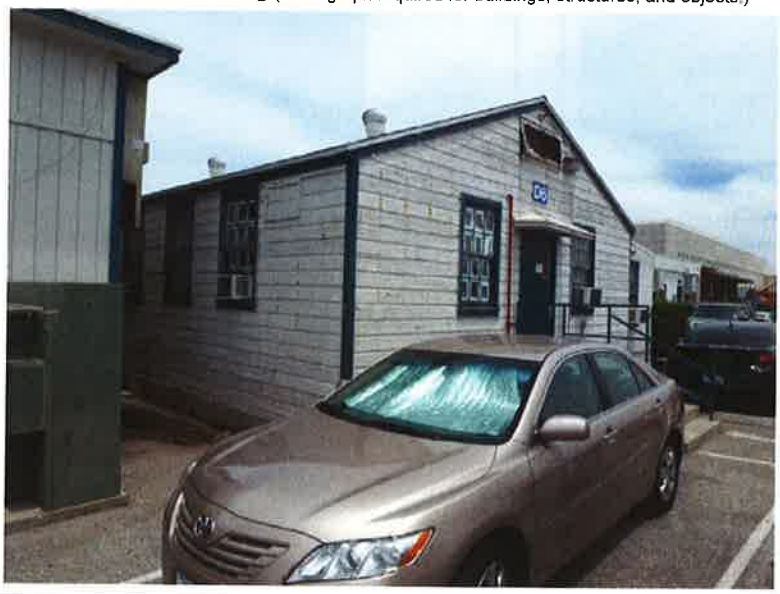
Alterations: Addition to east elevation, vent openings sealed, A/C units in original windows, HVAC ducts added to east elevation, concrete porch steps with metal handrails at south elevation entrance, plywood skirt around perimeter of building, original doors replaced.

Notes: Canopy over south elevation entrance, porch on east elevation supported and enclosed by wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and west elevations, view looking northeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List): _____

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building D6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and east elevations, view looking northwest. 6/11/13.



East elevation, view looking northwest. 6/11/13.



South elevation, attic vent detail. 6/11/13.



Southeast corner detail. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, sliding
Window Material(s): Wood, aluminum

Alterations: Addition to west elevation, windows on east elevation replaced with aluminum sliders, new concrete steps at west elevation, south elevation cladding replaced with stucco, concrete ADA-accessible ramp with metal handrails on west elevation, plywood and chickenwire skirt around perimeter of building, original doors replaced.

Notes: Canopy over west elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, view looking southeast

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building E2 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.



East elevation, view looking west. 6/11/13.



West elevation, south end, view looking southeast. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: None

Door Type(s): Partially-glazed slab
Door Material(s): Metal
Window Type(s): Obscured by screen
Window Material(s): Metal

Alterations: No windows visible, either boarded up or obscured by security bars, A/C units in a number of windows, concrete ADA-accessible ramp with metal handrails at east elevation, chickenwire skirt around perimeter of building, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☑ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E4 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E4 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with fascia board
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung, slider
Window Material(s): Wood, vinyl, aluminum

Alterations: Additions to south and west elevations, some windows replaced within original openings, original doors replaced, addition of gabled projection over south elevation entrance, HVAC unit added to roof, plywood skirt around original portion of building, wood and concrete ramp at west elevation entrance.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking northeast. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building E4 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, south end, view looking northeast. 6/11/13.



West elevation, north end, view looking east. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E5 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E5 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Fixed
Window Material(s): Metal

Alterations: Completely altered - all original windows, cladding and doors replaced, addition of gabled projection over south elevation entrance, HVAC vents added to west elevation, concrete ADA-accessible ramp with metal handrails on south elevation.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building E5 - 1000 W. Carson Street

Recorded By Amanda Yoder

Date: 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building E6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building E6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboards, T1-11, stucco
Primary Elevation: None

Door Type(s): Partially-glazed slab
Door Material(s): Metal
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Extensive additions. The original building is "sandwiched" between new construction leaving only the original south elevation visible, HVAC vents added to south elevation, concrete ADA-accessible ramps on west elevation, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building E6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, addition, view looking northeast. 6/11/13.



North elevation, view looking southeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Cross-gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Boarded up
Window Material(s): None visible

Alterations: Loading dock added, stuccoed addition between F1 and F2, HVAC ducts added to east elevation, truncated south end, windows boarded up, original cladding replaced with stucco, original doors replaced.

Notes: Wood porch steps at east elevation.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building F1 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☐ Continuation ☐ Update



East elevation, view looking northwest. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F2 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; **1/4 of** **1/4 of Se** ; **B.M**

c. Address Building F2 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed slab
Door Material(s): Wood
Window Type(s): None visible
Window Material(s): None visible

Alterations: Stuccoed addition between Buildings F1 and F2, original cladding replaced, visible doors replaced.

Notes: Very little of Building F2 is visible, the majority is enclosed by chain-link fence.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

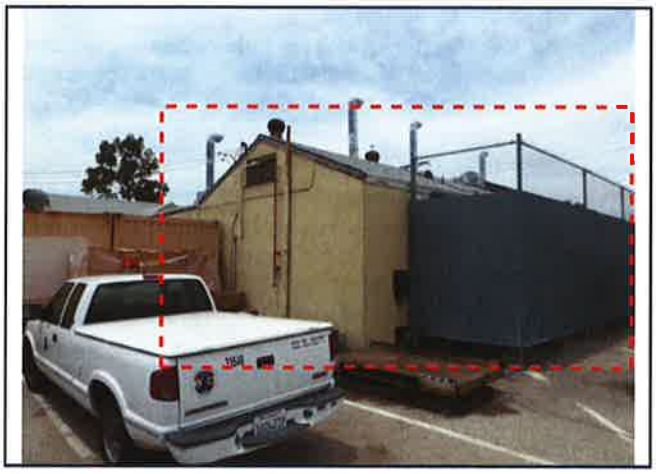
*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F2 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



South and east elevations, view looking northwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F3 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F3 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 6-over-6 double-hung, jalousie
Window Material(s): Wood

Alterations: Additions to east, south and west elevations--the original building is "sandwiched" between new construction, original cladding replaced, HVAC ducts added to east elevation, plywood skirt around perimeter of building.

Notes: Wood entry porch with wood porch supports and railing.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building F3 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation, view looking southeast. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F4 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F4 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Some windows replaced, addition to west elevation, original cladding replaced with T1-11 on east elevation, door opening removed from north elevation, window opening altered, security bars added, HVAC ducts added to west elevation, original doors replaced.

Notes: Canopies over east elevation doors, wood walkway along east elevation.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevations, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

*Resource Name or #: (Assigned by Recorder) Building F4 - 1000 W. Carson Street

Recorded By Amanda Yoder

Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



Removed door opening. 6/11/13.



Replacement window and security bars, east elevation. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F5 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F5 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Slab, paneled
Door Material(s): Wood
Window Type(s): Multilight hopper, 2-over-2 and 6-over-6 double-hung
Window Material(s): Wood

Alterations: Original cladding replaced with stucco, some original doors replaced, HVAC ducts added to east elevation, wood ADA-accessible ramp at west elevation.

Notes: Canopies over west elevation entrance, wood stairs at east elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevation, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F5 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



West elevation, view looking southeast. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: None

Door Type(s): Partially-glazed slab
Door Material(s): Wood
Window Type(s): Multilight hopper, 6-over-6 double-hung
Window Material(s): Wood

Alterations: Some window openings boarded up, some original windows replaced, original doors replaced, original cladding replaced with stucco, HVAC ducts added to west elevation.

Notes: Wood steps at east elevation entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevations, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F7 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F7 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: None

Door Type(s): Partially glazed slab
Door Material(s): Wood
Window Type(s): 2-over-2 double hung, multi-light hopper
Window Material(s): Wood

Alterations: Additions to west elevation, original cladding replaced with stucco, some original windows replaced, HVAC ducts added to east elevation, ADA-accessible ramps at west elevation entrances, both concrete and wood, original doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North and west elevations, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building F7 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



West elevation additions, view looking east. 6/11/13.



East elevation, view looking southwest. 6/11/13.



West elevation, doorway. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F8 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F8 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Not visible
Foundation: Not visible

Roof Form: Gabled
Roof Features: None
Eaves: Shallow, open
Roof Material: Rolled asphalt
Exterior Materials: Standing seam metal siding
Primary Elevation: North

Door Type(s): Partially-glazed panel
Door Material(s): Wood
Window Type(s): Hoppers, paired casements
Window Material(s): Steel

Alterations: No major alterations were observed.

Notes: This building is significantly different from the rest of the c. 1943 buildings in that its cladding, construction and windows are all made of metal as opposed to wood. Its original function may have differed.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building F8 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking southwest. 6/11/13.



East elevation, windows. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building F9 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building F9 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: None

Door Type(s): None visible
Door Material(s): None visible
Window Type(s): Slider
Window Material(s): Aluminum

Alterations: Original cladding replaced with stucco, original windows replaced with aluminum sliders.

Notes: The only visible portion of F9 is the north gable end.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☑ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building H1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building H1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Slider
Window Material(s): Aluminum

Alterations: Original windows and doors replaced, original cladding replaced, security bars added to some windows, wall A/C units added to north and east elevations.

Notes: Canopies over south elevation entrances, brick structure at north elevation, possibly an incinerator.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Building H1 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



North and east elevations, view looking southwest. 6/11/13.

***Required Information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N14 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N14 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Irregular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents and attic access doors, cupolas
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door with sidelights
Door Material(s): Wood
Window Type(s): 8-over-8 double-hung, sliders
Window Material(s): Wood, aluminum

Alterations: Additions to all elevations, some window openings on west elevation altered, some original windows replaced with aluminum sliders, HVAC ducts added to south elevation, vent openings sealed, non-original concrete steps on north elevation entrances with metal handrails.

Notes: Multiple entrances, accessed by concrete or wood steps. Free-standing wood shed to the rear clad in plywood with a gabled roof, 6-over-6 double-hung wood windows and a wood slab door.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):



North elevation, east end, view looking southwest. 6/11/13.



North elevation, west entrance. 6/11/13.



West elevation, addition detail. 6/11/13.



West elevation, view looking northeast. 6/11/13.



East elevation, view looking west. 6/11/13.



South elevation, free-standing shed. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N17 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N17 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door, slab
Door Material(s): Wood
Window Type(s): Multilight casements, single-hung
Window Material(s): Wood, vinyl

Alterations: Original cladding replaced with stucco, security bars added to some windows, some windows replaced on north elevation, awning added over north entrance, chickenwire skirt around perimeter of building, some original doors replaced.

Notes: Wood entrance ramp on the north elevation, wood porch entrance on the west elevation, porch is supported and enclosed by thin wood beams.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N17 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



North elevation, entrance. 6/11/13.



West elevation, view looking southeast. 6/11/13.



North elevation, typical window. 6/11/13.



North elevation, replacement window. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N22 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N22 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gable
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal
Window Type(s): Multilight casement, 6-over-6 double-hung
Window Material(s): Wood

Alterations: Cladding replaced with stucco, security bars added to some windows, HVAC ducts added to west elevation, original doors replaced, concrete ADA-accessible ramp with metal handrails at north elevation entrance, plywood skirt around building perimeter, doors replaced.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N22 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking west. 6/11/13.



North elevation, entrance and ramp. 6/11/13.



South elevation, original window. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N24 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N24 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: T-shaped
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Cross-gabled and shed
Roof Features: None
Eaves: Open with fascia board
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North [blocked by new construction]

Door Type(s): Double, slab
Door Material(s): Metal
Window Type(s): Sliders
Window Material(s): Aluminum and wood

Alterations: Additions to east and south elevations, replacement of some windows with aluminum sliders, original cladding possibly replaced with stucco, original doors replaced, HVAC ducts added to east elevation.

Notes: This building appears to date after the property was purchased by Los Angeles County and may be an early Harbor General Hospital building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
East elevation, view looking west. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1950 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N24 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and east elevations, view looking northwest. 6/11/13.



West elevation, view looking southeast. 6/11/13.



East elevation, original window. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N28 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N28 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Combination hipped/gabled
Roof Features: None
Eaves: Shallow, both open and boxed
Roof Material: Composition shingle
Exterior Materials: Stucco, wood clapboard
Primary Elevation: East

Door Type(s): Slab, fully-glazed
Door Material(s): Wood, metal
Window Type(s): Hopper/awning, 2-over-2 double-hung, sliding
Window Material(s): Wood, metal

Alterations: Additions, replacement of original windows with metal sliding windows, new concrete steps with metal handrails at entrances, HVAC ducts added to east elevation, awning added to primary entrance on west elevation, concrete ADA-accessible ramp with metal handrails at west elevation main entrance, replacement of original doors. This was originally two buildings that were later connected by the stuccoed portion in the center.

Notes: None.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, north end, view looking southeast.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
1943/50 1952 Historic Aerial/Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N28 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, north end, view looking southwest. 6/11/13.



South and west elevations, view looking northeast. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N34 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N34 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: South

Door Type(s): Partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 3-over-3, 6-over-6 and 8-over-8 double-hung
Window Material(s): Wood

Alterations: Original cladding replaced with stucco, HVAC ducts added to west elevation, new concrete porch steps, concrete ADA-accessible ramp with metal handrails.

Notes: South elevation porch with thin wood porch supports and wood porch enclosure.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Primary #
HRI #

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N34 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



East elevation, view looking west. 6/11/13.



South elevation, view looking northwest. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building N6 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building N6 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: Gable-end attic vents and cupola
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: South

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): 8-over-8 double-hung
Window Material(s): Wood

Alterations: Window opening on west elevation boarded up, HVAC ducts added to south elevation and roof, siding patched, vent openings sealed on south elevation, water heater added to south elevation, east elevation entrance moved, south elevation entrance opening possibly altered, ADA-accessible concrete ramps with metal handrails at entrances on east and south elevations, plywood skirt around building perimeter, original doors replaced.

Notes: Canopy over south entrance.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking northwest. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/17/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building N6 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



North elevation, view looking southwest. 6/11/13.



East elevation, view looking southwest. 6/11/13.



East elevation and ADA, view looking west. 6/11/13.



South elevation, typical window. 6/11/13



South elevation, HVAC ducts. 6/11/13.



South elevation, entrance. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Building T1 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Building T1 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Irregular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: West

Door Type(s): Slab
Door Material(s): Wood
Window Type(s): Multilight awning/hopper, slider
Window Material(s): Wood, aluminum

Alterations: Additions, some window openings boarded up, some windows replaced with aluminum sliders, vehicular openings on north elevation boarded up, original cladding replaced with stucco, original doors replaced.

Notes: Canopy over west elevation entrance, originally used as a gas station.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
West elevation, view looking east. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Building T1 - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



North elevation, view looking south. 6/11/13.

*Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Cottage 14 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Cottage 14 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Paneled
Door Material(s): Wood
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Original windows replaced (original window openings maintained), original cladding replaced with stucco, new concrete porch steps.

Notes: Entrance porch at north and south elevations with shed roofs supported by thin wood posts, no windows on east elevation.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Cottage 14 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Cottage 16 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Cottage 16 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Paneled
Door Material(s): Wood
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Original windows replaced (original window openings maintained), original cladding replaced with stucco, new concrete porch steps.

Notes: Entrance porch at north and south elevations with shed roofs supported by thin wood posts, no windows on east elevations.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #
HRI #

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Cottage 16 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Cottage 18 - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Cottage 18 - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Stories: 1
Construction: Wood
Foundation: Concrete

Roof Form: Gabled
Roof Features: Gable-end attic vents
Eaves: Shallow, open with exposed rafter tails
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Paneled
Door Material(s): Wood
Window Type(s): Single-hung
Window Material(s): Vinyl

Alterations: Original windows replaced (original window openings maintained), original cladding replaced with stucco, new concrete porch steps.

Notes: Entrance porch at north and south elevations with shed roofs supported by thin wood posts, no windows on east elevations.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) Cottage 18 - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northeast. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) D Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address D Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard, T1-11
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal, wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions to north elevation, removal of Building D4 and patch with T1-11, original doors replaced.

Notes: Long, narrow building that houses an interior hallway connecting "D" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☐ Building ☑ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
North elevation, view looking southeast. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):



South elevation, building scar. 6/11/13.



North elevation, gable remnant. 6/11/13.



South elevation, severe window deterioration. 6/11/13.



Interior, severe termite damage. 6/11/13.



Interior, floor damage. 6/11/13.



Interior wall materials. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) E Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** T ; R ; **1/4 of** **1/4 of Se** ; **B.M**

c. Address E Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Wood clapboard
Primary Elevation: North

Door Type(s): Slab
Door Material(s): Metal, wood
Window Type(s): 6-over-6 double-hung
Window Material(s): Wood

Alterations: Additions to north elevation, replacement of original doors, alterations to door openings.

Notes: Long, narrow building that houses an interior hallway connecting "E" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

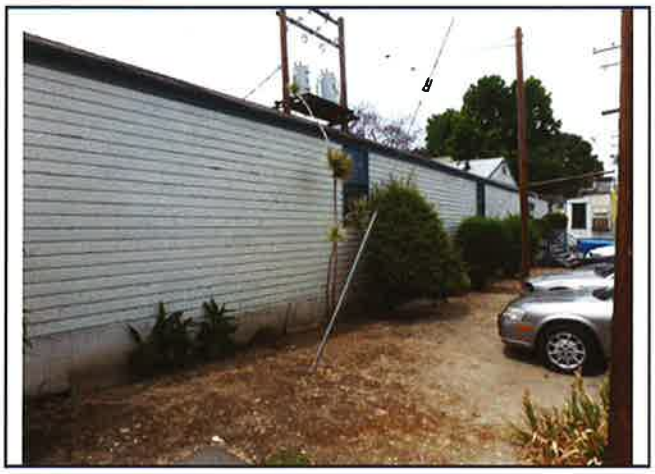
***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) E Walkway - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



North elevation, view looking southwest. 6/11/13.



South elevation, view looking north. 6/11/13.



South elevation, view looking north. 6/11/13.



North elevation, altered entrance. 6/11/13.



North elevation, altered entrance. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) F Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address F Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: East/west
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: North

Door Type(s): Partially-glazed paneled door
Door Material(s): Wood
Window Type(s): 2-over-2 double-hung
Window Material(s): Wood

Alterations: Portions of F Walkway are enclosed, but the majority is a covered, open walkway supported by thin wood posts and covered with a gabled roof. It may have been entirely open or entirely enclosed originally.

Notes: Long, narrow building that houses an interior hallway connecting "F" buildings, windows, multiple exterior doors accessed by stairs or ramps, interior doors that lead directly into each remaining building. Portions of F Walkway are open and covered with a gabled roof supported by thin wood posts.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South elevation, view looking north. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #

CONTINUATION SHEET

 ***NRHP Status Code** 6Z

***Resource Name or #:** (Assigned by Recorder) F Walkway - 1000 W. Carson Street

Recorded By Amanda Yoder **Date:** 6/18/2013 ☑ Continuation ☐ Update



F Walkway, view looking east. 6/11/13.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) N Walkway - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address N Walkway - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: Rectangular
Orientation: North/south
Stories: 1
Construction: Wood
Foundation: None

Roof Form: Gabled
Roof Features: None
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: None
Primary Elevation: None

Door Type(s): None
Door Material(s): None
Window Type(s): None
Window Material(s): None

Alterations: No major alterations were observed.

Notes: Long, narrow open walkway covered by a gabled roof supported by thin wood posts, connects "N" buildings.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☐ Building ☑ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
N Walkway, view looking south. 6/11/13.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☑ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Survey #
DOE #
Other Listings
Review Code
Reviewer
Date

Page 1 ***Resource Name or #:** (Assigned by Recorder) Paint Shop - 1000 W. Carson Street

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☑ **Unrestricted** ***a. County** Los Angeles

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necesary.)

***b. USGS 7.5'Qua** **Date** **T** ; **R** ; **1/4 of** **1/4 of** **Se** ; **B.M**

c. Address Paint Shop - 1000 W. Carson Street City: Torrance Zip 90502

d. UTM (Give more than one for large and/or linear resources) Zone ; mE/ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, etc. as appropriate) APN: 7344-001-901

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Plan Shape: L-shaped
Stories: 1
Construction: Wood
Foundation: Elevated on concrete piers

Roof Form: Combination
Roof Features: Gable-end attic vents
Eaves: Flush
Roof Material: Composition shingle
Exterior Materials: Stucco
Primary Elevation: East

Door Type(s): Single and double, slab doors
Door Material(s): Metal
Window Type(s): Sliders, fixed, 6-over-6 double-hung
Window Material(s): Aluminum, wood

Alterations: Additions, original cladding replaced with stucco, door opening removed, security bars added to some windows, awnings added to some windows, non-original doors.

Notes: No skirt around building base.

***P3b. Resource Attributes:** (List Attributes and codes) HP41. Hospital

***P4. Resources Present** ☑ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
South and east elevations, view looking northwest.

***P6. Date Constructed/Age and Source:** ☑ Historic ☐ Prehistoric ☐ Both
c. 1943 Visual Observation

***P7. Owner and Address:**
Los Angeles County
500 W. Temple Street #754
Los Angeles, CA 90012

***P8. Recorded by:**
Amanda Yoder
GPA Consulting
231 California Street
El Segundo, CA 90245

***P9. Date Recorded:** 6/18/2013

***P10. Survey Type:** (Describe)
Intensive Level Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Los Angeles Biomedical Research Institute Historic Resource Report, GPA Consulting, July 2013

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☑ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Reature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record Other (List):

CONTINUATION SHEET

*NRHP Status Code 6Z

*Resource Name or #: (Assigned by Recorder) Paint Shop - 1000 W. Carson Street

Recorded By Amanda Yoder Date: 6/18/2013 ☑ Continuation ☐ Update



South and west elevations, view looking northwest. 6/11/13.



East elevation, north end, view looking northwest. 6/11/13.

*Required Information

APPENDIX II: ALTERATION PERMITS

N BLOCK				
Building	**Applicant**	**Owner**	**Date**	**Work Completed**
N28	R.E. Shonerd	Los Angeles County	9/21/1950	Add flammable liquid storage vault for pharmacy
N6	S. A. DiGiamaopolo	Los Angeles County	2/29/1968	Change partitions, add sheetrock to walls
N14	S. A. DiGiamaopolo	Los Angeles County	3/12/1971	Install interior partitions
N14	S. A. DiGiamaopolo	Los Angeles County	6/21/1971	1,500 sq.ft. addition, a covered loading dock for receiving office supplies
N24	Clyde M. Johnson	Los Angeles County	12/22/1971	4,000 sq. ft. addition to N24 for research lab
N24	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	12/22/1971	1 - 4 ton compressor, 1 - 5 ton compressor
N14	Clyde M. Johnson	Los Angeles County	5/4/1972	Cover open section to create new office space
N24	S. A. DiGiamaopolo	Los Angeles County	10/20/1972	225 sq. ft. shed addition to house animals
N22	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/25/1972	1 Compressor
N24	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/30/1972	1 24M BTU Compressor
N22	S. A. DiGiamaopolo	Los Angeles County	12/29/1972	Convert warehouse to offices
N14	Illegible	Los Angeles County	1/4/1973	Relocate 2 doors
N24	S. A. DiGiamaopolo	None listed	1/9/1973	Convert restrooms to examination rooms
N28	S. A. DiGiamaopolo	Los Angeles County	1/19/1973	Join existing structures and make small addition [originally A 14 and 16, joined in the middle by this permit]
N28	Air Tec	Los Angeles County	1/19/1973	Replace existing: 4 air handling units, 2,000 cfms; 4 60M ventilation systems
N17	S. A. DiGiamaopolo	Los Angeles County	2/14/1973	Install partitions and add toilet room

N17	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	2/14/1973	1 - 3 horsepower comrpessor
N14	S. A. DiGiamaopolo	Los Angeles County	8/1/1973	Addition of storage area (plan check only)
N14	Nichols Sheet Metal and Air Co. Inc.	L.A. General Hospital	8/1/1973	1 - 3 1/2 horsepower compressor
N24	None listed	Los Angeles County	10/26/1973	Construct two offices
N14	Illegible	Los Angeles County	3/13/1974	East side addition
N14	S. A. DiGiamaopolo	Los Angeles County	4/15/1974	Addition of office
N6	S. A. DiGiamaopolo	Los Angeles County	5/3/1974	Install 7' high office partition
N28	Paul Thompson	Los Angeles County	6/26/1974	Addition for research
N28	S. A. DiGiamaopolo	Los Angeles County	11/22/1974	Construct telephone equipment room
N28	S. A. DiGiamaopolo	Los Angeles County	1/21/1975	Addtion to clinic
N28	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	1/21/1975	1 - 3hr heat pump, 1 - 5hr heat pump, 1 - 2hr heat pump
N28	Nichols Sheet Metal and Air Co. Inc.	None listed	1/21/1975	1 - heat pump, 126,000 BTUs
N14	Bill Ferguson	Harbor General	9/7/1976	Add 2 walls and shelves
N34	Nichols Sheet Metal and Air Co. Inc.	Harbor General	9/1/1977	A/C unit, gas piping
N34	Paul Burton	Harbor General Hospital	9/21/1977	Remove 3 wall heaters
N28	S. A. DiGiamaopolo	Los Angeles County	10/7/1977	Interior changes, enclosure of play area
N14	S. A. DiGiamaopolo	Los Angeles County	7/6/1978	Wood frame addition for storage
N14	S. A. DiGiamaopolo	Los Angeles County	10/31/1978	Add a room to the existing building
N28	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Alter existing building into storage room and lab
N28	Ernest Garcia	Los Angeles County	12/14/1978	Alteration
N14	S. A. DiGiamaopolo	Los Angeles County	12/19/1978	Add northeast offices to existing building room 7B (Phase I only)

N14	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	1/15/1979	36/100 Gas & electric a/c units
None listed	Frank Gallo	Los Angeles County	1/15/1979	Extension of "A" [now N] ramp
N14	Frank Gallo	Los Angeles County	4/30/1979	Photo machine
N14	R.G. Lyman	Harbor General Hospital	5/9/1979	Install fire sprinklers
N14	S. A. DiGiamaopolo	Los Angeles County	2/1/1980	Interior partitions
N28	S. A. DiGiamaopolo	Los Angeles County	5/5/1980	Install fire sprinklers
N14	S. A. DiGiamaopolo	Los Angeles County	8/4/1980	Construct 30' x 15' lattice patio roof cover
N24	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	1/13/1981	60,000 BTU Compressor
N28	S. A. DiGiamaopolo	Los Angeles County	9/3/1981	Remodel
N14	Howell Barvin (?)	Los Angeles County Harbor-UCLA Medical Center	2/20/1982	Remodel interior
N14	Illegible	Los Angeles County Harbor-UCLA Medical Center	3/18/1982	Fire-rated drywall
N24	SWG Sheet Metal	Los Angeles County Harbor General	12/13/1982	1 - 24,000 BTU Compressor, 1 4 ton gas & electric replacing existing 48,000 BTUs
N24	None listed	Harbor General Hospital	11/24/1984	2 - 60,000 BTU compressors, 28 - supply and return vents
N14	None listed	Harbor-UCLA Medical Center	12/12/1984	Add kitchen
N14	So Dev Concepts Inc	Harbor-UCLA Medical Center	12/12/1984	Move A/C, supply
N14	Halco Const.	Harbor UCLA Medical Center	8/27/1987	Replace T-bar ceiling
N14	Action Fire	Harbor UCLA Medical Center	5/1/1991	Install fire sprinklers
N14	George G. Layman	Los Angeles County	5/1/1991	Enclose shipping dock
N24 and N26	Mary Werk	Los Angeles County Harbor-UCLA Medical Center	11/24/1992	Addition of (state-approved) trailers to existing HIV clinic (foundation only)
N14	Nichols Sheet Metal and Air Co. Inc.	None listed	illegible	1 - 36,000 BTU furnace

B BLOCK				
Building	Applicant	Owner	Date	Work Completed
B2	Illegible	Los Angeles County	11/24/1965	Alter
B2	Charles R. Reid	Harbor General Hospital	2/21/1968	Interior partitions
B5	Illegible	Los Angeles County	3/26/1968	2124 sq.ft. addition to lab building on side of barracks (plan check only)
B6	Illegible	Los Angeles County	6/14/1968	Revision of B6, Area II (plan check only)
B4	Glen Colvin	Harbor General Hospital	10/4/1968	Add windows, one door and siding at barracks
B6	Clyde M. Johnson	Harbor General Hospital	3/19/1969	Add partitions to south end
B3	S. A. DiGiamaopolo	Harbor General Hospital	2/7/1970	Enclose porch on west side
B5	S. A. DiGiamaopolo	Los Angeles County	2/10/1970	Add research laboratory (plan check only)
B5	Charles R. Reid	Harbor General Hospital	2/10/1970	1800 sq.ft. addition for labs and offices
B5	S. A. DiGiamaopolo	Los Angeles County	3/30/1970	B5 addition, northeast end, conference room (plan check only)
B5	A.W. Peterson	Los Angeles County	5/21/1971	Fire damage
B1	S. A. DiGiamaopolo	Los Angeles County	5/21/1971	Alteration of and addition to research lab (plan check only)
B2	S. A. DiGiamaopolo	Los Angeles County	5/21/1971	Install noise ceiling, install tracks for x-ray and add to footings
B4	S. A. DiGiamaopolo	Los Angeles County	2/14/1972	Install cabinets and do necessary work
B3	S. A. DiGiamaopolo	Los Angeles County	4/19/1972	1600 sq.ft. addition for storage
B1	Ernest J. Davis	Los Angeles County	3/15/1973	Remodel, new partitions at rear
B4	S. A. DiGiamaopolo	Los Angeles County Harbor General Hospital	12/17/1973	Addition to existing structure for laboratory
B4	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	12/17/1973	1 - 3 1/2 horsepower compressor
B5	S. A. DiGiamaopolo	Los Angeles County	6/10/1974	2710 sq.ft. addition (plan check only)

B3	None listed	Los Angeles County	8/16/1974	988 sq.ft. addition
B6	S. A. DiGiamaopolo	Los Angeles County	10/16/1974	2769 sq.ft. lab addition (plan check only)
B6	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/16/1974	1 - 5 ton gas/electric compressor; 1 - 3 ton gas/electric compressor
B-2	Colin P. Ward	Los Angeles County	12/10/1974	Install non-load bearing wall
B6	S. A. DiGiamaopolo	Los Angeles County	1/2/1975	Enclose B6 ramp (plan check only)
B1	S. A. DiGiamaopolo	Los Angeles County	12/29/1975	Construct wood frame building with raised-floor offices and lab (plan check only)
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	12/29/1975	2 - 2 horsepower compressors
B5	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	6/20/1976	1 - 3/4 horsepower refrigeration system
B5	Randy Brown	Harbor General Hospital	11/8/1976	Fire sprinklers
B5	Dir. Mech. Services	Los Angeles County	11/8/1976	Wood frame building with raised-floor office and storage area, 435 sq.ft.
B5	Keith Gallo	Harbor General Hospital	5/13/1977	Wood ramp, 25' long, 4' wide
B4	J. Broudreaux	Los Angeles County	5/16/1977	Renovate existing building (plan check only)
B4	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County	5/16/1977	1 - Forced air furnace
B6	J. Broudreaux	Los Angeles County	9/7/1977	144 sq.ft. addition to existing building
B6	Ernest L. Garcia	Harbor General Hospital	9/7/1977	1 - 8,000 BTU compressor
B3	S. A. DiGiamaopolo	Los Angeles County	12/9/1977	Install fire sprinkler to existing building (plan check only)
B2	S. A. DiGiamaopolo	Los Angeles County	12/9/1977	Install fire sprinkler to existing building (plan check only)
B5	S. A. DiGiamaopolo	Los Angeles County	7/18/1978	703 sq.ft. addition to southwest corner (plan check only)

B5	S. A. DiGiamaopolo	Los Angeles County	7/26/1978	Install fire sprinklers in conference room alteration (plan check only)
B5	S. A. DiGiamaopolo	Los Angeles County	7/28/1978	Install fire sprinklers in addition (plan check only)
B5	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	7/28/1978	1 - 55,000 BTU forced air furnace
B	S. A. DiGiamaopolo	Los Angeles County	9/15/1978	"Close in passage way with doors"
B3	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Addition to existing building for use as record storage (plan check only)
B	S. A. DiGiamaopolo	Los Angeles County	12/19/1978	Install "pass-thru" door and counter
B2	S. A. DiGiamaopolo	Los Angeles County	12/19/1978	Construct vestibule and alter existing building
B5	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	3/14/1979	Modify existing duct system
B5	R.G. Lyman	Harbor General Hospital	5/10/1979	Install fire sprinklers
B5	S. A. DiGiamaopolo	Los Angeles County	6/5/1979	Remodel and addition to B5
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	2/15/1980	1 - 48,000 BTU compressor
B1	Ernest L. Garcia	Los Angeles County	12/3/1980	Build 2 partition walls
B6	Western Automatic Sprinkler	Harbor General Hospital	4/28/1981	Install fire sprinklers
B6	S. A. DiGiamaopolo	Los Angeles County	4/28/1981	510 sq.ft. addition to B6
B4	S. A. DiGiamaopolo	Los Angeles County	9/29/1981	Remodel interior
B3	None listed	Los Angeles County	11/15/1981	2 - 100,000 BTU forced air furnaces
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor Hospital	6/22/1982	2 - 60,000 BTU compressors
B4	S. A. DiGiamaopolo	Los Angeles County	7/12/1982	Cold storage room and office
B6	R.E. Thomas Co.	Harbor-UCLA Medical Center	9/2/1982	Add 3 fire sprinkler heads
B6	S. A. DiGiamaopolo	Los Angeles County	9/2/1982	Alteration to building B6 and addition (plan check only)

B2	None listed	Los Angeles County	11/15/1982	2 - 60,000 BTU compressors; 2 - 100,000 BTU furnaces
B1	Nichols Sheet Metal and Air Co. Inc.	Harbor Hospital	11/21/1982	1 - 24,000 BTU compressor; 6 - supply outlets
B5	S. A. DiGiamaopolo	Los Angeles County	1/3/1983	Addition to B5
B4	S&G Sheet Metal	Research Education Institute, Inc.	6/20/1984	2 - 60,000 BTU compressors, 40 - inlets and outlets
B6	S&G Sheet Metal	Research Education Institute, Inc.	6/20/1984	3 - 60,000 BTU compressors, air inlets and outlets
B5	Graves & Son's	None listed	11/20/1984	3 - 60,000 BTU compressors; 15 - supplies
B5	Nichols Sheet Metal and Air Co. Inc.	None listed	11/29/1984	1 - 2 ton heat pump; 6 - supplies
B1	So Dev	Harbor-UCLA Medical Center	12/12/1984	Fire sprinklers
B1	R&J Air Conditioning	Harbor General Hospital	2/20/1985	Adding/relocating 5 units
B1	Halco Const.	Harbor-UCLA Medical Center	3/8/1985	Construct new rooms in exisiting building
B4	Norm Fast	Harbor-UCLA Medical Center	1/22/1991	2,182 sq.ft. addition
B4	R&J Air Conditioning	Research Education Institute, Inc.	10/1/1991	2 - 30,000 BTU units, 28 - outlets

C BLOCK				
Building	Applicant	Owner	Date	Work Completed
C1	Harbor General Hospital	Los Angeles County	1/19/1950	Waiting room addition 168 sq. ft.
C1	Charles Seymour	Los Angeles County	4/29/1963	370 sq.ft. addition to building (plan check only)
C1	None listed	Harbor Hospital	8/6/1968	Area II - C1 remodel (plan check only)
C1	Glen Colvin	Los Angeles County	12/12/1968	Alter/repair C1
C1	Clyde M. Johnson	Los Angeles County	4/9/1970	Add 39x36 research laboratory
C1	S. A. DiGiamaopolo	Los Angeles County	12/14/1970	1,0650 sq.ft. addition to C1 (plan check only)
C1	TRN Heating and Air Conditioning	Harbor General Hospital	12/14/1970	1 - 3 horsepower compressor
C1	S. A. DiGiamaopolo	Los Angeles County	6/23/1972	1,500 sq.ft. addition (plan check only)
C1	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	6/23/1972	1 - 5 horsepower compressor
C1	S. A. DiGiamaopolo	Los Angeles County	3/19/1973	Add 870 sq.ft. C1 Annex Lab (plan check only)
C4	S. A. DiGiamaopolo	Los Angeles County	9/14/1976	Alteration to existing building
C3	S. A. DiGiamaopolo	Los Angeles County	9/23/1976	Alter existing room into offices
C1	S. A. DiGiamaopolo	Los Angeles County	4/7/1978	Alteration to existing building (plan check only)
C1	S. A. DiGiamaopolo	Los Angeles County	4/7/1978	Alteration to existing building (plan check only)
C2	S. A. DiGiamaopolo	Los Angeles County	8/16/1978	Install additional partitions
C3	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	1/15/1979	1 - 36/80 A/C unit compressor
C1	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	3/19/1979	2 compressors: 1 - 3 1/2 horsepower, 1 - 5 horsepower

C2	S. A. DiGiamaopolo	Los Angeles County	6/5/1979	Add a partition
C3	S. A. DiGiamaopolo	Los Angeles County	12/11/1979	Alter rooms 13, 13A, 15 and 17
C3	S. A. DiGiamaopolo	Los Angeles County	12/18/1979	Alter existing building north end into offices (plan check only)
C2	S. A. DiGiamaopolo	Los Angeles County	5/14/1980	Add 10'x3'x6" bubble to east side of building
C2	S. A. DiGiamaopolo	Los Angeles County	8/4/1980	Partition off lobby
C1	S. A. DiGiamaopolo	Los Angeles County	9/16/1980	Addition to building
C1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	6/1/1981	1 - 18M, 40M Heat compressor
C1	Halco Const. Co	Los Angeles County	6/3/1981	Addition to building
C1	S. A. DiGiamaopolo	Los Angeles County	9/3/1981	Install wall and door in C1
C3	S. A. DiGiamaopolo	Los Angeles County	9/3/1981	Alteration to existng building (plan check only)
C3	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	9/3/1981	2 - 48/120 A/C unit compressors
C1	S/P Co. Inc.	Harbor-UCLA Medical Center	5/26/1982	3 - 32,000 CFM air-handling units; 3 <100,000 BTU compressors, 2 exhaust fans
C1	Harbor General Hospital	Los Angeles County	8/11/1982	1,400 sq.ft. addition (plan check only)
C1	R.G. Lyman	Harbor-UCLA Medical Center	4/29/1983	Install fire sprinklers
C1	So Dev.	Harbor-UCLA Medical Center	6/7/1984	"Hallway" (plan check only)
C1	S&G Sheetmetal	Harbor General Hospital	9/19/1984	3 - compressors (1 36,000 BTU, 1 48,000 BTU, 1 60,000 BTU); 38 inlet and outlets
C4	None listed	Los Angeles County	9/21/1984	2 - 60,000 BTU compressor; 2 - 100,000 BTU forced air furnace
C4	None listed	Los Angeles County	11/15/1984	2 - 100,000 BTU forced air furnaces
C5	Los Angeles County	Los Angeles County	11/15/1984	2 - 60,000 BTU compressor; 2 - 100,000 BTU forced air furnace

C2	Gerard Somers	Los Angeles County	5/29/1986	Alteration inside building C2 (plan check only)
C2	Halco Const. Co	Los Angeles County	5/25/1999	Match handicap ramp per permit #BL9905120018

D BLOCK				
Building	Applicant	Owner	Date	Work Completed
D3	Harbor General Hospital	Los Angeles County	2/20/1950	Alterations to building
D1	Robert M. Bigelow	Los Angeles County	10/1/1969	Vet lab, surgery locker room - post mortem
D1	Clyde M. Johnson	Los Angeles County	4/22/1970	Convert storage area to 2 vet labs
D3	S. A. DiGiamaopolo	Los Angeles County	5/4/1971	Connect part of dayroom to an office
D3	Clyde M. Johnson	Los Angeles County	8/17/1971	Alteration of interior partitions
D3	S. A. DiGiamaopolo	Los Angeles County	9/17/1971	480 sq. ft. addition for conference room (plan check only)
D1	Clyde M. Johnson	Los Angeles County	9/17/1971	Roof over wash area
D3	Clyde M. Johnson	Los Angeles County	4/20/1972	Remove interior walls
D1	Frank Gallo	Los Angeles County	12/14/1972	Add 15' partition and 1 door
D1	Frank Gallo	Los Angeles County	2/16/1973	8' roof extend ??? shed roof
D1	Ernest Garcia	Los Angeles County	1/28/1974	Alter storage
D3	Calvin Ward	Los Angeles County	12/10/1974	Relocate 2 walls, relocate door
D4	Calvin Ward	Los Angeles County	12/10/1974	Cover ??? walls
D4	S. A. DiGiamaopolo	Los Angeles County	6/13/1975	Alteration to building D4 - 2x4 studs, 5/8 dry wall partition (plan check only)
D1	S. A. DiGiamaopolo	Los Angeles County	10/1/1975	Addition - animal surgery (plan check only)
D1	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	10/1/1975	1 - 116M BTU compressor
D1	S. A. DiGiamaopolo	Los Angeles County	4/7/1976	Addition to storage shed at east side of D1
D1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	2/14/1977	1 - 140M BTU forced air furnace
D Ramp	J. Broudreaux	Los Angeles County	7/8/1977	Enclose ramp to make into storage room
D1	S. A. DiGiamaopolo	Los Angeles County	11/4/1977	Relocated existing entrance door

D1	J. Broudreaux	Los Angeles County	11/23/1977	Construct 39'x42' concrete block building - sheep-holding building (plan check only)
D1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	11/23/1977	4 - 1,000 CFM air-handling units, 2 - 69M BTU compressors
D1	Valentini's Refrigeration	Professional Staff Assoc	11/23/1977	2 - 60,000 BTU compressors; 2 - ventilation systems; 2 - 120,000 BTU forced air furnaces
D4	S. A. DiGiamaopolo	Los Angeles County	10/10/1978	Divide existing room with 1-hour rated partition (plan check only)
D1	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Alter existing building (plan check only)
D3	Frank Gallo	Los Angeles County	1/15/1979	Raising foundation for repair
D6	S. A. DiGiamaopolo	Los Angeles County	1/15/1979	Install new doorway
D6	S. A. DiGiamaopolo	Los Angeles County	7/26/1979	Alter for storage room
D2	Los Angeles County	Los Angeles County	8/29/1979	1 - 120,000 BTU forced air furnace with cooling
D4	Nichols Refrig. Inc.	Harbor General Hospital	9/19/1979	1 - 15M BTU remote; 1 - 11M BTU remote
D3	Dennis Lish	Harbor General Hospital	9/5/1980	Install fire sprinklers
D3	S. A. DiGiamaopolo	Los Angeles County	9/5/1980	Addition to building
D5	S. A. DiGiamaopolo	Los Angeles County	8/20/1981	Construct 15'x8' bubble north and attached to D ramp for toilets
D4	None listed	Los Angeles County	4/30/1982	Alteration inside of building D4 (plan check only)
D4	Thomas M. Ryan	Harbor-UCLA Medical Center	5/26/1982	1 - 1,600 air handling unit; 1 - 48,000 BTU compressor
D3	Graves & Son's	None listed	1/19/1984	3 - 48,000 BTU compressors; 15 - supplies
D5	S. A. DiGiamaopolo	None listed	7/24/1984	2 - 60,000 BTU compressors; 2 - 100,000 BTU furnaces
D6	S. A. DiGiamaopolo	None listed	10/24/1984	2 - 60,000 BTU compressors; 2 100,000 BTU furnaces
D1	Charles Seymour	None listed	11/20/1984	2 - 398M BTU boilers

D2	Tony DiGiampaolo	Los Angeles County	4/9/1986	Interior wall

E BLOCK				
Building	Applicant	Owner	Date	Work Completed
E6	A. Anderson?	Los Angeles County	11/13/1966	Repair lab and Experiments (partitions)
E5	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	4/22/1970	2 compressors: 1 - 3.5 horsepower and 1 - 5 horsepower
E4	S. A. DiGiamaopolo	Los Angeles County	11/8/1971	Addition (plan check only)
E4	Modern Air Cond. Co.	Harbor General Hospital	11/8/1971	1 - 5 horsepower compressor; 1 - 4 horsepower compressor
E2	Clyde M. Johnson	Los Angeles County	12/7/1971	Alterations of interior partitions
E5	S. A. DiGiamaopolo	Los Angeles County	12/8/1972	546 sq.ft. office addition
E5	S. A. DiGiamaopolo	Los Angeles County	12/8/1972	3 air-handling units
E4	S. A. DiGiamaopolo	Los Angeles County	3/8/1973	795 sq.ft. addition to existing structure (plan check only)
E2	S. A. DiGiamaopolo	Harbor General Hospital	7/23/1973	Vivarium records office
E4	S. A. DiGiamaopolo	Los Angeles County	6/26/1974	800 sq.ft. addition (plan check only)
E4	Nichols Sheet Metal and Air Co. Inc.	None listed	8/26/1974	1 combined unit
E6	S. A. DiGiamaopolo	Los Angeles County	12/21/1974	Remodel for offices
E4	S. A. DiGiamaopolo	Los Angeles County	8/29/1975	Lab and office addition (plan check only)
E4	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	8/29/1975	2 - 200,000 BTU compressors
E2	S. A. DiGiamaopolo	Los Angeles County	8/26/1976	Wood frame building with raised-floor research labs and office
E2	S. A. DiGiamaopolo	Los Angeles County	8/26/1976	1 - 2,000 CFM air-handling unit; 2 - 5 ton a/c units and components
E6	S. A. DiGiamaopolo	Los Angeles County	6/21/1977	Alter existing building and add an addition (plan check only)

E3	S. A. DiGiamaopolo	Los Angeles County	11/15/1977	Install room divider
E3	S. A. DiGiamaopolo	Los Angeles County	6/28/1978	Alteration to existing building
E4	S. A. DiGiamaopolo	Los Angeles County	11/15/1978	Remodel E4 rooms 1A and 14A (plan check only)
E2	S. A. DiGiamaopolo	Los Angeles County	1/15/1979	Alteration to existing building (plan check only)
E3	S. A. DiGiamaopolo	Los Angeles County	3/16/1979	Add to existing building for office space (plan check only)
E6	Steve Meredith	Los Angeles County	12/31/1979	Fire sprinklers in E6 addition
E6	S. A. DiGiamaopolo	Los Angeles County	1/3/1980	Addition to E6
E6	S. A. DiGiamaopolo	Los Angeles County	1/7/1980	Enclose corridor alcove
E4	S. A. DiGiamaopolo	Los Angeles County	1/7/1980	Install metal storage building
E3	S. A. DiGiamaopolo	Los Angeles County	4/16/1980	Cold storage room
E3	John F. Loguzzo	Los Angeles County UCLA Medical Center	4/16/1980	Fire sprinklers
E3	E.B. Kilstofte	Los Angeles County	4/18/1980	Remodel lab
E6	S. A. DiGiamaopolo	Los Angeles County	5/2/1980	Porch roof over ramp between E6 and E6 trailers
E4	Robert Oliveira	Harbor General Hospital	5/28/1980	Install fire sprinklers
E6	S. A. DiGiamaopolo	Los Angeles County	3/24/1981	Add offices to west side of E6
E6	Pyro Auto. Prot.	Los Angeles County	3/24/1981	Fire sprinkler system
E6	Nichols Sheet Metal and Air Co. Inc.	None listed	3/24/1981	1 - 30,000 BTU compressor
E3	Beverly Aire	Los Angeles County	5/1/1981	2 compressors: 1 - 24M, 1 - 42M; 2 ventilation systems
E4	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	5/28/1981	1 - 48,000 BTU compressor
E4	S. A. DiGiamaopolo	Los Angeles County	6/1/1981	Install two trailers and ramps
E3	R.A. Aire	Harbor-UCLA Medical Center	5/5/1982	2 - 1,050 CFM air-handling unit; 2 - 40,000 BTU forced air furnaces

E3	Howell Barfoot	"County UCLA"	8/28/1982	Alter existing building floor for free-standing equipment
E3	Western Automatic Sprinkler	Los Angeles County	11/10/1982	Install 2 fire sprinklers
E3	Howell Barfoot	Los Angeles County	11/30/1982	Construct ramp from E3 to trailer
E3	Ray Brewington	Los Angeles County	12/2/1982	3 - 2,000 CFM air-handling units; 3 - 60,000 BTU compressors
E6	Halco Const. Co.	Harbor-UCLA Medical Center	12/16/1982	1 ventilation system
E3	So Dev	Harbor-UCLA Medical Center	5/14/1984	Addition to E3
E3	So Dev	UCLA Medical Center	7/2/1984	Install automatic fire sprinklers
E6	S. A. DiGiamaopolo	Los Angeles County	12/12/1984	Addition to building E6 for laboratory and offices
E6	South Bay Heating & Air	Los Angeles County	12/22/1984	1 - 2,000 CFM air-handling unit; 1 - 60,000 BTU compressor; 21 - registers
E5	Ernest Garcia	Los Angeles County	8/15/1985	Wood frame work
E3		Research and Education Institute, Harbor-UCLA Medical Center	11/13/1987	480 sq.ft. addition to existing lab building
E6	George G. Layman	Harbor-UCLA Medical Center	1/15/1991	Enclose 241 sq.ft. of open space to include into building E6
E6	George G. Layman	Research and Education Institute	5/1/1991	Minor renovation - Relocating walls, reflooring, enclosing an open corridor
E5	Mary Werk	Los Angeles County Harbor-UCLA Medical Center	6/18/1993	Interior alterations (plan check only)
E5	Eidson Fire Protection	Los Angeles County	11/16/1993	Relocate 5 fire sprinklers, change other heads
E3	Regency Fire Protection	Los Angeles County	12/16/1997	New fire sprinkler system/1173 sq. ft.
E3	All Seasons Air Conditioning	Los Angeles County	1/20/1998	Add 1 5-ton heat pump
E4	Du Bordieu Inc.	Los Angeles County	4/3/1998	Add handicap ramp, remove door opening

E6	Du Bordieu Inc.	Los Angeles County	7/13/1998	Removal of existing wooden porch and stairs at south building elevation, new stucco color coat and landscape planters
E5	Du Bordieu Inc.	Los Angeles County	7/13/1998	New concrete block wall and chain link fence around ser [sic] area
E2	Du Bordieu Inc.	Los Angeles County	7/13/1998	New porch and stairs, stucco (on south side), hollow metal door
E3	Halco Const. Co.	Los Angeles County	5/12/1999	Construct new H.C. ramp, canopy, stucco south elevation
E2	Halco Const. Co.	Los Angeles County	5/12/1999	Replace wood steps and landing, construct canopy, stucco south elevation, concrete block planter
E1	Halco Const. Co.	Los Angeles County	5/12/1999	Replace existing wood landing with concrete

F BLOCK				
Building	Applicant	Owner	Date	Work Completed
F1	Henry B. Schnitger	Los Angeles County	9/15/1950	Kitchen & employee lockers - addition and alterations to Bldg F1
F9	Clyde M. Johnson	Los Angeles County	3/19/1968	Interior partitions for cardiovascular research library
F3	S. A. DiGiamaopolo	Los Angeles County	9/18/1969	Women's restroom addition
F3	S. A. DiGiamaopolo	Los Angeles County	4/28/1971	Carpenter shop addition
F9	S. A. DiGiamaopolo	Los Angeles County	6/2/1971	Additions/alterations for attending staff facilities (plan check only)
F9	Modern Air Conditioning Co	Harbor General Hospital	6/2/1971	1 - 2 horsepower boiler
F2	S. A. DiGiamaopolo	Los Angeles County	5/1/1972	600 sq.ft. addition for shower room and locker room
F9	Air Conditioning Systems, Inc	Harbor General Hospital	7/19/1972	2 - 60,000 BTU compressors
F7	S. A. DiGiamaopolo	Los Angeles County	2/14/1973	Convert restrooms to restroom and examination room
F7	S. A. DiGiamaopolo	Los Angeles County	6/18/1973	Office addition
F5	Frank Gallo	Los Angeles County	3/6/1974	Lab - interior partitions
F1	Nichols Sheet Metal and Air Co. Inc.	None listed	4/4/1974	1 combined unit - 80,000/50,000 BTUs
F5	Nichols Sheet Metal and Air Co. Inc.	None listed	5/10/1974	2 - 60,000 BTU forced air furnaces
F5	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County Hospital	5/10/1974	1 compressor - 24M BTU cool, 60M Heating
F1	S. A. DiGiamaopolo	Los Angeles County	5/21/1974	Replace existing loading dock
F1	Ernest Garcia	Los Angeles County	6/26/1974	Ramp

F1	Nichols Sheet Metal and Air Co. Inc.	Harbor General Hospital	2/14/1975	1 - 3 1/2 horsepower compressor
F7	S. A. DiGiamaopolo	Los Angeles County	3/4/1975	Add to office (plan check only)
F7	S. A. DiGiamaopolo	Los Angeles County	1/28/1976	Install 3'x6'8" door
F1	Bill Ferguson	Los Angeles County	5/11/1976	Install 1 sink and cabinet, add one wall and one door
F9	Bill Ferguson	Los Angeles County	7/26/1976	Change 6 windows to UL [illegible] and 1 SC Door
F9	S. A. DiGiamaopolo	Los Angeles County	11/15/1976	One hour fire wall (plan check only)
F8	Harbor General Hospital	Los Angeles County	1/7/1977	New addition to building F8, install a/c unit and duct work
F8	S. A. DiGiamaopolo	Los Angeles County	10/7/1977	Addition - Wood frame building with slab floor
F9	S. A. DiGiamaopolo	Los Angeles County	8/1/1978	Install partition wall (plan check only)
F2	S. A. DiGiamaopolo	Los Angeles County	5/2/1980	Install partitions and exterior ramps
F1	S. A. DiGiamaopolo	Los Angeles County	8/29/1980	Remodel rooms 1, 1A and 2C in Building F1
F3	S. A. DiGiamaopolo	Los Angeles County	10/22/1980	Enclose porch
F7	S. A. DiGiamaopolo	Los Angeles County	2/24/1981	Alter north end of building
F7	David Butcher	Harbor General Hospital	2/24/1981	Installation of auto sprinkler system
F9	S. A. DiGiamaopolo	Los Angeles County	7/22/1981	850 sq.ft. addition
F9	Western Auto Sprinkler	Harbor General Hospital	7/22/1981	Install fire sprinklers
F9	Nichols Sheet Metal and Air Co. Inc.	Los Angeles County	7/22/1981	1 - 48,000 BTU compressor
F2	Nichols Sheet Metal and Air Co. Inc.	None listed	9/29/1982	1 - compressor

F5	Howell Barfoot	Los Angeles County	5/14/1983	Remove non-load bearing wall, rooms 9 and 10
F6	Graves & Son's	None listed	11/2/1983	2 - 60,000 BTU compressors; 15 - supplies
F7	Graves & Son's	None listed	11/2/1983	2 - 60,000 BTU compressors; 15 - supplies
F5	Halco Const.	Harbor-UCLA Medical Center	4/9/1986	Stucco exist..??
F3	None listed	Los Angeles County	5/29/1986	1 - 60,000 BTU compressor; 1 - 100,000 BTU furnace
F2	S. A. DiGiamaopolo	Los Angeles County	Illegible	Alteration to existing building (plan check only)

OTHER			
Building	Owner	Date	Work Completed
Paint Shop	Los Angeles County Harbor General Hospital	3/16/1971	Install paint-spray booth according to codes
H1	Harbor General Hospital	4/19/1972	Remodel H1
Cottage 16	Los Angeles County	1/29/1974	Fume hood vent

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A-2.C SCOPING MEETING MATERIALS JULY 2015

Harbor-UCLA Medical Center Campus Master Plan Project

Environmental Impact Report

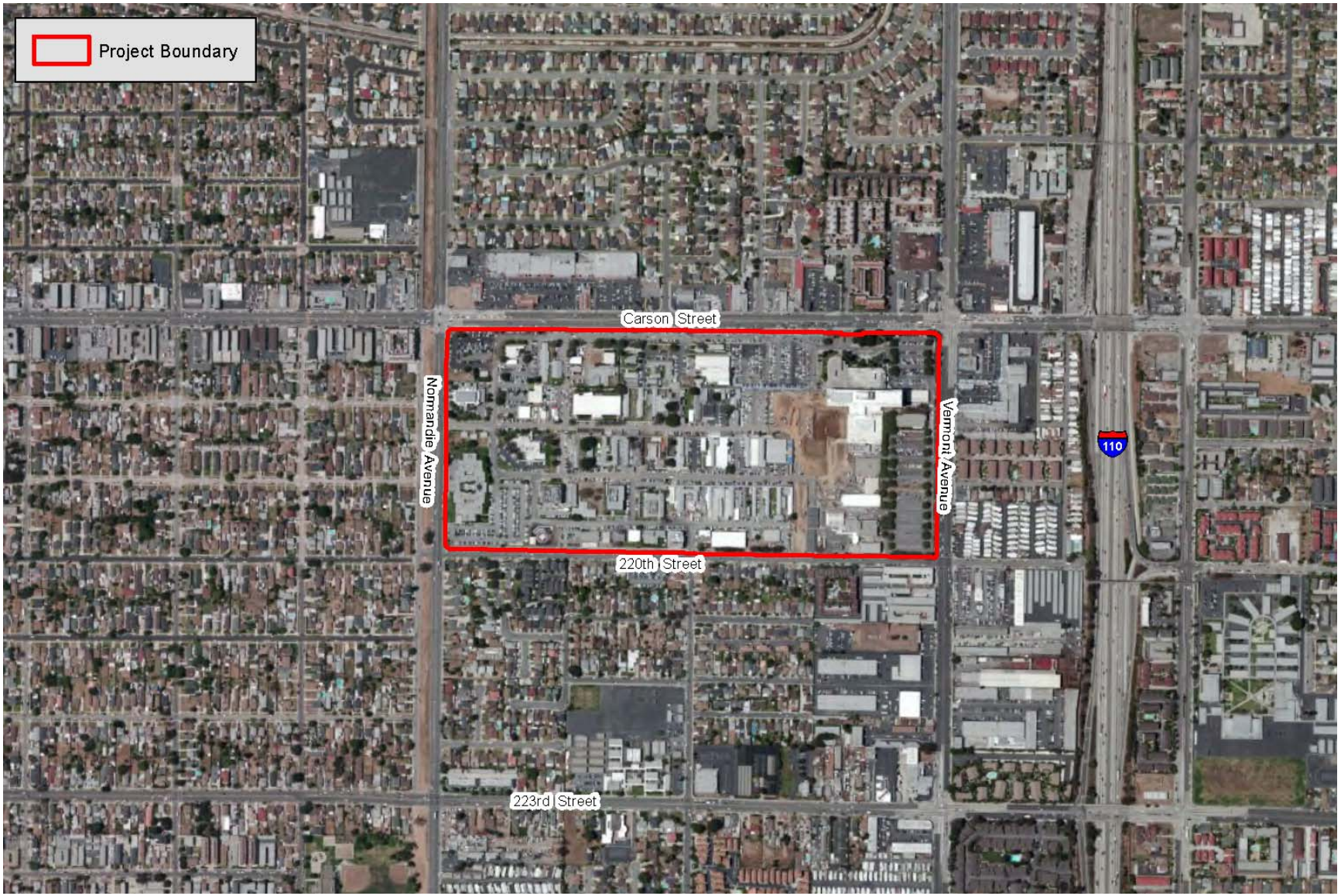
Public Scoping Meeting

July 15, 2015

Scoping Meeting Agenda

- ***Welcome and Introductions***
- ***Project Background/Existing Facilities***
- ***Proposed Project Overview***
- ***Environmental Review Process***
- ***Open House/Questions & Answers***
- ***Adjournment***

Project Location



Project Background

- Property originally developed in 1943 as U.S. Army Port of Embarkation Station Hospital for personnel returning from Pacific during World War II
- By 1946, facility no longer needed by U.S. Army; sold to Los Angeles County for development of Harbor General Hospital to serve the southwestern part of the County
- Affiliation with UCLA School of Medicine began in 1948 and the facility became the southern campus of the UCLA School of Medicine in 1951
- Construction of the existing eight-story, 450K-SF Hospital was completed in 1962, replacing a number of the original barracks and cottages
- In 1978, renamed Los Angeles County Harbor-UCLA Medical Center

Existing Hospital Facilities

- Harbor-UCLA Medical Center is a tertiary-care medical center and one of four Level 1 Trauma Centers in the County; serves the County's 10.3M residents
- Approximately 1.05M SF of existing development
- Licensed for 446 inpatient beds and operates more than 70 primary and secondary care clinics
- Premier teaching hospital with residency and fellowship programs in all medical and surgical specialties and a strong research focus
- Hospital employs staff of more than 4,000; the entire Harbor-UCLA campus (including the Hospital and other tenants) employs approximately 5,500. Other tenants:
  - LA BioMed (Founded as Harbor-UCLA Research and Education Institute in 1952)
  - Harbor-UCLA Medical Foundation, Inc. ("MFI") founded in 1963
  - Children's Institute International ("CII") founded in 1906

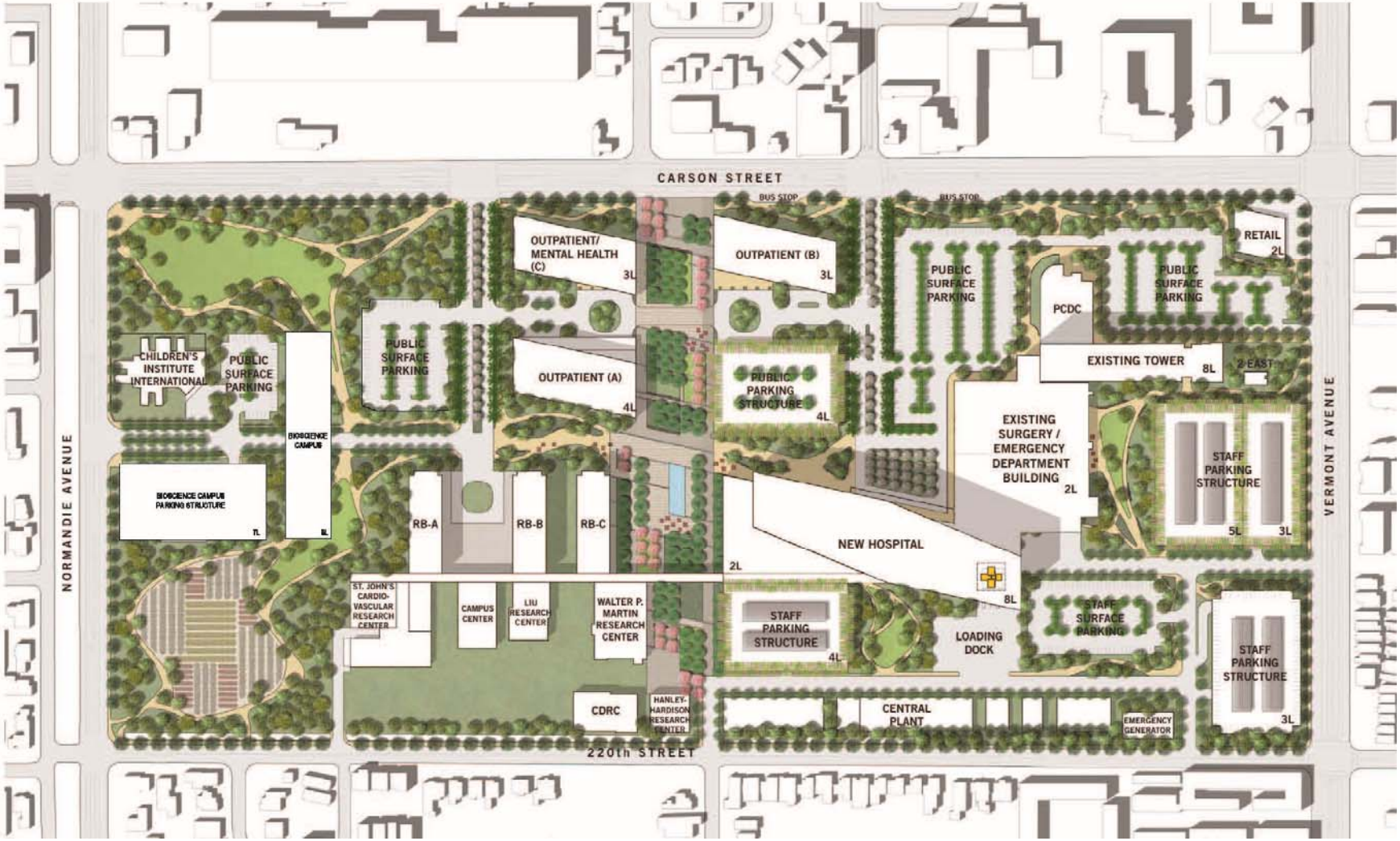
Existing Medical Campus



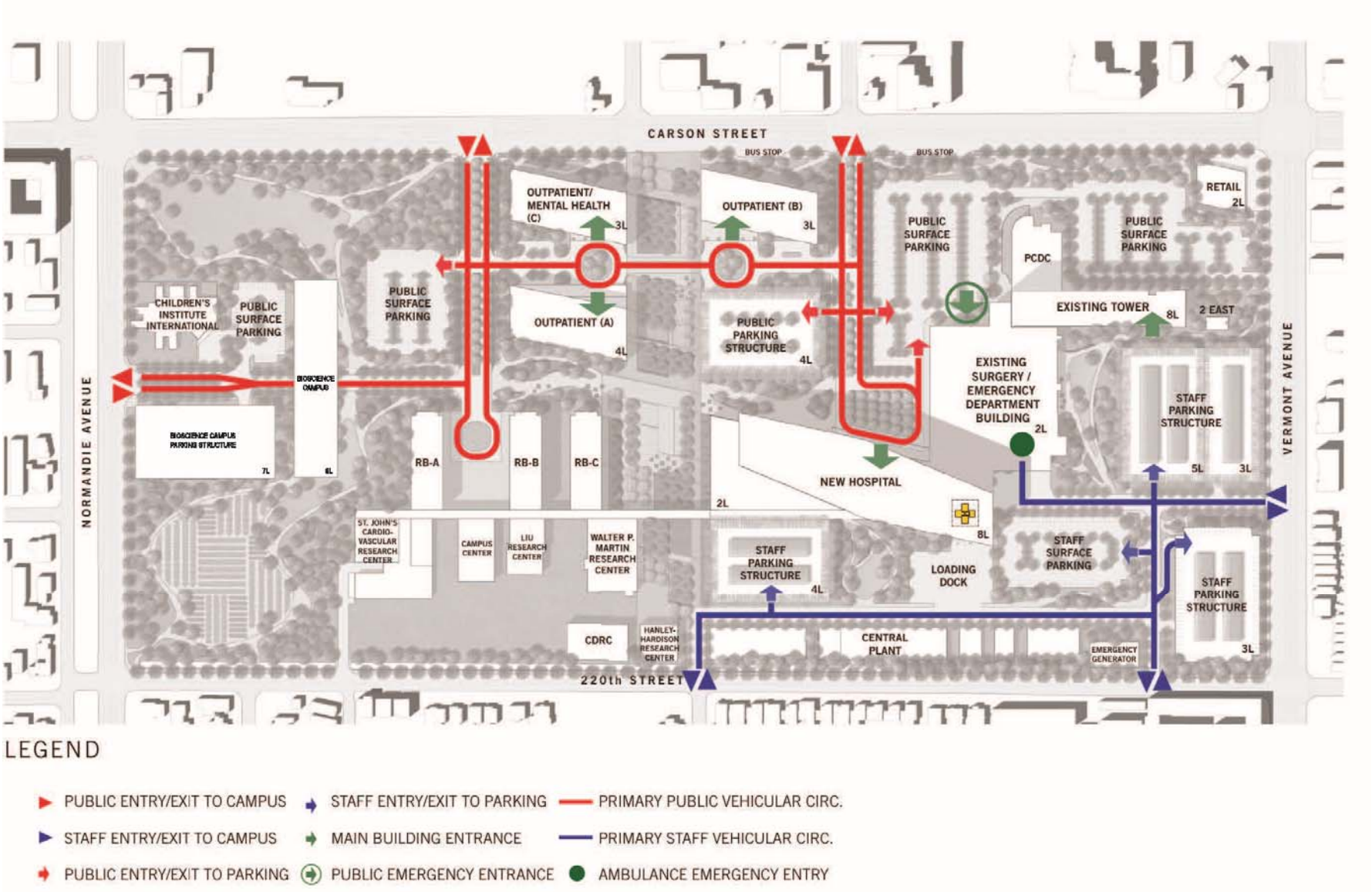
Proposed Project Summary

- State seismic law mandates that acute care services can no longer be provided after January 1, 2030 in buildings built before 1973
  - Harbor-UCLA Medical Center Hospital building completed in 1962
  - Requires decommissioning of existing Hospital, except for PCDC and recently constructed Surgery and Emergency Room Replacement Project facilities, which would remain operational
- Future development on Medical Campus through year 2030 guided by Draft 2012 Harbor-UCLA Medical Center Campus Master Plan
- Future facilities include New Hospital Tower, outpatient/medical office buildings, Bioscience Tech Park and other research facilities, laboratories, staff offices, central utility plant, parking structures and surface parking, and support facilities
- Increase of approximately 1,100,000 SF for a total at buildout of approximately 2,150,000 SF within the 72-acre Medical Campus
  - Includes up to 200K SF of new development within LA BioMed-leased portion of Medical Campus

Proposed Site Plan



Proposed Vehicular Circulation Plan



California Environmental Quality Act

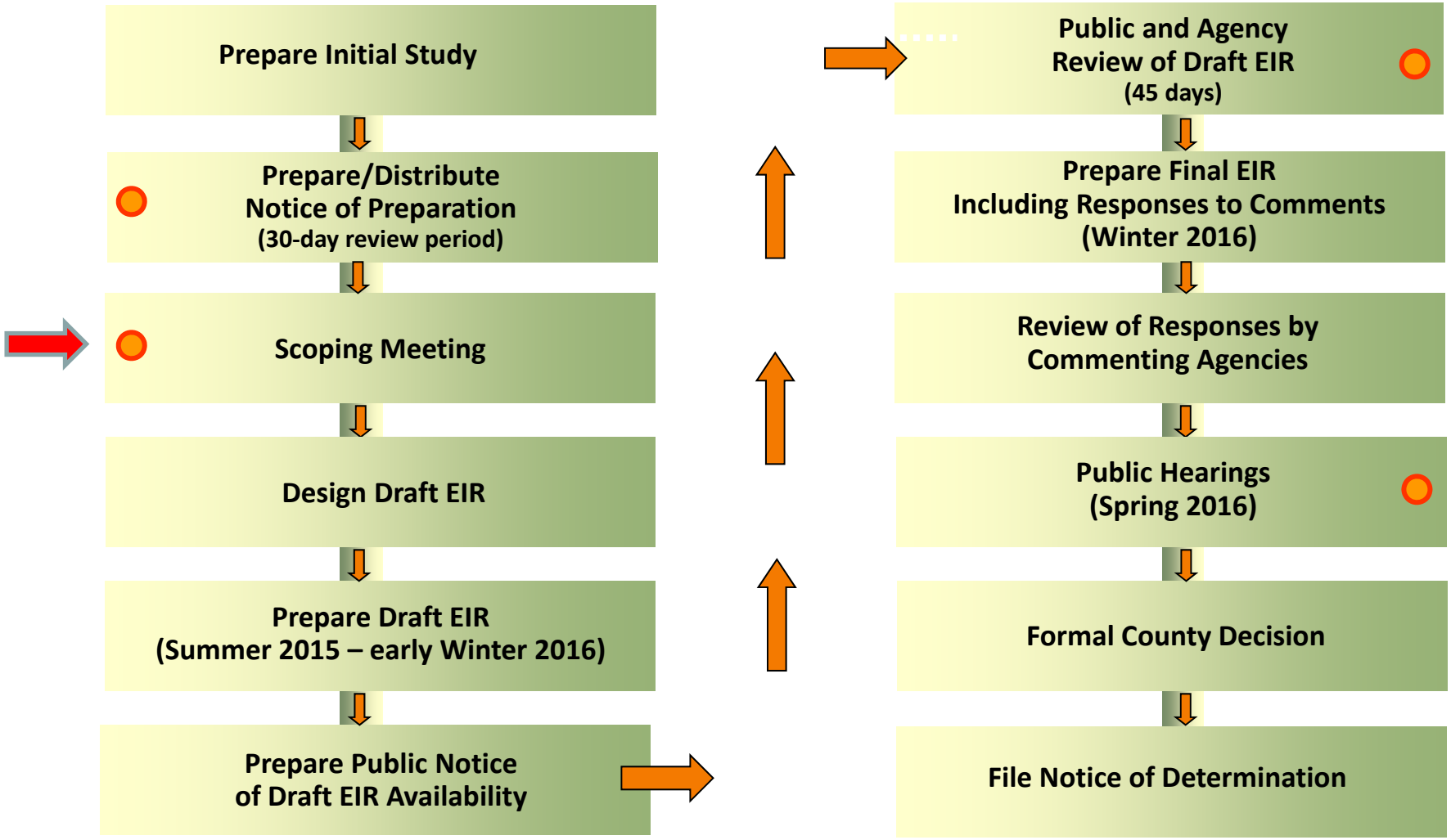
The basic purposes of CEQA are to:

- **Inform** governmental decision-makers and the public about the potential significant environmental effects of a proposed project
- **Identify** ways that environmental impacts can be avoided or reduced
- **Prevent** significant, unavoidable impacts to the environment by requiring changes in projects
- **Disclose** to the public the reasons why an agency approved the project in the manner the agency chose if significant effects are involved

The basic purpose of an EIR is to:

- **Analyze** the significant environmental effects of a proposed project
- **Identify** alternatives
- **Disclose** possible ways to reduce or avoid possible environmental impacts

CEQA EIR Process



= opportunities for Public Input

= current step in CEQA process

EIR Scoping Process

- **PURPOSE OF NOTICE OF PREPARATION**
  - Announce that an Environmental Impact Report (EIR) has been initiated
  - Describe the proposed project
  - Provide preliminary information on potential environmental effects of the project
  - Start public scoping process

- **PURPOSE OF SCOPING PERIOD**
  - Obtain agency and public input on scope and content of the EIR
  - Identify range of alternatives, mitigation measures, and significant effects to be analyzed in the EIR
  - Eliminate issues found not to be significant from the detailed study
  - Identify potential issues early in the environmental review process
  - Bring together and resolve concerns of agencies and the public

Environmental Impact Report

- Topics To Be Addressed in Environmental Impact Report
  - Aesthetics
  - Air Quality
  - Geology/Soils
  - Greenhouse Gas Emissions
  - Hazards/Hazardous Materials
  - Hydrology/Water Quality
  - Land Use and Planning
  - Noise
  - Population/Housing
  - Public Services & Recreation
  - Transportation/Traffic & Parking
  - Utilities/Service Systems

Public Comments

- Scoping Period Comment Period

  June 30, 2015 through **July 30, 2015**

- All comments must be submitted in writing via email or regular mail to:

Clarice Nash, Project Manager

County of Los Angeles Department of Public Works

Program Management Division I

900 S. Fremont Ave.

Alhambra, CA 91803 -1331

cnash@dpw.lacounty.gov

Phone: (626) 300-2363

A-2.D NOP COMMENTS JULY 2015

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

July 8, 2015

Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 S. Fremont Ave.
Alhambra, CA 91803

Notice of Preparation of a CEQA Document for the
Harbor UCLA Medical Center Campus Master Plan Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the CEQA document upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is

recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies.
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov)

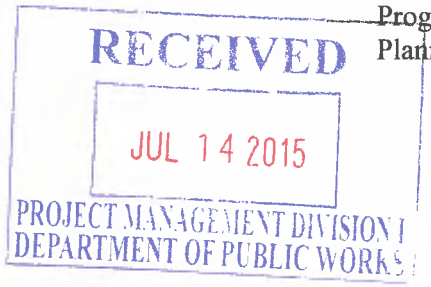
The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at Jwong1@aqmd.gov or call me at (909) 396-3176.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

LAC150701-03
Control Number



DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1337
www.dot.ca.gov

Serious drought.
Help save water!

July 20, 2015

Ms. Clarice Nash
Los Angeles County
Department of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

RE: Harbor UCLA Medical Center Campus
Master Plan SCH #2014111004
Vic. LA-110/PM 7.02, LA-213/PM 7.98
LA-405/PM 10.54
Ref. IGR/CEQA No. 141114AL-NOP
IGR/CEQA No. 150722AL-NOP

Dear Ms. Nash:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. This is an update NOP. The proposed project would expand development on the existing Harbor UCLA Medical Center Campus (Medical Campus) from the current developed total of approximately 1,050,000 square feet to an approximately 2,150,000 square feet of developed floor area. It would involve the demolition of some existing buildings, rehabilitation/re-use of a number of existing buildings, and construction of new buildings.

Caltrans notes that the Lead Agency has increased the development from 1,900,000 square feet from the previous NOP proposal to 2,150,000 square feet. There are no major changes to the Transportation/Traffic section of the document.

Caltrans comments remain the same as comments provided in our letter November 20, 2014 (see attached).

As mentioned during your telephone conversation on July 16, 2015, with Mr. Alan Lin of my staff, Caltrans would like to request a formal scoping meeting to discuss preparation of the traffic impact study, potential traffic direct/cumulative impacts, and possible traffic mitigation for the State facilities.

If you have any questions, please feel free to contact Mr. Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 150722AL.

Sincerely,

DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

Attachment

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
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November 20, 2014

Ms. Clarice Nash
Los Angeles County
Department of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

RE: Harbor UCLA Medical Center Campus
Master Plan SCH #2014111004
Vic. LA-110/PM 7.02, LA-213/PM 7.98
LA-405/PM 10.54
SCH # 2014111004
IGR/CEQA No. 141114AL-NOP

Dear Ms. Nash:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project would expand development on the existing Harbor UCLA Medical Center Campus (Medical Campus) from the current developed total of approximately 1,050,000 square feet to an approximately 1,900,000 square feet of developed floor area. It would involve the demolition of some existing buildings, rehabilitation/re-use of a number of existing buildings, and construction of new buildings.

To assist in evaluating the impacts of this project on State transportation facilities, a traffic study should be prepared prior to preparing the Draft Environmental Impact Report (DEIR). Please refer the project's traffic consultant to Caltrans' traffic study guide Website:

http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Listed below are some elements of what is generally expected in the traffic study:

1. Presentations of assumptions and methods used to develop trip generation, trip distribution, choice of travel mode, and assignments of trips to SR-213 (S. Western Ave.), I-405, and I-110, and all off ramps at the project vicinity including but not limit to Northbound (NB) I-110 at 220th St./Figueroa St. (Exit 7), Southbound (SB) I-110 at W.

Carson St. (Exit 7B), SB I-110 at W 223rd St. (Exit 7A), NB I-405 at E Carson St. (Exit 34), NB I-405 at Wilmington Ave. (Exit 33B), SB I-405 at Wilmington Ave. (Exist 33B). The traffic consultant should work with Caltrans to identify and confirm off ramp study locations prior to the preparation of the traffic study. The traffic study should also analyze the storage for left-turn pocket at on/off-ramps.

Caltrans is concerned with queuing of vehicles using off-ramps that may potentially back into the mainline through lanes. Caltrans is requesting that a queuing analysis for the off-ramp be performed to determine if there is adequate storage space to safely accommodate the project and cumulative project traffic. The off ramps should be analyzed utilizing the Highway Capacity Manual (HCM) 85th Percentile Queuing analysis methodology with the actual signal timings at the ramps' termini.

For a more accurate off-ramp queuing analysis, capacity of the off-ramp should be calculated by the actual length of the off-ramp between the terminuses to the gore point with 30 feet per car. Generally, the demand of the off-ramp should be calculated from the traffic counts, actual signal timing, and the percent of truck assignments to the ramp with a passenger car equivalent factor of 3.0 (worst case scenario).

2. Project travel modeling should be consistent with other regional and local modeling forecasts and travel data. Caltrans uses the indices to verify the results and any differences or inconsistencies must be thoroughly explained. Please submit modeling assumptions for Caltrans review and comment.

3. Trip generation rates for the project should be based on the nationally recognized recommendations contained in "Trip Generation" manual, 9th edition, published by the Institute of Transportation Engineers (ITE).

4. Analysis of ADT, AM and PM peak-hour volumes for both the existing and future conditions in the affected area with and without project. Utilization of transit lines and vehicles, and of all facilities, should be realistically estimated. Future conditions should include build-out of all projects and any plan-horizon years.

5. Include all appropriate traffic volumes. The analysis should include existing traffic, traffic generated by the project, cumulative traffic generated from all specific approved developments in the area, and traffic growth other than from the project and developments.

6. A discussion of mitigation measures appropriate to alleviate anticipated traffic impacts should also be included. Any mitigation involving transit or Transportation Demand Management (TDM) should be justified and the results conservatively estimated.

7. A fair share contribution toward pre-established or future improvements on the State Highway System is considered acceptable mitigation. (Please see Appendix "B" of the Guide for more information).

We look forward to reviewing the traffic study and expect to receive a copy from the State Clearinghouse when the DEIR is completed. Should you wish to expedite the review process or receive early feedback from the Department please feel free to send a copy of the DEIR directly to our office.

Per your phone conversation with Mr. Alan Lin of my staff, we would like to formally invite the Lead Agency and the traffic consultants to a formal scoping meeting to discuss preparation of traffic impact study, potential traffic direct/cumulative impacts, and possible traffic mitigation for the State facilities.

If you have any questions, please feel free to contact Mr. Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 141114AL.

Sincerely,

DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

July 30, 2015

Ref File No.: 3366965

Ms. Clarice Nash, Project Manager
Project Management Division I
County of Los Angeles Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803-1331

Dear Ms. Nash:

Harbor-UCLA Medical Center Campus Master Plan Project

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on July 1, 2015. The proposed development is located within the jurisdictional boundaries of District No. 8. We offer the following comments regarding sewerage service:

1. The proposed project may require an amendment to a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at extension (562) 908-4288, extension 2900, in order to reach a determination on this matter. If this update is necessary, project developers will be required to forward copies of final plans and supporting information for the proposed project to the Districts for review and approval before beginning project construction.

2. The Districts maintain sewerage facilities within the project area that may be affected by the proposed project. Approval to construct improvements within a Districts' sewer easement and/or over or near a Districts' sewer is required before construction may begin. For a copy of the Districts' buildover procedures and requirements go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Buildover Procedures and Requirements link. For more specific information regarding the buildover procedure, please contact Mr. Ed Stewart at (562) 908-4288, extension 2766.

3. The increase in wastewater flow originating from the proposed project will discharge directly to the Districts' Joint Outfall D Unit 8 Trunk Sewer, located in the project site. This 54–inch diameter trunk sewer has a design capacity of 30.6 million gallons per day (mgd) and conveyed a peak flow of 13.9 mgd when last measured in 2012. A 6-inch diameter or smaller direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. An 8-inch diameter or larger direct connection to a Districts' trunk sewer requires submittal of Sewer Plans for review and approval by the Districts. For additional information, please contact the Districts' Engineering Counter at (562) 908-4288, extension 1205.

4. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 263 mgd.

Recycled Paper

5. In order to estimate the volume of wastewater the project will generate, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link for a copy of the Districts' average wastewater generation factors.

6. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727.

7. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Grace Robinson Hyde

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: L. Shadler
E. Stewart
M. Sullivan
J. Ganz

DOC: #3401855.D08

Anne Collins-Doehne

From: Clarice Nash <CNash@dpw.lacounty.gov>
Sent: Wednesday, July 22, 2015 9:32 AM
To: Esther Amaya
Cc: David Crook
Subject: RE: Interested Parties List - Harbor-UCLA Medical Center Master Plan

Will do and thanks for your interest

Clarice Nash
Department of Public Works, Project Management Division I|☎: 626.300.2363|🖷: 626.979.5321|✉ cnash@dpw.lacounty.gov

From: Esther Amaya [mailto:esther.amaya@lacity.org]
Sent: Wednesday, July 22, 2015 9:23 AM
To: Clarice Nash
Subject: Interested Parties List - Harbor-UCLA Medical Center Master Plan

Clarice,

Please add me to the interested parties list for this Project.

Thank you.

--

Esther Amaya

Planning Assistant

Policy Planning Division

Department of City Planning | City of Los Angeles

213.978.1211 | www.planning.lacity.org

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

RECEIVED
JUL 22 2015
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

July 16, 2015

Clarice Nash, Project Manager
Department of Public Works
Project Management Division I
900 South Fremont Avenue
Alhambra, CA 91803

Dear Ms. Nash:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND NOTICE OF PUBLIC SCOPING MEETING, "HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT", ENHANCE THE INTERACTIVE RELATIONSHIP BETWEEN THE CLINICAL, EDUCATIONAL, AND RESEARCH COMPONENTS OF THE MEDICAL CAMPUS AND TO UPDATE IT CONCURRENT WITH GROWTH IN THE REGION, 100 WEST CARSON STREET, LOS ANGELES (FFER 201500123)

The Notice of Preparation of an Environmental Impact Report and Notice of Public Scoping Meeting has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. We will reserve our comments for the Draft EIR.

LAND DEVELOPMENT UNIT:

Specific Land Development Unit requirements for this project will be addressed with submittal of plans. Preliminary access and water system requirements are addressed below and are subject to change.

ACCESS CONDITIONS OF APPROVAL

1. Prior to the issuance of any building permits, the required Fire Apparatus Access Roads and the fire hydrants shall be inspected for compliance by the County of Los Angeles Fire Department.

2. All on-site Fire Department's vehicular access roads shall be labeled as "Private Driveway and Fire Lane" on the site plan along with the widths clearly depicted on the plan. Labeling is necessary to assure the access availability for Fire Department use. The designation allows for appropriate signage prohibiting parking.

2. Fire Department's vehicular access roads must be installed and maintained in a serviceable manner prior to and during the time of construction. Fire Code 501.4.

4. All fire lanes shall be clear of all encroachments and shall be maintained in accordance with the Title 32, County of Los Angeles Fire Code.

5. The edge of the fire access roadway shall be located a minimum of 5 feet from the building or any projections there from.

6. The Fire Apparatus Access Roads and designated fire lanes shall be measured from flow line to flow line.

7. Provide a minimum unobstructed width of 28 feet exclusive of shoulders and an unobstructed vertical clearance "clear to sky" Fire Department's vehicular access to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building when the height of the building above the lowest level of the Fire Department's vehicular access road is more than 30 feet high or the building is more than three stories. The access roadway shall be located a minimum of 15 feet and a maximum of 30 feet from the building and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official. Fire Code 503.1.1 and 503.2.2.

   a. The Fire Apparatus Access Road shall be cross-hatch on the site plan, and the width shall be clearly noted.

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JUL 21 2015
PROJECTION SUBDIVISION
DEPARTMENT OF PUBLIC WORKS

8. If the Fire Apparatus Access Road is separated by island, provide a minimum unobstructed width of 20 feet exclusive of shoulders and an unobstructed vertical clearance "clear to sky" Fire Department's vehicular access to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building.
Fire Code 503.1.1 and 503.2.2

   a. The Fire Apparatus Access Road shall be cross-hatch on the site plan and the width shall be clearly noted.

9. The dimensions of the approved Fire Apparatus Access Roads shall be maintained as originally approved by the fire code official. Fire Code 503.2.2.1.

10. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround. Fire Code 503.2.5.

   a. Include: The dimensions of the turnaround with the orientation of the turnaround shall be properly placed in the direction of travel of the access roadway.

11. Fire Department's vehicular access roads shall be provided with a 32 foot centerline turning radius. Fire Code 503.2.4.

   a. Indicate the centerline, inside, and outside turning radii for each change in direction on the site plan

12. Fire Apparatus Access Roads shall be designed and maintained to support the imposed load of fire apparatus weighing 75,000, and shall be surfaced so as to provide all-weather driving capabilities. Fire apparatus access roads having a grade of 10 percent or greater shall have a paved or concrete surface.
Fire Code 503.2.3.

13. Provide approved signs or other approved notices or markings that include the words "NO PARKING - FIRE LANE". Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. Signs shall be provided for fire apparatus access roads to clearly indicate the entrance to such road or prohibit the obstruction thereof and at intervals as required by the Fire Inspector. Fire Code 503.3.

14. A minimum 5 foot wide approved firefighter access walkway leading from the fire department access road to all required openings in the building's exterior walls shall be provided for firefighting and rescue purposes. Fire Code 504.1.

15. Clearly identify firefighter walkway access routes on the site plan. Indicate the slope and walking surface material. Clearly show the required width.

16. Fire Apparatus Access Roads shall not be obstructed in any manner including by the parking of vehicles or the use of traffic calming devices including but not limited to, speed bumps, or speed humps. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times. Fire Code 503.4.

17. Traffic Calming Devices including but not limited to, speed bumps and speed humps shall be prohibited unless approved by the fire code official. Fire Code 503.4.1.

18. Security barriers, visual screen barriers, or other obstructions shall not be installed on the roof of any building in such a manner as to obstruct firefighter access or egress in the event of fire or other emergency. Parapets shall not exceed 48 inches from the top of the parapet to the roof surface on more than two sides. Fire Code 504.5.

    a. Clearly indicate the height of all parapets in a section view.

19. Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. The numbers shall contrast with their background, be Arabic numerals or alphabet letters and be a minimum of 4 inches high with a minimum stroke width of 0.5 inch. Fire Code 505.1.

20. Multiple buildings having entrances to individual units not visible from the street or road shall have unit numbers displayed in groups for all units within each structure. Such numbers may be grouped on the wall of the structure or mounted on a post independent of the structure and shall be positioned to be plainly visible from the street or road as required by Fire Code 505.3 and in accordance with Fire Code 505.1.

21. Fire Apparatus Access Roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an approved

size, weather resistant, and be maintained until replaced by permanent signs. Fire Code 505.2

22. An approved key box, listed in accordance with UL 1037 shall be provided as required by Fire Code 506. The location of each key box shall be determined by the Fire Inspector.

23. Gates:

    a. When security gates are provided, maintain a minimum access width of 28 feet. The security gate shall be provided with an approved means of emergency operation and shall be maintained operational at all times and replaced or repaired when defective. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F220. Gates shall be of the swinging or sliding type. Construction of gates shall be of materials that allow manual operation by one person. Fire Code 503.6.

    b. For any proposed gates, provide gate detail prior to clearance for public hearing. The gated entrance design with a single access point (ingress and egress) shall provide for a minimum width of 28 feet, clear-to-sky, with all gate hardware is clear of the access way.

    c. Gated entrance design with separate access gates for ingress and egress shall provide minimum width of 20 feet, clear-to-sky, for each side.

    d. All locking devices shall comply with the County of Los Angeles Fire Department Regulation 5, Compliance for Installation of Emergency Access Devices.

WATER SYSTEM CONDITIONS OF APPROVAL

1. All fire hydrants shall measure 6"x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal and shall be installed in accordance with the County of Los Angeles Fire Department Regulation 8.

2. All required PUBLIC fire hydrants shall be installed, tested, and accepted prior to beginning construction. Fire Code 501.4.

3. All private on-site fire hydrants shall be installed, tested, and approved prior to building occupancy. Fire Code 901.5.1.

    a. Plans showing underground piping for private on-site fire hydrants shall be submitted to the Sprinkler Plan Check Unit for review and approval prior to installation. Fire Code 901.2 and County of Los Angeles Fire Department Regulation 7.

4. All on-site fire hydrants shall be installed a minimum of 25 feet from a structure or protected by a two (2) hour rated firewall. Fire Code Appendix C106.

5. Fire Flow:

    a. The required fire flow for the public fire hydrants for this project is 8000 gpm at 20 psi residual pressure for 4 hours. Three (3) public fire hydrants flowing simultaneously may be used to achieve the required fire flow. Fire Code 507.3 and Appendix B105.1.

    b. The required fire flow for the on-site private fire hydrants for this project is 8000 gpm at 20 psi residual pressure for 4 hours. Three (3) on-site fire hydrants flowing simultaneously may be used to achieve the required fire flow.

    c. The following information is required to determine the exact fire flow:
        1) The square footage of each proposed building;
        2) The type of construction of each proposed building;
        3) Confirmation of the installation of automatic fire sprinkler system conforming to NFPA 13 Standards.

6. An approved automatic fire sprinkler system is required for the proposed buildings within this development. Submit design plans to the Fire Department Sprinkler Plan Check Unit for review and approval prior to installation.

7. All existing public and on-site fire locations shall be noted on the site plan.

For any questions regarding the report, please contact FPEA Wally Collins at (323) 890-4243 or at Wally.Collins@fire.lacounty.gov.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department has no comment or objection to the project at this time.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

KEVIN T. JOHNSON, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

KTJ:ad

50 YEARS
SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

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Alan Wapner, San Bernardino Associated Governments

July 29, 2015

Ms. Clarice Nash, Project Manager
County of Los Angeles Department of Public Works
Project Management Division I
900 South Fremont Avenue
Alhambra, California 91803
Phone: (626) 300-2363
E-mail: cnash@dpw.lacounty.gov

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Harbor-UCLA Medical Center Campus Master Plan Project [SCAG NO. IGR8252]

Dear Ms. Nash,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Harbor-UCLA Center Campus Master Plan Project ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Harbor-UCLA Medical Center Campus Master Plan Project. The proposed project would incorporate the expansion of current services, the upgrading of aging facilities and buildings, redesign of the Medical Campus to improve access and internal circulation, and provide a cohesion design for staff, patients, and visitors to the Medical Campus.

When available, please send environmental documentation to SCAG's *office in Los Angeles or by email to sunl@scag.ca.gov* providing, at a minimum, the full public comment period for review. If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Lijin Sun, Esq., Senior Regional Planner, at (213) 236-1882 or sunl@scag.ca.gov. Thank you.

Sincerely,

Ping Chang
Ping Chang
Program Manager II, Land Use and Environmental Planning

[1] SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN [SCAG NO. IGR8252]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

2012 RTP/SCS GOALS

The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012. The 2012 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see http://rtpscs.scag.ca.gov). The goals included in the 2012 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012 RTP/SCS are the following:

SCAG 2012 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and non-motorized transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012 RTP/SCS GOALS		
	Goal	Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

RTP/SCS STRATEGIES

To achieve the goals of the 2012 RTP/SCS, a wide range of strategies are included in SCS Chapter (starting on page 152) of the RTP/SCS focusing on four key areas: 1) Land Use Actions and Strategies; 2) Transportation Network Actions and Strategies; 3) Transportation Demand Management (TDM) Actions and Strategies and; 4) Transportation System Management (TSM) Actions and Strategies. If applicable to the proposed project, please refer to these strategies as guidance for considering the proposed project within the context of regional goals and policies. To access a listing of the strategies, please visit http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf (Tables 4.3 – 4.7, beginning on page 152).

REGIONAL GROWTH FORECASTS

At the time of this letter, the most recently adopted SCAG forecasts consists of the 2020 and 2035 RTP/SCS population, household and employment forecasts. To view them, please visit http://scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf. The forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts		Adopted County of Los Angeles Forecasts	
	Year 2020	**Year 2035**	**Year 2020**	**Year 2035**
Population	19,663,000	22,091,000	10,404,000	11,353,000
Households	6,458,000	7,325,000	3,513,000	3,852,000
Employment	8,414,000	9,441,000	4,558,000	4,827,000

MITIGATION

SCAG staff recommends that you review the SCAG 2012 RTP/SCS Final Program EIR Mitigation Measures for guidance, as appropriate. See Chapter 6 (beginning on page 143) at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf

As referenced in Chapter 6, a comprehensive list of example mitigation measures that may be considered as appropriate is included in Appendix G: *Examples of Measures that Could Reduce Impacts from Planning, Development and Transportation Projects.* Appendix G can be accessed at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/2012fPEIR_AppendixG_ExampleMeasures.pdf

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

Notice of Preparation

June 30, 2015

To: Reviewing Agencies

Re: Harbor UCLA Medical Center Campus Master Plan
SCH# 2014111004

Attached for your review and comment is the Notice of Preparation (NOP) for the Harbor UCLA Medical Center Campus Master Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Clarice Nash
Los Angeles County
Dept. of Public Works
900 S. Fremont Avenue
Alhambra, CA 91803

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

RECEIVED
JUL 13 2015
PROJECT MANAGEMENT DIVISION I
DEPARTMENT OF PUBLIC WORKS

Document Details Report
State Clearinghouse Data Base

SCH# 2014111004
Project Title Harbor UCLA Medical Center Campus Master Plan
Lead Agency Los Angeles County

Type NOP Notice of Preparation

Description The proposed Harbor UCLA Medical Center Campus Master Plan Project involves the multi-phased development of hospital, outpatient, research, and support facilities through the year 2030. The proposed project would expand development on the existing Harbor UCLA Medical Center Campus (Medical Campus) from the current developed total of ~1,050,000 sf to a ~2,150,000 sf of developed floor area, which would involve the demolition of some existing buildings, rehabilitation/re-use of a number of existing buildings, and construction of new buildings.

Lead Agency Contact

Name Clarice Nash
Agency Los Angeles County
Phone 626 300-2363 **Fax**
email
Address Dept. of Public Works
900 S. Fremont Avenue
City Alhambra **State** CA **Zip** 91803

Project Location

County Los Angeles
City Torrance
Region
Cross Streets Carson Street at S. Vermont Avenue
Lat / Long
Parcel No. 7344-001-901
Township **Range** **Section** **Base**

Proximity to:

Highways I-405, I-110
Airports
Railways UPRR, BNSF
Waterways Dominguez Channel
Schools Several
Land Use GP: Public and Semi-Public
Z: C-3 Unlimited Commercial/TOD

Project Issues Air Quality; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Parks and Recreation; Resources, Recycling and Recovery; Department of Water Resources; Department of Fish and Wildlife, Region 5; Office of Emergency Services, California; Native American Heritage Commission; Public Utilities Commission; California Highway Patrol; Caltrans, District 7; Air Resources Board; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4; Statewide Health Planning

Date Received 06/30/2015 **Start of Review** 06/30/2015 **End of Review** 07/29/2015

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: LOS ANGELES **SCH#** 2014111009

Resources Agency

Resources Agency
Nadell Gayou

- ☐ **Dept. of Boating & Waterways**
  Denise Peterson
- ☐ **California Coastal Commission**
  Elizabeth A. Fuchs
- ☐ **Colorado River Board**
  Lisa Johansen
- ☐ **Dept. of Conservation**
  Elizabeth Carpenter
- ☐ **California Energy Commission**
  Eric Knight
- ☐ **Cal Fire**
  Dan Foster
- ☐ **Central Valley Flood Protection Board**
  James Herota
- ☐ **Office of Historic Preservation**
  Ron Parsons

Dept of Parks & Recreation
Environmental Stewardship Section

- ☒ **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- ☒ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- ☐ **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Wildlife Region 1**
  Curt Babcock
- ☐ **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- ☐ **Fish & Wildlife Region 2**
  Jeff Drongesen
- ☐ **Fish & Wildlife Region 3**
  Charles Armor
- ☐ **Fish & Wildlife Region 4**
  Julie Vance
- ☒ **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- ☐ **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- ☐ **Depart. of General Services**
  Public School Construction
- ☐ **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- ☐ **Delta Stewardship Council**
  Kevan Samsam
- ☐ **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Michael Machado
- ☒ **OES (Office of Emergency Services)**
  Marcia Scully
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☒ **Public Utilities Commission**
  Supervisor
- ☐ **Santa Monica Bay Restoration**
  Guangyu Wang
- ☐ **State Lands Commission**
  Jennifer Deleong
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- ☐ **Caltrans - Division of Aeronautics**
  Philip Crimmins
- ☐ **Caltrans – Planning HQ LD-IGR**
  Terri Pencovic
- ☒ **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ☐ **Caltrans, District 3**
  Eric Federicks – South
  Susan Zanchi - North
- ☐ **Caltrans, District 4**
  Patricia Maurice
- ☐ **Caltrans, District 5**
  Larry Newland
- ☐ **Caltrans, District 6**
  Michael Navarro
- ☒ **Caltrans, District 7**
  Dianna Watson
- ☐ **Caltrans, District 8**
  Mark Roberts
- ☐ **Caltrans, District 9**
  Gayle Rosander
- ☐ **Caltrans, District 10**
  Tom Dumas
- ☐ **Caltrans, District 11**
  Jacob Armstrong
- ☐ **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- ■ All Other Projects
  Cathi Slaminski
  - ☐ Transportation Projects
    Nesamani Kalandiyur
  - ☐ Industrial/Energy Projects
    Mike Tollstrup
- ☐ **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- ☐ **State Water Resources Control Board**
  Karen Larsen
  Division of Drinking Water
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ☐ **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- ☒ **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ☐ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☒ **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- ☐ **RWQCB 5S**
  Central Valley Region (5)
  - ☐ **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- ☐ **RWQCB 6**
  Lahontan Region (6)
  - ☐ **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- ☐ **RWQCB 7**
  Colorado River Basin Region (7)
- ☐ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

☒ **Other** OSHPD

☐ _____
Conservancy

Last Updated 6/23/2015

Appendix B

Air Quality Data Worksheets

Harbor-UCLA Medical Center
Draft EIR
Appendix B, Air Quality Data Worksheets

B. 1 Construction Emission Model Inputs

B. 2 Construction Emissions – CalEEMod Output (Summer and Winter)

- Phase 1 Construction Emissions
- Phase 2 Construction Emissions
- Phase 3 Construction Emissions
- Phase 4 Construction Emissions
- Phase 5 Construction Emissions
- Phase 6 Construction Emissions
- Phase C Construction Emissions
- Phase M Construction Emissions
- LA Biomed Construction Emissions

B. 3 Construction Emissions – Localized Significance Threshold Analysis

B. 4 Construction Health Risk Assessment Calculations

B. 5 Operational Emissions – CalEEMod Output (Summer and Winter)

- Existing Operations
- Interim Operations
- Full Build-Out Operations

B. 6 South Coast Air Quality Management District Rule 403

Appendix B. 1

Construction Emission Model Inputs

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units		
Building 1	Hospital	55,600	sqft	
Building 2	Hospital	55,600	sqft	
Surface Parking	Unenclosed Parking	41,650	sqft	128.00 Spaces
—				

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Demolish Buildings: N6, N7, N8, N9, N11, N12 (28,001) SF	Demolition	7/6/2016	9/15/2016	52	Concrete/Industrial Saws	2
					Excavators	1
					Tractors/Loaders/Backhoes	1
					Water Trucks	1
Building pad and underground utilities	Grading	9/16/2016	11/29/2016	53	Excavators	1
	4 vendor trips/day				Rubber Tired Loaders	1
					Water Trucks	1
					Tractors/Loaders/Backhoes	3
					Graders	1
Surface Parking	Paving	11/30/2016	3/30/2017	87	Tractors/Loaders/Backhoes	4
					Cement and Motor Mixers	2
Two Modular Buildings	Building Construction	4/1/2017	8/11/2017	95	Tractors/Loaders/Backhoes	1
					Forklifts	1
					Welder	1
					Water Trucks	1
					Crane	2
					Air Compressors	1
	Paving	8/12/2017	11/10/2017	65	Tractors/Loaders/Backhoes	1
					Paving Equipment	2
					Trencher	1

Demolition (CY)

Soft Demo	3,941	CY
Hard Demo	3,928	CY
Dirt Export	8,744	CY
Dirt Import	14,574	CY

Architectural Coating

CalEEMod assumes the total surface for architectural coating equals:

Nonresidential Coating Area	2	times the square footage
	75%	interior
	25%	exterior
Parking Lot Coating Area	6%	of the square foot Interior

Source: SCAQMD, CEQA Air Quality Handbook, (1993) A9-124.

Non-Residential Land Uses				
Land Use		**Area (sf)**	**Interior (sf)**	**Exterior (sf)**
	Surface Parking	41,650	2,499	10,412.50
	Total Non-Residential		**2,499**	**10,413**

ENTER VALUES ABOVE INTO CALEEMOD

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units
Central Plant	Unrefrigerated Warehouse	58,000 sqft
SCE Service Yard	General Industrial	6,200 sqft
Central IT Building	General Office	29,200 sqft
Surface Parking	—	6,000 sqft 24 spaces
Utility Tunnel	General Industrial	54,720 Sqft

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Utility Tunnel	Grading	10/1/2018	3/30/2021	652	Concrete/Industrial Saws	1
					Excavators	1
					Rubber Tired Loaders	1
					Water Trucks	2
					Tractors/Loaders/Backhoes	5
					Graders	1
					Forklifts	1
					Air Compressors	1
					Welder	1
					Crane	1
					Rubber Tired Dozers	1
Demolish Buildings F-10, M01, T-1	Demolition	8/30/2018	3/12/2019	139	Excavators	1
					Concrete/Industrial Saws	1
					Rubber Tired Loaders	1
					Graders	1
					Water Trucks	2
					Tractors/Loaders/Backhoes	4
Central Plant ,Central IT building, and Surface Parking	Building Construction	8/30/2018	3/28/2023	1194	Forklifts	1
					Crane	1
					Tractors/Loaders/Backhoes	3
					Welder	1
					Graders	1
					Air Compressors	1
	Architectural Coatings	10/1/2022	3/28/2023	127	Air Compressors	1
	Paving	12/1/2022	3/28/2023	84	Water Trucks	1
					Tractors/Loaders/Backhoes	2
					Paving Equipment	1
					Rollers	1
					Trencher	1
SCE Service Yard	Building Construction	8/23/2019	2/19/2020	129	Concrete/Industrial Saws	1
					Water Trucks	1
					Tractors/Loaders/Backhoes	3
					Graders	1
					Welder	1
					Cement and Mortar Mixers	1
	Paving	1/1/2020	2/19/2020	36	Cement and Mortar Mixers	1
					Trencher	1
					Paving Equipment	1
					Rollers	1

Demolition (CY)

Soft Demo	3,756	CY
Hard Demo	2,253	CY
Dirt Export	28,027	CY
Dirt Import	10,851	CY

Architectural Coating

Non-Residential Land Uses

Land Use		Area (sf)	Interior (sf)	Exterior (sf)
	Central Plant	58,000	87000	29000
	SCE Service Yard	6,200	9300	3100
	Central IT Building	29,200	43800	14600
	Surface Parking	6,000	360	1,500.00
	Utility Tunnel	54,720	82080	27360
	Total Non-Residential		222,540	75,560

ENTER VALUES ABOVE INTO CALEEMOD

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units			
Public Parking Structure	Unnclosed Parking with elevator —	300,700	sqft	809.00	Spaces

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Demolish Buildings: B-2. B-2 West, B-3, B-3 Annex, B-4, B-4 Annex, B-1, C-1, C-1 Annex, C-2, C-2 Annex, C-3, N-14, N-16, N-17, N-18, N-20, N-21)	Demolition	12/13/2017	5/30/2018	121	Concrete/Industrial Saws	2
					Excavators	1
					Rubber Tired Loaders	1
					Tractors/Loaders/Backhoes	3
					Rubber Tired Dozers	1
					Water Trucks	1
Building pad and underground utilities	Grading	6/1/2018	8/29/2018	64	Tractors/Loaders/Backhoes	3
					Rubber Tired Dozers	1
					Water Trucks	1
					Graders	1
Public Parking Structure	Building Construction (2)	2/5/2020	1/19/2021	250	Forklift	1
					Welder	1
					Crane	1
	Architectural Coatings	11/1/2020	1/19/2021	57	Air Compressors	1
	Paving	11/1/2020	1/19/2021	57	Tractors/Loaders/Backhoes	1
					Cement and Motar Mixers	1
					Roller	1
					Paving Equipment	1
					Trencher	1

Demolition (CY)

Soft Demo	11,008	CY
Hard Demo	9,206	CY
Dirt Export	23,027	CY
Dirt Import	37,067	CY

Architectural Coating

Non-Residential Land Uses				
Land Use		**Area (sf)**	**Interior (sf)**	**Exterior (sf)**
	Public Parking Structure	300,700	18,042	75,175
	Total Non-Residential		**18,042**	**75,175**

ENTER VALUES ABOVE INTO CALEEMOD

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units
Outpatient Building A	Hospital	130,000 sqft
Mental Health Building	Hospital	97,500 sqft
Bridge between Out Patient A & Mental Health	Hospital	2,400 sqft
	—	

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
	Grading	1/20/2021	4/19/2021	64	Rubber Tired Loaders	1
Outpatian Building A					Tractors/Loaders/Backhoes	1
Mental Health Building					Water Trucks	1
Bridge between Out Patient A & Mental Health	Building Construction	4/20/2021	8/30/2021	95	Forklift	1
					Tractors/Loaders/Backhoes	3
					Air Compressors	1
					Crane	2
	Building Construction (2)	9/1/2021	1/30/2022	108	Tractors/Loaders/Backhoes	2
					Air Compressors	1
					Crane	1
	Building Construction (3)	2/1/2022	6/30/2022	108	Forklift	1
					Welder	1
					Tractors/Loaders/Backhoes	3
					Air Compressors	1
					Crane	1
	Building Construction (4)	3/1/2023	12/7/2023	202	Forklift	2
					Welder	2
					Tractors/Loaders/Backhoes	2
					Air Compressors	1
					Water Trucks	1
					Crane	1
	Architectural Coatings	7/1/2023	12/7/2023	114	Air Compressors	1
	Paving	8/1/2023	12/7/2023	93	Tractors/Loaders/Backhoes	1
					Cement and Motar Mixers	1
					Roller	1
					Paving Equipment	1
					Trencher	1

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units		
Staff Parking Structure	Unenclosed Parking with elevator	250,580	sqft	580.00 Spaces
Temporary Helipad	Other Asphalt Surface	10,000	sqft	
	—			

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Demolish Buildings: D-2 Annex, D-2.5, D-3, D-3.5, D-4, D-4.5, D-5, d-5 Annex, D-5.5, D-6, D-6 Ramp Office, D-9, F-2, F-3, F-3.5, F-4, F-4.5 Trailer, F-5, F-5 Trailer, F-6, F-7, F-8, F-9, F-9 Annex, H1	Demolition	1/12/2021	11/16/2021	221	Concrete/Industrial Saws	2
					Excavators	1
					Rubber Tired Loaders	1
					Tractors/Loaders/Backhoes	3
					Rubber Tired Dozers	1
					Water Trucks	1
Building pad and underground utilities	Grading	6/1/2021	11/16/2021	121	Tractors/Loaders/Backhoes	2
					Rubber Tired Dozers	1
					Water Trucks	1
					Graders	1
Staff Parking Structure Temporary Helipad	Building Construction	11/17/2021	3/28/2023	355	Forklift	1
					Tractors/Loaders/Backhoes	2
					Cement and Motar Mixers	1
					Welder	1
					Crane	1
	Architectural Coatings	1/1/2023	3/28/2023	62	Air Compressors	1
	Paving	1/1/2023	3/28/2023	62	Tractors/Loaders/Backhoes	1
					Cement and Motar Mixers	1
					Roller	1
					Paving Equipment	1
					Trencher	1

Demolition (CY)

Soft Demo	12,970	CY
Hard Demo	10,186	CY
Dirt Export	18,052	CY
Dirt Import	30,126	CY

Architectural Coating

Non-Residential Land Uses				
Land Use		**Area (sf)**	**Interior (sf)**	**Exterior (sf)**
	Staff Parking Structure	250,580	15,034.80	3,758.70
	Temporary Helipad	10,000	600	2,500
	Total Non-Residential		**15,635**	**6,259**

ENTER VALUES ABOVE INTO CALEEMOD

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units
Patient Bed tower	Hospital	450,000 sqft
Diagnostic and Treatment Center	Hospital	505,100 sqft
—		

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Patient Bed tower	**Grading**	**3/29/2023**	**10/30/2023**	154	Tractors/Loaders/Backhoes	3
Diagnostic and Treatment Center					Rubber Tired Dozers	1
					Water Trucks	1
					Graders	1
	Building Construction (2)	11/1/2023	11/30/2024	283	Rubber Tired Loaders	1
					Tractors/Loaders/Backhoes	8
					Forklift	2
					Welder	3
					Air Compressors	2
					Crane	2
	Building Construction (3)	12/1/2024	1/30/2026	305	Tractors/Loaders/Backhoes	2
					Welder	2
					Air Compressors	1
					Crane	1
	Architectural Coatings	7/1/2025	1/30/2026	154	Air Compressors	1
	Paving	1/1/2027	8/16/2027	162	Tractors/Loaders/Backhoes	2
					Forklift	1
					Welder	1
					Cement and Motar Mixers	1
					Roller	1
					Paving Equipment	1
					Trencher	2

Demolition (CY)

Dirt Export	33,675 CY
Dirt Import	38,726 CY

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units			
Renovate Existing Hospital Tower	Hospital	234,000	sqft		
Public Parking Structure	Unenclosed Parking with Elevator	551,150	sqft	1,220.00	Spaces
Two Surface Parking Lots	Surface Parking Lot	104,005		570.00	Spaces
Retail Building	Retail	35,000	sqft		
	—				

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Renovate Existing Hospital Tower	Grading/Excavation	8/5/2024	4/2/2025	173	Rubber Tired Loaders	1
Public Parking Structure					Tractors/Loaders/Backhoes	3
Two Surface Parking Lots					Excavator	1
Retail Building					Air Compressors	2
					Water Trucks	2
	Building Construction	8/5/2024	4/2/2025	173	Tractors/Loaders/Backhoes	4
					Forklift	1
					Crane	2
					Welder	1
	Building Construction (2)	4/3/2025	8/30/2025	107	Tractors/Loaders/Backhoes	3
					Water Trucks	1
	Building Construction (3)	9/1/2025	5/30/2027	455	Tractors/Loaders/Backhoes	2
					Forklift	1
					Water Trucks	1
	Building Construction (4)	6/1/2028	5/30/2029	260	Rubber Tired Loaders	2
					Tractors/Loaders/Backhoes	3
					Welder	1
					Crane	1
					Forklift	1
	Building Construction (5)	6/1/2029	9/30/2029	86	Tractors/Loaders/Backhoes	1
					Forklift	1
					Air Compressors	1
					Crane	2
					Water Trucks	2
	Building Construction (6)	10/1/2029	4/22/2030	146	Tractors/Loaders/Backhoes	1
					Forklift	1
					Crane	1
	Architectural Coatings	4/1/2029	4/22/2030	276	Air Compressors	1
	Paving	1/1/2030	4/22/2030	80	Tractors/Loaders/Backhoes	3
					Cement and Motar Mixers	1
					Roller	1
					Paving Equipment	1
					Trencher	2

Demolition (CY)

Soft Demo	14,277	CY
Hard Demo	161,839	CY
Dirt Export	10,675	CY
Dirt Import	73,803	CY

Architectural Coating

Non-Residential Land Uses				
Land Use		**Area (sf)**	**Interior (sf)**	**Exterior (sf)**
	Renovate Existing Hospital Tower	234,000	351,000	117,000
	Public Parking Structure	551,150	33,069	137,788
	Two Surface Parking Lots	104,005	6,240	26,001
	Retail Building	35,000	52,500	17,500
	Total Non-Residential		**442,809**	**298,289**

ENTER VALUES ABOVE INTO CALEEMOD

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units		
Bioscience Building	Lab/ Medical Office	250,000	sqft	
Parking Structure	Unenclosed Parking with Elevator	400,000	sqft	1000 Spaces
Outpatient Building B	Medical Office	97,000	sqft	
Carson St. Access Road Associated Sitework	Other Asphalt Surface	75,000	sqft	
Landscape and Hardscape	City Park	22	Acre	
Perimeter Street Improvements	Other Asphalt Surface	13,500	sqft	

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
Demolish Buildings: Hazmat Storage, Paint Shop, N22, N24, N25, N26, N26A- Trailer, N26B-Trailer, N26C, N28, N31, N32, N33, Buildings 14- 16-18, Imaging Center, Professional Building	Demolition	11/17/2021	3/15/2022	85	Concrete/Industrial Saws	2
					Excavators	1
					Rubber Tired Loaders	1
					Tractors/Loaders/Backhoes	3
					Rubber Tired Dozers	1
					Water Trucks	2
Carson Street access road associated sitework Perimeter street improvements (Carson Street) Landscape and hardscape (Westpark) Phase M Site (landscape and hardscape) Research Building	Grading	3/16/2022	10/15/2024	675	Rubber Tired Loaders	1
					Grader	1
					Tractors/Loaders/Backhoes	3
					Air Compressors	1
					Water Trucks	1
	Building Construction	12/2/2022	5/8/2024	374	Forklift	1
					Tractors/Loaders/Backhoes	3
					Air Compressors	1
					Welder	1
					Crane	1
	Architectural Coatings	1/1/2024	5/8/2024	93	Air Compressors	1
	Paving	1/1/2024	5/8/2024	93	Tractors/Loaders/Backhoes	2
					Roller	1
					Paving Equipment	1
					Trencher	1

Demolition (CY)

Soft Demo	33,246	CY
Hard Demo	28,128	CY
Dirt Export	31,953	CY
Dirt Import	69,094	CY

Architectural Coating

Non-Residential Land Uses				
Land Use		**Area (sf)**	**Interior (sf)**	**Exterior (sf)**
	Bioscience Building	250,000	375,000	125,000
	Parking Structure	400,000	24,000	100,000
	Outpatient Building B	97,000	145,500	48,500
	Total Non-Residential		**544,500**	**273,500**

ENTER VALUES ABOVE INTO CALEEMOD

Harbor-UCLA Master Plan
Air Quality and Greenhouse Gas Assessment

Project Information

Land Use	CalEEMod Land Use Type	Units
LA Biomed	Lab/Medical Office —	225,000 sqft

Source: Harbor-UCLA, 2015; PCR Services Corporation, 2015

Construction Schedule and California Emissions Estimator Model (CalEEMod) Inputs

Activity	Caleemod Phase	Start Date	End Date	No. Days	Equipment	Quantity
	Grading	1/1/2022	4/19/2022	77	Rubber Tired Loaders	1
					Tractors/Loaders/Backhoes	1
					Water Trucks	1
	Building Construction (4)	4/20/2022	12/30/2022	183	Forklift	2
					Welder	2
					Tractors/Loaders/Backhoes	2
					Air Compressors	1
					Water Trucks	1
					Crane	1
	Building Construction (4)	1/1/2029	12/30/2029	260	Forklift	2
					Welder	2
					Tractors/Loaders/Backhoes	2
					Air Compressors	1
					Water Trucks	1
					Crane	1
	Architectural Coatings	7/1/2029	12/30/2029	130	Air Compressors	1
	Paving	8/1/2029	12/30/2029	108	Tractors/Loaders/Backhoes	1
					Cement and Motar Mixers	1
					Roller	1
					Paving Equipment	1
					Trencher	1

Appendix B. 2
Construction Emissions – CalEEMod Output (Summer and Winter)

- Phase 1 Construction Emissions
- Phase 2 Construction Emissions
- Phase 3 Construction Emissions
- Phase 4 Construction Emissions
- Phase 5 Construction Emissions
- Phase 6 Construction Emissions
- LA Biomed Construction Emissions

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase 1 Construction Emissions

Harbor UCLA Master Plan- Phase 1

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	809.00	Space	7.28	300,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Architectural Coating - Paved Coating Exterior- 6% of the square footage

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	57.00
tblConstructionPhase	NumDays	230.00	250.00

tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	20.00	57.00
tblConstructionPhase	PhaseEndDate	4/8/2021	1/19/2021
tblConstructionPhase	PhaseEndDate	8/14/2019	1/19/2021
tblConstructionPhase	PhaseEndDate	8/28/2018	8/29/2018
tblConstructionPhase	PhaseEndDate	4/8/2021	1/19/2021
tblConstructionPhase	PhaseStartDate	1/20/2021	11/1/2020
tblConstructionPhase	PhaseStartDate	8/30/2018	2/5/2020
tblConstructionPhase	PhaseStartDate	5/31/2018	6/1/2018
tblConstructionPhase	PhaseStartDate	1/20/2021	11/1/2020
tblGrading	MaterialExported	0.00	28,851.00
tblGrading	MaterialImported	0.00	37,067.00
tblLandUse	LandUseSquareFeet	323,600.00	300,700.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	358.00	3,369.00
tblTripsAndVMT	HaulingTripNumber	8,240.00	10,986.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	128.00
tblTripsAndVMT	WorkerTripNumber	13.00	499.00

tblTripsAndVMT	WorkerTripNumber	126.00	516.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	25.00	68.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.0800	48.6449	42.6878	0.0811	5.3766	2.4373	7.8139	1.3023	2.2914	3.5937	0.0000	7,746.3659	7,746.3659	1.1203	0.0000	7,769.8917
2018	7.1405	70.6425	78.7154	0.2219	15.2502	2.2845	17.5347	5.6870	2.1019	7.7890	0.0000	20,353.3475	20,353.3475	1.1178	0.0000	20,376.8213
2020	126.6190	24.8548	48.8569	0.1246	7.2812	1.2657	8.5469	1.9370	1.1818	3.1188	0.0000	9,780.7220	9,780.7220	0.9699	0.0000	9,801.0893
2021	126.3051	22.6183	46.8136	0.1248	7.2812	1.1194	8.4007	1.9370	1.0449	2.9819	0.0000	9,683.0645	9,683.0645	0.9515	0.0000	9,703.0462
Total	**265.1445**	**166.7605**	**217.0738**	**0.5524**	**35.1892**	**7.1069**	**42.2962**	**10.8634**	**6.6200**	**17.4834**	**0.0000**	**47,563.4999**	**47,563.4999**	**4.1595**	**0.0000**	**47,650.8485**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.4324	9.8883	38.3539	0.0811	4.9888	0.1873	5.1761	1.2436	0.1775	1.4211	0.0000	7,746.3659	7,746.3659	1.1203	0.0000	7,769.8917
2018	4.7315	44.0352	73.7146	0.2219	11.1822	0.7580	11.9402	3.6221	0.7007	4.3228	0.0000	20,353.3475	20,353.3475	1.1178	0.0000	20,376.8213
2020	125.0634	8.2442	49.8707	0.1246	7.2812	0.2411	7.5224	1.9370	0.2332	2.1703	0.0000	9,780.7220	9,780.7220	0.9699	0.0000	9,801.0893
2021	124.9164	7.6033	48.0234	0.1248	7.2812	0.2239	7.5052	1.9370	0.2164	2.1534	0.0000	9,683.0645	9,683.0645	0.9515	0.0000	9,703.0462
Total	**256.1437**	**69.7711**	**209.9626**	**0.5524**	**30.7335**	**1.4104**	**32.1438**	**8.7398**	**1.3279**	**10.0677**	**0.0000**	**47,563.4999**	**47,563.4999**	**4.1595**	**0.0000**	**47,650.8485**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.39**	**58.16**	**3.28**	**0.00**	**12.66**	**80.15**	**24.00**	**19.55**	**79.94**	**42.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/12/2017	5/30/2018	5	122	
2	Grading	Grading	6/1/2018	8/29/2018	5	64	
3	Building Construction	Building Construction	2/5/2020	1/19/2021	5	250	
4	Paving	Paving	11/1/2020	1/19/2021	5	57	
5	Architectural Coating	Architectural Coating	11/1/2020	1/19/2021	5	57	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 32

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 451,050; Non-Residential Outdoor: 150,350 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	128.00	2.00	3,369.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	499.00	2.00	10,986.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	516.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6357	0.0000	0.6357	0.0963	0.0000	0.0963			0.0000			0.0000
Off-Road	4.1356	40.8712	29.8321	0.0422		2.3151	2.3151		2.1790	2.1790		4,218.0339	4,218.0339	1.0335		4,239.7374
Total	**4.1356**	**40.8712**	**29.8321**	**0.0422**	**0.6357**	**2.3151**	**2.9508**	**0.0963**	**2.1790**	**2.2752**		**4,218.0339**	**4,218.0339**	**1.0335**		**4,239.7374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4500	7.0138	5.1541	0.0204	3.2976	0.1082	3.4058	0.8231	0.0995	0.9226		2,021.0050	2,021.0050	0.0144		2,021.3080
Vendor	0.0153	0.1582	0.1876	4.3000e-004	0.0125	2.5200e-003	0.0150	3.5600e-003	2.3100e-003	5.8800e-003		42.9334	42.9334	3.0000e-004		42.9398
Worker	0.4790	0.6018	7.5141	0.0181	1.4307	0.0115	1.4422	0.3794	0.0106	0.3901		1,464.3936	1,464.3936	0.0720		1,465.9065
Total	**0.9444**	**7.7737**	**12.8558**	**0.0389**	**4.7409**	**0.1222**	**4.8631**	**1.2061**	**0.1125**	**1.3185**		**3,528.3320**	**3,528.3320**	**0.0868**		**3,530.1543**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2479	0.0000	0.2479	0.0375	0.0000	0.0375			0.0000			0.0000
Off-Road	0.4880	2.1146	25.4982	0.0422		0.0651	0.0651		0.0651	0.0651	0.0000	4,218.0339	4,218.0339	1.0335		4,239.7374
Total	**0.4880**	**2.1146**	**25.4982**	**0.0422**	**0.2479**	**0.0651**	**0.3130**	**0.0375**	**0.0651**	**0.1026**	**0.0000**	**4,218.0339**	**4,218.0339**	**1.0335**		**4,239.7374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4500	7.0138	5.1541	0.0204	3.2976	0.1082	3.4058	0.8231	0.0995	0.9226		2,021.0050	2,021.0050	0.0144		2,021.3080
Vendor	0.0153	0.1582	0.1876	4.3000e-004	0.0125	2.5200e-003	0.0150	3.5600e-003	2.3100e-003	5.8800e-003		42.9334	42.9334	3.0000e-004		42.9398
Worker	0.4790	0.6018	7.5141	0.0181	1.4307	0.0115	1.4422	0.3794	0.0106	0.3901		1,464.3936	1,464.3936	0.0720		1,465.9065
Total	**0.9444**	**7.7737**	**12.8558**	**0.0389**	**4.7409**	**0.1222**	**4.8631**	**1.2061**	**0.1125**	**1.3185**		**3,528.3320**	**3,528.3320**	**0.0868**		**3,530.1543**

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6357	0.0000	0.6357	0.0963	0.0000	0.0963			0.0000			0.0000
Off-Road	3.6307	35.8100	28.4808	0.0422		1.9639	1.9639		1.8495	1.8495		4,169.0905	4,169.0905	1.0207		4,190.5243
Total	**3.6307**	**35.8100**	**28.4808**	**0.0422**	**0.6357**	**1.9639**	**2.5996**	**0.0963**	**1.8495**	**1.9458**		**4,169.0905**	**4,169.0905**	**1.0207**		**4,190.5243**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4402	6.5110	5.0322	0.0203	0.5285	0.1082	0.6367	0.1434	0.0995	0.2429		1,987.4740	1,987.4740	0.0146		1,987.7810
Vendor	0.0144	0.1452	0.1788	4.3000e-004	0.0125	2.3700e-003	0.0149	3.5600e-003	2.1800e-003	5.7400e-003		42.2135	42.2135	3.0000e-004		42.2198
Worker	0.4319	0.5460	6.8272	0.0181	1.4307	0.0112	1.4419	0.3794	0.0104	0.3898		1,409.9041	1,409.9041	0.0669		1,411.3082
Total	**0.8864**	**7.2022**	**12.0382**	**0.0389**	**1.9718**	**0.1217**	**2.0935**	**0.5264**	**0.1121**	**0.6384**		**3,439.5915**	**3,439.5915**	**0.0818**		**3,441.3091**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2479	0.0000	0.2479	0.0375	0.0000	0.0375			0.0000			0.0000
Off-Road	0.4880	2.1146	25.4982	0.0422		0.0651	0.0651		0.0651	0.0651	0.0000	4,169.0905	4,169.0905	1.0207		4,190.5243
Total	**0.4880**	**2.1146**	**25.4982**	**0.0422**	**0.2479**	**0.0651**	**0.3130**	**0.0375**	**0.0651**	**0.1026**	**0.0000**	**4,169.0905**	**4,169.0905**	**1.0207**		**4,190.5243**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4402	6.5110	5.0322	0.0203	0.5285	0.1082	0.6367	0.1434	0.0995	0.2429		1,987.4740	1,987.4740	0.0146		1,987.7810
Vendor	0.0144	0.1452	0.1788	4.3000e-004	0.0125	2.3700e-003	0.0149	3.5600e-003	2.1800e-003	5.7400e-003		42.2135	42.2135	3.0000e-004		42.2198
Worker	0.4319	0.5460	6.8272	0.0181	1.4307	0.0112	1.4419	0.3794	0.0104	0.3898		1,409.9041	1,409.9041	0.0669		1,411.3082
Total	**0.8864**	**7.2022**	**12.0382**	**0.0389**	**1.9718**	**0.1217**	**2.0935**	**0.5264**	**0.1121**	**0.6384**		**3,439.5915**	**3,439.5915**	**0.0818**		**3,441.3091**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6688	0.0000	6.6688	3.3851	0.0000	3.3851			0.0000			0.0000
Off-Road	2.7064	27.8959	20.6402	0.0244		1.5661	1.5661		1.4409	1.4409		2,460.3614	2,460.3614	0.7659		2,476.4462
Total	**2.7064**	**27.8959**	**20.6402**	**0.0244**	**6.6688**	**1.5661**	**8.2350**	**3.3851**	**1.4409**	**4.8260**		**2,460.3614**	**2,460.3614**	**0.7659**		**2,476.4462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7361	40.4730	31.2809	0.1265	2.9912	0.6723	3.6635	0.8191	0.6185	1.4376		12,354.3497	12,354.3497	0.0909		12,356.2584
Vendor	0.0144	0.1452	0.1788	4.3000e-004	0.0125	2.3700e-003	0.0149	3.5600e-003	2.1800e-003	5.7400e-003		42.2135	42.2135	3.0000e-004		42.2198
Worker	1.6837	2.1284	26.6156	0.0706	5.5776	0.0437	5.6213	1.4792	0.0404	1.5196		5,496.4230	5,496.4230	0.2607		5,501.8969
Total	**4.4342**	**42.7466**	**58.0753**	**0.1975**	**8.5814**	**0.7184**	**9.2997**	**2.3019**	**0.6611**	**2.9630**		**17,892.9861**	**17,892.9861**	**0.3519**		**17,900.3751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6008	0.0000	2.6008	1.3202	0.0000	1.3202			0.0000			0.0000
Off-Road	0.2974	1.2886	15.6394	0.0244		0.0397	0.0397		0.0397	0.0397	0.0000	2,460.3614	2,460.3614	0.7659		2,476.4462
Total	**0.2974**	**1.2886**	**15.6394**	**0.0244**	**2.6008**	**0.0397**	**2.6405**	**1.3202**	**0.0397**	**1.3599**	**0.0000**	**2,460.3614**	**2,460.3614**	**0.7659**		**2,476.4462**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7361	40.4730	31.2809	0.1265	2.9912	0.6723	3.6635	0.8191	0.6185	1.4376		12,354.3497	12,354.3497	0.0909		12,356.2584
Vendor	0.0144	0.1452	0.1788	4.3000e-004	0.0125	2.3700e-003	0.0149	3.5600e-003	2.1800e-003	5.7400e-003		42.2135	42.2135	3.0000e-004		42.2198
Worker	1.6837	2.1284	26.6156	0.0706	5.5776	0.0437	5.6213	1.4792	0.0404	1.5196		5,496.4230	5,496.4230	0.2607		5,501.8969
Total	**4.4342**	**42.7466**	**58.0753**	**0.1975**	**8.5814**	**0.7184**	**9.2997**	**2.3019**	**0.6611**	**2.9630**		**17,892.9861**	**17,892.9861**	**0.3519**		**17,900.3751**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8742	7.4843	4.7582	9.0200e-003		0.3738	0.3738		0.3509	0.3509		833.8664	833.8664	0.2333		838.7647
Total	**0.8742**	**7.4843**	**4.7582**	**9.0200e-003**		**0.3738**	**0.3738**		**0.3509**	**0.3509**		**833.8664**	**833.8664**	**0.2333**		**838.7647**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3166	2.8658	4.0725	0.0106	0.3064	0.0505	0.3569	0.0873	0.0464	0.1337		991.2470	991.2470	7.0800e-003		991.3956
Worker	1.5021	1.8718	23.5784	0.0729	5.7677	0.0441	5.8118	1.5296	0.0409	1.5705		5,246.8823	5,246.8823	0.2390		5,251.9007
Total	**1.8187**	**4.7376**	**27.6509**	**0.0835**	**6.0740**	**0.0946**	**6.1686**	**1.6169**	**0.0873**	**1.7042**		**6,238.1293**	**6,238.1293**	**0.2461**		**6,243.2963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4216	1.9159	5.1538	9.0200e-003		0.0975	0.0975		0.0975	0.0975	0.0000	833.8664	833.8664	0.2333		838.7647
Total	**0.4216**	**1.9159**	**5.1538**	**9.0200e-003**		**0.0975**	**0.0975**		**0.0975**	**0.0975**	**0.0000**	**833.8664**	**833.8664**	**0.2333**		**838.7647**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3166	2.8658	4.0725	0.0106	0.3064	0.0505	0.3569	0.0873	0.0464	0.1337		991.2470	991.2470	7.0800e-003		991.3956
Worker	1.5021	1.8718	23.5784	0.0729	5.7677	0.0441	5.8118	1.5296	0.0409	1.5705		5,246.8823	5,246.8823	0.2390		5,251.9007
Total	**1.8187**	**4.7376**	**27.6509**	**0.0835**	**6.0740**	**0.0946**	**6.1686**	**1.6169**	**0.0873**	**1.7042**		**6,238.1293**	**6,238.1293**	**0.2461**		**6,243.2963**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	6.8394	4.5841	9.0200e-003		0.3264	0.3264		0.3062	0.3062		833.8228	833.8228	0.2296		838.6442
Total	**0.7855**	**6.8394**	**4.5841**	**9.0200e-003**		**0.3264**	**0.3264**		**0.3062**	**0.3062**		**833.8228**	**833.8228**	**0.2296**		**838.6442**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3061	2.4336	3.9614	0.0106	0.3064	0.0460	0.3524	0.0873	0.0423	0.1296		990.8267	990.8267	7.1300e-003		990.9764
Worker	1.4218	1.7508	22.1826	0.0730	5.7677	0.0442	5.8118	1.5296	0.0409	1.5706		5,166.3487	5,166.3487	0.2288		5,171.1528
Total	**1.7279**	**4.1844**	**26.1440**	**0.0836**	**6.0741**	**0.0901**	**6.1642**	**1.6169**	**0.0832**	**1.7001**		**6,157.1754**	**6,157.1754**	**0.2359**		**6,162.1292**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3822	1.8535	5.1056	9.0200e-003		0.0847	0.0847		0.0847	0.0847	0.0000	833.8228	833.8228	0.2296		838.6442
Total	**0.3822**	**1.8535**	**5.1056**	**9.0200e-003**		**0.0847**	**0.0847**		**0.0847**	**0.0847**	**0.0000**	**833.8228**	**833.8228**	**0.2296**		**838.6442**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3061	2.4336	3.9614	0.0106	0.3064	0.0460	0.3524	0.0873	0.0423	0.1296		990.8267	990.8267	7.1300e-003		990.9764
Worker	1.4218	1.7508	22.1826	0.0730	5.7677	0.0442	5.8118	1.5296	0.0409	1.5706		5,166.3487	5,166.3487	0.2288		5,171.1528
Total	**1.7279**	**4.1844**	**26.1440**	**0.0836**	**6.0741**	**0.0901**	**6.1642**	**1.6169**	**0.0832**	**1.7001**		**6,157.1754**	**6,157.1754**	**0.2359**		**6,162.1292**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1112	10.5573	9.6814	0.0139		0.6771	0.6771		0.6241	0.6241		1,329.0936	1,329.0936	0.4188		1,337.8876
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1112**	**10.5573**	**9.6814**	**0.0139**		**0.6771**	**0.6771**		**0.6241**	**0.6241**		**1,329.0936**	**1,329.0936**	**0.4188**		**1,337.8876**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1164	0.1451	1.8278	5.6500e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1217		406.7351	406.7351	0.0185		407.1241
Total	**0.1164**	**0.1451**	**1.8278**	**5.6500e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1217**		**406.7351**	**406.7351**	**0.0185**		**407.1241**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2986	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,329.0936	1,329.0936	0.4188		1,337.8876
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2208**	**1.0702**	**10.2986**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,329.0936**	**1,329.0936**	**0.4188**		**1,337.8876**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1164	0.1451	1.8278	5.6500e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1217		406.7351	406.7351	0.0185		407.1241
Total	**0.1164**	**0.1451**	**1.8278**	**5.6500e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1217**		**406.7351**	**406.7351**	**0.0185**		**407.1241**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0169	9.7012	9.6251	0.0139		0.5996	0.5996		0.5528	0.5528		1,329.2895	1,329.2895	0.4188		1,338.0849
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0169**	**9.7012**	**9.6251**	**0.0139**		**0.5996**	**0.5996**		**0.5528**	**0.5528**		**1,329.2895**	**1,329.2895**	**0.4188**		**1,338.0849**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1102	0.1357	1.7196	5.6600e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1218		400.4922	400.4922	0.0177		400.8646
Total	**0.1102**	**0.1357**	**1.7196**	**5.6600e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1218**		**400.4922**	**400.4922**	**0.0177**		**400.8646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2985	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,329.2895	1,329.2895	0.4188		1,338.0849
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2208**	**1.0702**	**10.2985**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,329.2895**	**1,329.2895**	**0.4188**		**1,338.0849**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1102	0.1357	1.7196	5.6600e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1218		400.4922	400.4922	0.0177		400.8646
Total	**0.1102**	**0.1357**	**1.7196**	**5.6600e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1218**		**400.4922**	**400.4922**	**0.0177**		**400.8646**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**122.5005**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1980	0.2467	3.1072	9.6000e-003	0.7601	5.8100e-003	0.7659	0.2016	5.3900e-003	0.2070		691.4496	691.4496	0.0315		692.1109
Total	**0.1980**	**0.2467**	**3.1072**	**9.6000e-003**	**0.7601**	**5.8100e-003**	**0.7659**	**0.2016**	**5.3900e-003**	**0.2070**		**691.4496**	**691.4496**	**0.0315**		**692.1109**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**122.2880**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1980	0.2467	3.1072	9.6000e-003	0.7601	5.8100e-003	0.7659	0.2016	5.3900e-003	0.2070		691.4496	691.4496	0.0315		692.1109
Total	**0.1980**	**0.2467**	**3.1072**	**9.6000e-003**	**0.7601**	**5.8100e-003**	**0.7659**	**0.2016**	**5.3900e-003**	**0.2070**		**691.4496**	**691.4496**	**0.0315**		**692.1109**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**122.4772**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1874	0.2307	2.9233	9.6200e-003	0.7601	5.8200e-003	0.7659	0.2016	5.4000e-003	0.2070		680.8367	680.8367	0.0302		681.4698
Total	**0.1874**	**0.2307**	**2.9233**	**9.6200e-003**	**0.7601**	**5.8200e-003**	**0.7659**	**0.2016**	**5.4000e-003**	**0.2070**		**680.8367**	**680.8367**	**0.0302**		**681.4698**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**122.2880**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1874	0.2307	2.9233	9.6200e-003	0.7601	5.8200e-003	0.7659	0.2016	5.4000e-003	0.2070		680.8367	680.8367	0.0302		681.4698
Total	**0.1874**	**0.2307**	**2.9233**	**9.6200e-003**	**0.7601**	**5.8200e-003**	**0.7659**	**0.2016**	**5.4000e-003**	**0.2070**		**680.8367**	**680.8367**	**0.0302**		**681.4698**

Harbor UCLA Master Plan- Phase 1

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	809.00	Space	7.28	300,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Architectural Coating - Paved Coating Exterior- 6% of the square footage

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	57.00
tblConstructionPhase	NumDays	230.00	250.00

tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	20.00	57.00
tblConstructionPhase	PhaseEndDate	4/8/2021	1/19/2021
tblConstructionPhase	PhaseEndDate	8/14/2019	1/19/2021
tblConstructionPhase	PhaseEndDate	8/28/2018	8/29/2018
tblConstructionPhase	PhaseEndDate	4/8/2021	1/19/2021
tblConstructionPhase	PhaseStartDate	1/20/2021	11/1/2020
tblConstructionPhase	PhaseStartDate	8/30/2018	2/5/2020
tblConstructionPhase	PhaseStartDate	5/31/2018	6/1/2018
tblConstructionPhase	PhaseStartDate	1/20/2021	11/1/2020
tblGrading	MaterialExported	0.00	28,851.00
tblGrading	MaterialImported	0.00	37,067.00
tblLandUse	LandUseSquareFeet	323,600.00	300,700.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	358.00	3,369.00
tblTripsAndVMT	HaulingTripNumber	8,240.00	10,986.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	128.00
tblTripsAndVMT	WorkerTripNumber	13.00	499.00

tblTripsAndVMT	WorkerTripNumber	126.00	516.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	25.00	68.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.1144	48.9614	42.9045	0.0799	5.3766	2.4376	7.8142	1.3023	2.2917	3.5940	0.0000	7,650.0508	7,650.0508	1.1205	0.0000	7,673.5810
2018	7.3031	72.3140	81.4183	0.2173	15.2502	2.2860	17.5362	5.6870	2.1033	7.7903	0.0000	19,980.7877	19,980.7877	1.1191	0.0000	20,004.2886
2020	126.6756	25.1398	47.2537	0.1189	7.2812	1.2661	8.5473	1.9370	1.1822	3.1192	0.0000	9,374.5820	9,374.5820	0.9701	0.0000	9,394.9545
2021	126.3580	22.8780	45.3071	0.1191	7.2812	1.1198	8.4010	1.9370	1.0452	2.9822	0.0000	9,282.0127	9,282.0127	0.9518	0.0000	9,301.9998
Total	**265.4510**	**169.2931**	**216.8836**	**0.5352**	**35.1892**	**7.1095**	**42.2987**	**10.8634**	**6.6223**	**17.4857**	**0.0000**	**46,287.4331**	**46,287.4331**	**4.1615**	**0.0000**	**46,374.8239**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.4668	10.2048	38.5706	0.0799	4.9888	0.1876	5.1763	1.2436	0.1778	1.4214	0.0000	7,650.0508	7,650.0508	1.1205	0.0000	7,673.5810
2018	4.8941	45.7067	76.4175	0.2173	11.1822	0.7595	11.9417	3.6221	0.7021	4.3242	0.0000	19,980.7877	19,980.7877	1.1191	0.0000	20,004.2886
2020	125.1200	8.5293	48.2675	0.1189	7.2812	0.2416	7.5228	1.9370	0.2336	2.1706	0.0000	9,374.5820	9,374.5820	0.9701	0.0000	9,394.9545
2021	124.9693	7.8630	46.5168	0.1191	7.2812	0.2243	7.5055	1.9370	0.2167	2.1538	0.0000	9,282.0127	9,282.0127	0.9518	0.0000	9,301.9998
Total	**256.4502**	**72.3037**	**209.7724**	**0.5352**	**30.7335**	**1.4129**	**32.1464**	**8.7398**	**1.3302**	**10.0700**	**0.0000**	**46,287.4331**	**46,287.4331**	**4.1615**	**0.0000**	**46,374.8239**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.39**	**57.29**	**3.28**	**0.00**	**12.66**	**80.13**	**24.00**	**19.55**	**79.91**	**42.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/12/2017	5/30/2018	5	122	
2	Grading	Grading	6/1/2018	8/29/2018	5	64	
3	Building Construction	Building Construction	2/5/2020	1/19/2021	5	250	
4	Paving	Paving	11/1/2020	1/19/2021	5	57	
5	Architectural Coating	Architectural Coating	11/1/2020	1/19/2021	5	57	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 32

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 451,050; Non-Residential Outdoor: 150,350 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	128.00	2.00	3,369.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	499.00	2.00	10,986.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	516.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6357	0.0000	0.6357	0.0963	0.0000	0.0963			0.0000			0.0000
Off-Road	4.1356	40.8712	29.8321	0.0422		2.3151	2.3151		2.1790	2.1790		4,218.0339	4,218.0339	1.0335		4,239.7374
Total	**4.1356**	**40.8712**	**29.8321**	**0.0422**	**0.6357**	**2.3151**	**2.9508**	**0.0963**	**2.1790**	**2.2752**		**4,218.0339**	**4,218.0339**	**1.0335**		**4,239.7374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4734	7.2672	5.9431	0.0203	3.2976	0.1085	3.4061	0.8231	0.0998	0.9228		2,016.2014	2,016.2014	0.0146		2,016.5087
Vendor	0.0167	0.1621	0.2273	4.3000e-004	0.0125	2.5400e-003	0.0150	3.5600e-003	2.3400e-003	5.9000e-003		42.5728	42.5728	3.1000e-004		42.5793
Worker	0.4886	0.6609	6.9020	0.0170	1.4307	0.0115	1.4422	0.3794	0.0106	0.3901		1,373.2427	1,373.2427	0.0720		1,374.7555
Total	**0.9788**	**8.0902**	**13.0725**	**0.0377**	**4.7409**	**0.1225**	**4.8633**	**1.2061**	**0.1127**	**1.3188**		**3,432.0169**	**3,432.0169**	**0.0870**		**3,433.8436**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2479	0.0000	0.2479	0.0375	0.0000	0.0375			0.0000			0.0000
Off-Road	0.4880	2.1146	25.4982	0.0422		0.0651	0.0651		0.0651	0.0651	0.0000	4,218.0339	4,218.0339	1.0335		4,239.7374
Total	**0.4880**	**2.1146**	**25.4982**	**0.0422**	**0.2479**	**0.0651**	**0.3130**	**0.0375**	**0.0651**	**0.1026**	**0.0000**	**4,218.0339**	**4,218.0339**	**1.0335**		**4,239.7374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4734	7.2672	5.9431	0.0203	3.2976	0.1085	3.4061	0.8231	0.0998	0.9228		2,016.2014	2,016.2014	0.0146		2,016.5087
Vendor	0.0167	0.1621	0.2273	4.3000e-004	0.0125	2.5400e-003	0.0150	3.5600e-003	2.3400e-003	5.9000e-003		42.5728	42.5728	3.1000e-004		42.5793
Worker	0.4886	0.6609	6.9020	0.0170	1.4307	0.0115	1.4422	0.3794	0.0106	0.3901		1,373.2427	1,373.2427	0.0720		1,374.7555
Total	**0.9788**	**8.0902**	**13.0725**	**0.0377**	**4.7409**	**0.1225**	**4.8633**	**1.2061**	**0.1127**	**1.3188**		**3,432.0169**	**3,432.0169**	**0.0870**		**3,433.8436**

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6357	0.0000	0.6357	0.0963	0.0000	0.0963			0.0000			0.0000
Off-Road	3.6307	35.8100	28.4808	0.0422		1.9639	1.9639		1.8495	1.8495		4,169.0905	4,169.0905	1.0207		4,190.5243
Total	**3.6307**	**35.8100**	**28.4808**	**0.0422**	**0.6357**	**1.9639**	**2.5996**	**0.0963**	**1.8495**	**1.9458**		**4,169.0905**	**4,169.0905**	**1.0207**		**4,190.5243**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4613	6.7458	5.8250	0.0203	0.5285	0.1084	0.6369	0.1434	0.0997	0.2431		1,982.7477	1,982.7477	0.0148		1,983.0591
Vendor	0.0156	0.1487	0.2181	4.3000e-004	0.0125	2.3900e-003	0.0149	3.5600e-003	2.2000e-003	5.7600e-003		41.8581	41.8581	3.1000e-004		41.8646
Worker	0.4395	0.5994	6.2464	0.0170	1.4307	0.0112	1.4419	0.3794	0.0104	0.3898		1,321.9650	1,321.9650	0.0669		1,323.3691
Total	**0.9165**	**7.4940**	**12.2895**	**0.0377**	**1.9718**	**0.1220**	**2.0938**	**0.5264**	**0.1123**	**0.6387**		**3,346.5707**	**3,346.5707**	**0.0820**		**3,348.2928**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2479	0.0000	0.2479	0.0375	0.0000	0.0375			0.0000			0.0000
Off-Road	0.4880	2.1146	25.4982	0.0422		0.0651	0.0651		0.0651	0.0651	0.0000	4,169.0905	4,169.0905	1.0207		4,190.5243
Total	**0.4880**	**2.1146**	**25.4982**	**0.0422**	**0.2479**	**0.0651**	**0.3130**	**0.0375**	**0.0651**	**0.1026**	**0.0000**	**4,169.0905**	**4,169.0905**	**1.0207**		**4,190.5243**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4613	6.7458	5.8250	0.0203	0.5285	0.1084	0.6369	0.1434	0.0997	0.2431		1,982.7477	1,982.7477	0.0148		1,983.0591
Vendor	0.0156	0.1487	0.2181	4.3000e-004	0.0125	2.3900e-003	0.0149	3.5600e-003	2.2000e-003	5.7600e-003		41.8581	41.8581	3.1000e-004		41.8646
Worker	0.4395	0.5994	6.2464	0.0170	1.4307	0.0112	1.4419	0.3794	0.0104	0.3898		1,321.9650	1,321.9650	0.0669		1,323.3691
Total	**0.9165**	**7.4940**	**12.2895**	**0.0377**	**1.9718**	**0.1220**	**2.0938**	**0.5264**	**0.1123**	**0.6387**		**3,346.5707**	**3,346.5707**	**0.0820**		**3,348.2928**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6688	0.0000	6.6688	3.3851	0.0000	3.3851			0.0000			0.0000
Off-Road	2.7064	27.8959	20.6402	0.0244		1.5661	1.5661		1.4409	1.4409		2,460.3614	2,460.3614	0.7659		2,476.4462
Total	**2.7064**	**27.8959**	**20.6402**	**0.0244**	**6.6688**	**1.5661**	**8.2350**	**3.3851**	**1.4409**	**4.8260**		**2,460.3614**	**2,460.3614**	**0.7659**		**2,476.4462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8678	41.9326	36.2088	0.1262	2.9912	0.6738	3.6650	0.8191	0.6198	1.4389		12,324.9704	12,324.9704	0.0922		12,326.9061
Vendor	0.0156	0.1487	0.2181	4.3000e-004	0.0125	2.3900e-003	0.0149	3.5600e-003	2.2000e-003	5.7600e-003		41.8581	41.8581	3.1000e-004		41.8646
Worker	1.7133	2.3368	24.3512	0.0662	5.5776	0.0437	5.6213	1.4792	0.0404	1.5196		5,153.5979	5,153.5979	0.2607		5,159.0717
Total	**4.5967**	**44.4181**	**60.7781**	**0.1928**	**8.5814**	**0.7198**	**9.3012**	**2.3019**	**0.6624**	**2.9643**		**17,520.4264**	**17,520.4264**	**0.3531**		**17,527.8424**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6008	0.0000	2.6008	1.3202	0.0000	1.3202			0.0000			0.0000
Off-Road	0.2974	1.2886	15.6394	0.0244		0.0397	0.0397		0.0397	0.0397	0.0000	2,460.3614	2,460.3614	0.7659		2,476.4462
Total	**0.2974**	**1.2886**	**15.6394**	**0.0244**	**2.6008**	**0.0397**	**2.6405**	**1.3202**	**0.0397**	**1.3599**	**0.0000**	**2,460.3614**	**2,460.3614**	**0.7659**		**2,476.4462**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8678	41.9326	36.2088	0.1262	2.9912	0.6738	3.6650	0.8191	0.6198	1.4389		12,324.9704	12,324.9704	0.0922		12,326.9061
Vendor	0.0156	0.1487	0.2181	4.3000e-004	0.0125	2.3900e-003	0.0149	3.5600e-003	2.2000e-003	5.7600e-003		41.8581	41.8581	3.1000e-004		41.8646
Worker	1.7133	2.3368	24.3512	0.0662	5.5776	0.0437	5.6213	1.4792	0.0404	1.5196		5,153.5979	5,153.5979	0.2607		5,159.0717
Total	**4.5967**	**44.4181**	**60.7781**	**0.1928**	**8.5814**	**0.7198**	**9.3012**	**2.3019**	**0.6624**	**2.9643**		**17,520.4264**	**17,520.4264**	**0.3531**		**17,527.8424**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8742	7.4843	4.7582	9.0200e-003		0.3738	0.3738		0.3509	0.3509		833.8664	833.8664	0.2333		838.7647
Total	**0.8742**	**7.4843**	**4.7582**	**9.0200e-003**		**0.3738**	**0.3738**		**0.3509**	**0.3509**		**833.8664**	**833.8664**	**0.2333**		**838.7647**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3434	2.9313	5.0186	0.0105	0.3064	0.0509	0.3573	0.0873	0.0468	0.1341		982.8406	982.8406	7.3300e-003		982.9945
Worker	1.5267	2.0534	21.4704	0.0682	5.7677	0.0441	5.8118	1.5296	0.0409	1.5705		4,917.9872	4,917.9872	0.2390		4,923.0055
Total	**1.8701**	**4.9846**	**26.4890**	**0.0788**	**6.0740**	**0.0950**	**6.1690**	**1.6169**	**0.0877**	**1.7046**		**5,900.8278**	**5,900.8278**	**0.2463**		**5,906.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4216	1.9159	5.1538	9.0200e-003		0.0975	0.0975		0.0975	0.0975	0.0000	833.8664	833.8664	0.2333		838.7647
Total	**0.4216**	**1.9159**	**5.1538**	**9.0200e-003**		**0.0975**	**0.0975**		**0.0975**	**0.0975**	**0.0000**	**833.8664**	**833.8664**	**0.2333**		**838.7647**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3434	2.9313	5.0186	0.0105	0.3064	0.0509	0.3573	0.0873	0.0468	0.1341		982.8406	982.8406	7.3300e-003		982.9945
Worker	1.5267	2.0534	21.4704	0.0682	5.7677	0.0441	5.8118	1.5296	0.0409	1.5705		4,917.9872	4,917.9872	0.2390		4,923.0055
Total	**1.8701**	**4.9846**	**26.4890**	**0.0788**	**6.0740**	**0.0950**	**6.1690**	**1.6169**	**0.0877**	**1.7046**		**5,900.8278**	**5,900.8278**	**0.2463**		**5,906.0000**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	6.8394	4.5841	9.0200e-003		0.3264	0.3264		0.3062	0.3062		833.8228	833.8228	0.2296		838.6442
Total	**0.7855**	**6.8394**	**4.5841**	**9.0200e-003**		**0.3264**	**0.3264**		**0.3062**	**0.3062**		**833.8228**	**833.8228**	**0.2296**		**838.6442**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3314	2.4891	4.8986	0.0105	0.3064	0.0463	0.3527	0.0873	0.0426	0.1299		982.4194	982.4194	7.3900e-003		982.5746
Worker	1.4446	1.9197	20.1618	0.0684	5.7677	0.0442	5.8118	1.5296	0.0409	1.5706		4,841.6619	4,841.6619	0.2288		4,846.4660
Total	**1.7760**	**4.4087**	**25.0604**	**0.0789**	**6.0741**	**0.0905**	**6.1645**	**1.6169**	**0.0836**	**1.7004**		**5,824.0812**	**5,824.0812**	**0.2362**		**5,829.0405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3822	1.8535	5.1056	9.0200e-003		0.0847	0.0847		0.0847	0.0847	0.0000	833.8228	833.8228	0.2296		838.6442
Total	**0.3822**	**1.8535**	**5.1056**	**9.0200e-003**		**0.0847**	**0.0847**		**0.0847**	**0.0847**	**0.0000**	**833.8228**	**833.8228**	**0.2296**		**838.6442**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3314	2.4891	4.8986	0.0105	0.3064	0.0463	0.3527	0.0873	0.0426	0.1299		982.4194	982.4194	7.3900e-003		982.5746
Worker	1.4446	1.9197	20.1618	0.0684	5.7677	0.0442	5.8118	1.5296	0.0409	1.5706		4,841.6619	4,841.6619	0.2288		4,846.4660
Total	**1.7760**	**4.4087**	**25.0604**	**0.0789**	**6.0741**	**0.0905**	**6.1645**	**1.6169**	**0.0836**	**1.7004**		**5,824.0812**	**5,824.0812**	**0.2362**		**5,829.0405**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1112	10.5573	9.6814	0.0139		0.6771	0.6771		0.6241	0.6241		1,329.0936	1,329.0936	0.4188		1,337.8876
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1112**	**10.5573**	**9.6814**	**0.0139**		**0.6771**	**0.6771**		**0.6241**	**0.6241**		**1,329.0936**	**1,329.0936**	**0.4188**		**1,337.8876**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1184	0.1592	1.6644	5.2900e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1217		381.2393	381.2393	0.0185		381.6283
Total	**0.1184**	**0.1592**	**1.6644**	**5.2900e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1217**		**381.2393**	**381.2393**	**0.0185**		**381.6283**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2986	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,329.0936	1,329.0936	0.4188		1,337.8876
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2208**	**1.0702**	**10.2986**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,329.0936**	**1,329.0936**	**0.4188**		**1,337.8876**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1184	0.1592	1.6644	5.2900e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1217		381.2393	381.2393	0.0185		381.6283
Total	**0.1184**	**0.1592**	**1.6644**	**5.2900e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1217**		**381.2393**	**381.2393**	**0.0185**		**381.6283**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0169	9.7012	9.6251	0.0139		0.5996	0.5996		0.5528	0.5528		1,329.2895	1,329.2895	0.4188		1,338.0849
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0169**	**9.7012**	**9.6251**	**0.0139**		**0.5996**	**0.5996**		**0.5528**	**0.5528**		**1,329.2895**	**1,329.2895**	**0.4188**		**1,338.0849**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1120	0.1488	1.5629	5.3000e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1218		375.3226	375.3226	0.0177		375.6950
Total	**0.1120**	**0.1488**	**1.5629**	**5.3000e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1218**		**375.3226**	**375.3226**	**0.0177**		**375.6950**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2985	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,329.2895	1,329.2895	0.4188		1,338.0849
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2208**	**1.0702**	**10.2985**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,329.2895**	**1,329.2895**	**0.4188**		**1,338.0849**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1120	0.1488	1.5629	5.3000e-003	0.4471	3.4200e-003	0.4505	0.1186	3.1700e-003	0.1218		375.3226	375.3226	0.0177		375.6950
Total	**0.1120**	**0.1488**	**1.5629**	**5.3000e-003**	**0.4471**	**3.4200e-003**	**0.4505**	**0.1186**	**3.1700e-003**	**0.1218**		**375.3226**	**375.3226**	**0.0177**		**375.6950**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**122.5005**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2012	0.2706	2.8294	8.9900e-003	0.7601	5.8100e-003	0.7659	0.2016	5.3900e-003	0.2070		648.1068	648.1068	0.0315		648.7682
Total	**0.2012**	**0.2706**	**2.8294**	**8.9900e-003**	**0.7601**	**5.8100e-003**	**0.7659**	**0.2016**	**5.3900e-003**	**0.2070**		**648.1068**	**648.1068**	**0.0315**		**648.7682**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**122.2880**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2012	0.2706	2.8294	8.9900e-003	0.7601	5.8100e-003	0.7659	0.2016	5.3900e-003	0.2070		648.1068	648.1068	0.0315		648.7682
Total	**0.2012**	**0.2706**	**2.8294**	**8.9900e-003**	**0.7601**	**5.8100e-003**	**0.7659**	**0.2016**	**5.3900e-003**	**0.2070**		**648.1068**	**648.1068**	**0.0315**		**648.7682**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**122.4772**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1904	0.2530	2.6570	9.0100e-003	0.7601	5.8200e-003	0.7659	0.2016	5.4000e-003	0.2070		638.0485	638.0485	0.0302		638.6816
Total	**0.1904**	**0.2530**	**2.6570**	**9.0100e-003**	**0.7601**	**5.8200e-003**	**0.7659**	**0.2016**	**5.4000e-003**	**0.2070**		**638.0485**	**638.0485**	**0.0302**		**638.6816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	122.2583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**122.2880**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1904	0.2530	2.6570	9.0100e-003	0.7601	5.8200e-003	0.7659	0.2016	5.4000e-003	0.2070		638.0485	638.0485	0.0302		638.6816
Total	**0.1904**	**0.2530**	**2.6570**	**9.0100e-003**	**0.7601**	**5.8200e-003**	**0.7659**	**0.2016**	**5.4000e-003**	**0.2070**		**638.0485**	**638.0485**	**0.0302**		**638.6816**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase 2 Construction Emissions

Harbor UCLA Master Plan- Phase 2

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	130.00	1000sqft	2.98	130,000.00	0
Hospital	97.50	1000sqft	2.24	97,500.00	0
Hospital	2.40	1000sqft	0.06	2,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	230.00	95.00
tblConstructionPhase	NumDays	230.00	108.00
tblConstructionPhase	NumDays	230.00	108.00
tblConstructionPhase	NumDays	230.00	202.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	20.00	93.00
tblConstructionPhase	PhaseEndDate	5/15/2024	12/7/2023

tblConstructionPhase	PhaseEndDate	1/27/2022	1/30/2022
tblConstructionPhase	PhaseEndDate	6/29/2022	6/30/2022
tblConstructionPhase	PhaseEndDate	4/10/2023	12/7/2023
tblConstructionPhase	PhaseEndDate	4/16/2024	12/7/2023
tblConstructionPhase	PhaseStartDate	12/8/2023	7/1/2023
tblConstructionPhase	PhaseStartDate	8/31/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	1/31/2022	2/1/2022
tblConstructionPhase	PhaseStartDate	7/1/2022	3/1/2023
tblConstructionPhase	PhaseStartDate	12/8/2023	8/1/2023
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	38.00	40.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	455.00
tblTripsAndVMT	WorkerTripNumber	15.00	92.00
tblTripsAndVMT	WorkerTripNumber	13.00	80.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.6011	19.2975	27.5985	0.0699	3.2556	0.8984	4.1540	0.8681	0.8367	1.7048	0.0000	5,741.5043	5,741.5043	0.7637	0.0000	5,757.5423
2022	2.3519	14.9489	26.6939	0.0676	3.2556	0.6864	3.9419	0.8681	0.6454	1.5135	0.0000	5,426.3762	5,426.3762	0.6279	0.0000	5,439.5616
2023	51.1275	25.4813	51.8949	0.1367	7.2585	1.2389	8.4974	1.9299	1.1634	3.0933	0.0000	10,588.2764	10,588.2764	1.1860	0.0000	10,613.1815
Total	**56.0804**	**59.7276**	**106.1873**	**0.2742**	**13.7696**	**2.8237**	**16.5933**	**3.6660**	**2.6456**	**6.3116**	**0.0000**	**21,756.1568**	**21,756.1568**	**2.5776**	**0.0000**	**21,810.2853**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2609	4.0147	28.8823	0.0699	3.2556	0.0960	3.3516	0.8681	0.0915	0.9595	0.0000	5,741.5043	5,741.5043	0.7637	0.0000	5,757.5423
2022	1.4328	4.9838	27.6054	0.0676	3.2556	0.1514	3.4070	0.8681	0.1469	1.0150	0.0000	5,426.3762	5,426.3762	0.6279	0.0000	5,439.5615
2023	49.4768	8.2440	53.5568	0.1367	7.2585	0.2676	7.5261	1.9299	0.2608	2.1907	0.0000	10,588.2764	10,588.2764	1.1860	0.0000	10,613.1815

Total	52.1705	17.2425	110.0445	0.2742	13.7696	0.5150	14.2847	3.6660	0.4992	4.1652	0.0000	21,756.1568	21,756.1568	2.5776	0.0000	21,810.2853

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	6.97	71.13	-3.63	0.00	0.00	81.76	13.91	0.00	81.13	34.01	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/20/2021	4/19/2021	5	64	
2	Building Construction	Building Construction	4/20/2021	8/30/2021	5	95	
3	Building Construction 2	Building Construction	9/1/2021	1/30/2022	5	108	
4	Building Construction 3	Building Construction	2/1/2022	6/30/2022	5	108	
5	Building Construction 4	Building Construction	3/1/2023	12/7/2023	5	202	
6	Architectural Coating	Architectural Coating	7/1/2023	12/7/2023	5	114	
7	Paving	Paving	8/1/2023	12/7/2023	5	93	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 344,850; Non-Residential Outdoor: 114,950 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Building Construction 2	Air Compressors	1	8.00	78	0.48
Building Construction 2	Cranes	1	7.00	226	0.29
Building Construction 2	Forklifts	0	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45
Building Construction 3	Air Compressors	1	8.00	78	0.48
Building Construction 3	Cranes	1	7.00	226	0.29
Building Construction 3	Forklifts	1	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 3	Welders	1	8.00	46	0.45
Building Construction 4	Air Compressors	1	8.00	78	0.48
Building Construction 4	Cranes	1	7.00	226	0.29
Building Construction 4	Forklifts	2	8.00	89	0.20
Building Construction 4	Generator Sets	0	8.00	84	0.74
Building Construction 4	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 4	Welders	2	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	4	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	7	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	8	455.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5235	5.6834	3.8274	9.2300e-003		0.2381	0.2381		0.2190	0.2190		894.2007	894.2007	0.2892		900.2739
Total	**0.5235**	**5.6834**	**3.8274**	**9.2300e-003**	**0.0000**	**0.2381**	**0.2381**	**0.0000**	**0.2190**	**0.2190**		**894.2007**	**894.2007**	**0.2892**		**900.2739**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.0993	0.1617	4.3000e-004	0.0125	1.8800e-003	0.0144	3.5600e-003	1.7300e-003	5.2900e-003		40.4419	40.4419	2.9000e-004		40.4480
Worker	0.0496	0.0611	0.7738	2.5500e-003	0.2012	1.5400e-003	0.2027	0.0534	1.4300e-003	0.0548		180.2215	180.2215	7.9800e-003		180.3891
Total	**0.0621**	**0.1604**	**0.9355**	**2.9800e-003**	**0.2137**	**3.4200e-003**	**0.2171**	**0.0569**	**3.1600e-003**	**0.0601**		**220.6634**	**220.6634**	**8.2700e-003**		**220.8371**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1138	0.4931	5.1218	9.2300e-003		0.0152	0.0152		0.0152	0.0152	0.0000	894.2007	894.2007	0.2892		900.2739
Total	**0.1138**	**0.4931**	**5.1218**	**9.2300e-003**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**894.2007**	**894.2007**	**0.2892**		**900.2739**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0125	0.0993	0.1617	4.3000e-004	0.0125	1.8800e-003	0.0144	3.5600e-003	1.7300e-003	5.2900e-003		40.4419	40.4419	2.9000e-004		40.4480
Worker	0.0496	0.0611	0.7738	2.5500e-003	0.2012	1.5400e-003	0.2027	0.0534	1.4300e-003	0.0548		180.2215	180.2215	7.9800e-003		180.3891
Total	**0.0621**	**0.1604**	**0.9355**	**2.9800e-003**	**0.2137**	**3.4200e-003**	**0.2171**	**0.0569**	**3.1600e-003**	**0.0601**		**220.6634**	**220.6634**	**8.2700e-003**		**220.8371**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6197	16.4941	12.9193	0.0235		0.8397	0.8397		0.7825	0.7825		2,269.7861	2,269.7861	0.6385		2,283.1942
Total	**1.6197**	**16.4941**	**12.9193**	**0.0235**		**0.8397**	**0.8397**		**0.7825**	**0.7825**		**2,269.7861**	**2,269.7861**	**0.6385**		**2,283.1942**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2374	1.8873	3.0721	8.2000e-003	0.2376	0.0357	0.2733	0.0677	0.0328	0.1005		768.3962	768.3962	5.5300e-003		768.5123
Worker	0.7440	0.9161	11.6072	0.0382	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,703.3220	2,703.3220	0.1197		2,705.8358
Total	**0.9814**	**2.8034**	**14.6793**	**0.0464**	**3.2556**	**0.0588**	**3.3143**	**0.8681**	**0.0542**	**0.9223**		**3,471.7182**	**3,471.7182**	**0.1252**		**3,474.3481**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2795	1.2113	14.2030	0.0235		0.0373	0.0373		0.0373	0.0373	0.0000	2,269.7861	2,269.7861	0.6385		2,283.1942
Total	**0.2795**	**1.2113**	**14.2030**	**0.0235**		**0.0373**	**0.0373**		**0.0373**	**0.0373**	**0.0000**	**2,269.7861**	**2,269.7861**	**0.6385**		**2,283.1942**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2374	1.8873	3.0721	8.2000e-003	0.2376	0.0357	0.2733	0.0677	0.0328	0.1005		768.3962	768.3962	5.5300e-003		768.5123
Worker	0.7440	0.9161	11.6072	0.0382	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,703.3220	2,703.3220	0.1197		2,705.8358
Total	**0.9814**	**2.8034**	**14.6793**	**0.0464**	**3.2556**	**0.0588**	**3.3143**	**0.8681**	**0.0542**	**0.9223**		**3,471.7182**	**3,471.7182**	**0.1252**		**3,474.3481**

3.4 Building Construction 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9731	9.5048	8.0763	0.0143		0.4896	0.4896		0.4605	0.4605		1,380.1534	1,380.1534	0.3508		1,387.5193
Total	**0.9731**	**9.5048**	**8.0763**	**0.0143**		**0.4896**	**0.4896**		**0.4605**	**0.4605**		**1,380.1534**	**1,380.1534**	**0.3508**		**1,387.5193**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2374	1.8873	3.0721	8.2000e-003	0.2376	0.0357	0.2733	0.0677	0.0328	0.1005		768.3962	768.3962	5.5300e-003		768.5123
Worker	0.7440	0.9161	11.6072	0.0382	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,703.3220	2,703.3220	0.1197		2,705.8358
Total	**0.9814**	**2.8034**	**14.6793**	**0.0464**	**3.2556**	**0.0588**	**3.3143**	**0.8681**	**0.0542**	**0.9223**		**3,471.7182**	**3,471.7182**	**0.1252**		**3,474.3481**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1668	0.7227	8.7670	0.0143		0.0222	0.0222		0.0222	0.0222	0.0000	1,380.1534	1,380.1534	0.3508		1,387.5193
Total	**0.1668**	**0.7227**	**8.7670**	**0.0143**		**0.0222**	**0.0222**		**0.0222**	**0.0222**	**0.0000**	**1,380.1534**	**1,380.1534**	**0.3508**		**1,387.5193**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2374	1.8873	3.0721	8.2000e-003	0.2376	0.0357	0.2733	0.0677	0.0328	0.1005		768.3962	768.3962	5.5300e-003		768.5123
Worker	0.7440	0.9161	11.6072	0.0382	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,703.3220	2,703.3220	0.1197		2,705.8358
Total	**0.9814**	**2.8034**	**14.6793**	**0.0464**	**3.2556**	**0.0588**	**3.3143**	**0.8681**	**0.0542**	**0.9223**		**3,471.7182**	**3,471.7182**	**0.1252**		**3,474.3481**

3.4 Building Construction 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8803	8.3923	7.9545	0.0144		0.4154	0.4154		0.3909	0.3909		1,380.8249	1,380.8249	0.3497		1,388.1675
Total	**0.8803**	**8.3923**	**7.9545**	**0.0144**		**0.4154**	**0.4154**		**0.3909**	**0.3909**		**1,380.8249**	**1,380.8249**	**0.3497**		**1,388.1675**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2326	1.7130	3.0010	8.2000e-003	0.2376	0.0353	0.2729	0.0677	0.0324	0.1001		767.7037	767.7037	5.6500e-003		767.8224
Worker	0.7046	0.8596	10.9306	0.0382	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,658.7549	2,658.7549	0.1146		2,661.1620
Total	**0.9372**	**2.5726**	**13.9317**	**0.0464**	**3.2556**	**0.0583**	**3.3139**	**0.8681**	**0.0539**	**0.9219**		**3,426.4586**	**3,426.4586**	**0.1203**		**3,428.9844**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1668	0.7227	8.7670	0.0144		0.0222	0.0222		0.0222	0.0222	0.0000	1,380.8249	1,380.8249	0.3497		1,388.1675
Total	**0.1668**	**0.7227**	**8.7670**	**0.0144**		**0.0222**	**0.0222**		**0.0222**	**0.0222**	**0.0000**	**1,380.8249**	**1,380.8249**	**0.3497**		**1,388.1675**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2326	1.7130	3.0010	8.2000e-003	0.2376	0.0353	0.2729	0.0677	0.0324	0.1001		767.7037	767.7037	5.6500e-003		767.8224
Worker	0.7046	0.8596	10.9306	0.0382	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,658.7549	2,658.7549	0.1146		2,661.1620
Total	**0.9372**	**2.5726**	**13.9317**	**0.0464**	**3.2556**	**0.0583**	**3.3139**	**0.8681**	**0.0539**	**0.9219**		**3,426.4586**	**3,426.4586**	**0.1203**		**3,428.9844**

3.5 Building Construction 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4147	12.3763	12.7623	0.0212		0.6280	0.6280		0.5916	0.5916		1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**1.4147**	**12.3763**	**12.7623**	**0.0212**		**0.6280**	**0.6280**		**0.5916**	**0.5916**		**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2326	1.7130	3.0010	8.2000e-003	0.2376	0.0353	0.2729	0.0677	0.0324	0.1001		767.7037	767.7037	5.6500e-003		767.8224
Worker	0.7046	0.8596	10.9306	0.0382	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,658.7549	2,658.7549	0.1146		2,661.1620
Total	**0.9372**	**2.5726**	**13.9317**	**0.0464**	**3.2556**	**0.0583**	**3.3139**	**0.8681**	**0.0539**	**0.9219**		**3,426.4586**	**3,426.4586**	**0.1203**		**3,428.9844**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4956	2.4112	13.6737	0.0212		0.0931	0.0931		0.0931	0.0931	0.0000	1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**0.4956**	**2.4112**	**13.6737**	**0.0212**		**0.0931**	**0.0931**		**0.0931**	**0.0931**	**0.0000**	**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2326	1.7130	3.0010	8.2000e-003	0.2376	0.0353	0.2729	0.0677	0.0324	0.1001		767.7037	767.7037	5.6500e-003		767.8224
Worker	0.7046	0.8596	10.9306	0.0382	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,658.7549	2,658.7549	0.1146		2,661.1620
Total	**0.9372**	**2.5726**	**13.9317**	**0.0464**	**3.2556**	**0.0583**	**3.3139**	**0.8681**	**0.0539**	**0.9219**		**3,426.4586**	**3,426.4586**	**0.1203**		**3,428.9844**

3.6 Building Construction 4 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5353	12.4515	13.5355	0.0225		0.5924	0.5924		0.5614	0.5614		2,092.4232	2,092.4232	0.4889		2,102.6897
Total	**1.5353**	**12.4515**	**13.5355**	**0.0225**		**0.5924**	**0.5924**		**0.5614**	**0.5614**		**2,092.4232**	**2,092.4232**	**0.4889**		**2,102.6897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2267	1.4386	3.0306	8.5800e-003	0.2501	0.0366	0.2868	0.0712	0.0337	0.1050		804.2387	804.2387	5.3500e-003		804.3510
Worker	1.1248	1.3639	17.3795	0.0644	5.0858	0.0389	5.1247	1.3488	0.0361	1.3848		4,412.0386	4,412.0386	0.1856		4,415.9359
Total	**1.3515**	**2.8025**	**20.4100**	**0.0729**	**5.3360**	**0.0755**	**5.4115**	**1.4200**	**0.0698**	**1.4898**		**5,216.2772**	**5,216.2772**	**0.1909**		**5,220.2869**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7134	3.7270	14.4460	0.0225		0.1375	0.1375		0.1375	0.1375	0.0000	2,092.4232	2,092.4232	0.4889		2,102.6897
Total	**0.7134**	**3.7270**	**14.4460**	**0.0225**		**0.1375**	**0.1375**		**0.1375**	**0.1375**	**0.0000**	**2,092.4232**	**2,092.4232**	**0.4889**		**2,102.6897**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2267	1.4386	3.0306	8.5800e-003	0.2501	0.0366	0.2868	0.0712	0.0337	0.1050		804.2387	804.2387	5.3500e-003		804.3510
Worker	1.1248	1.3639	17.3795	0.0644	5.0858	0.0389	5.1247	1.3488	0.0361	1.3848		4,412.0386	4,412.0386	0.1856		4,415.9359
Total	**1.3515**	**2.8025**	**20.4100**	**0.0729**	**5.3360**	**0.0755**	**5.4115**	**1.4200**	**0.0698**	**1.4898**		**5,216.2772**	**5,216.2772**	**0.1909**		**5,220.2869**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.7363					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8017
Total	**46.9279**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2274	0.2758	3.5141	0.0130	1.0283	7.8600e-003	1.0362	0.2727	7.2900e-003	0.2800		892.1045	892.1045	0.0375		892.8925
Total	**0.2274**	**0.2758**	**3.5141**	**0.0130**	**1.0283**	**7.8600e-003**	**1.0362**	**0.2727**	**7.2900e-003**	**0.2800**		**892.1045**	**892.1045**	**0.0375**		**892.8925**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.7363					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8017
Total	**46.7660**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2274	0.2758	3.5141	0.0130	1.0283	7.8600e-003	1.0362	0.2727	7.2900e-003	0.2800		892.1045	892.1045	0.0375		892.8925
Total	**0.2274**	**0.2758**	**3.5141**	**0.0130**	**1.0283**	**7.8600e-003**	**1.0362**	**0.2727**	**7.2900e-003**	**0.2800**		**892.1045**	**892.1045**	**0.0375**		**892.8925**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8875	8.4087	9.5685	0.0139		0.4855	0.4855		0.4478	0.4478		1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8875**	**8.4087**	**9.5685**	**0.0139**		**0.4855**	**0.4855**		**0.4478**	**0.4478**		**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1978	0.2398	3.0557	0.0113	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		775.7430	775.7430	0.0326		776.4283
Total	**0.1978**	**0.2398**	**3.0557**	**0.0113**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**775.7430**	**775.7430**	**0.0326**		**776.4283**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2985	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2208**	**1.0702**	**10.2985**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1978	0.2398	3.0557	0.0113	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		775.7430	775.7430	0.0326		776.4283
Total	**0.1978**	**0.2398**	**3.0557**	**0.0113**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**775.7430**	**775.7430**	**0.0326**		**776.4283**

Harbor UCLA Master Plan- Phase 2

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	130.00	1000sqft	2.98	130,000.00	0
Hospital	97.50	1000sqft	2.24	97,500.00	0
Hospital	2.40	1000sqft	0.06	2,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	230.00	202.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	20.00	93.00
tblConstructionPhase	PhaseEndDate	5/15/2024	12/7/2023

tblConstructionPhase	PhaseEndDate	1/27/2022	1/30/2022
tblConstructionPhase	PhaseEndDate	6/29/2022	6/30/2022
tblConstructionPhase	PhaseEndDate	4/10/2023	12/7/2023
tblConstructionPhase	PhaseEndDate	4/16/2024	12/7/2023
tblConstructionPhase	PhaseStartDate	12/8/2023	7/1/2023
tblConstructionPhase	PhaseStartDate	8/31/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	1/31/2022	2/1/2022
tblConstructionPhase	PhaseStartDate	7/1/2022	3/1/2023
tblConstructionPhase	PhaseStartDate	12/8/2023	8/1/2023
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	38.00	40.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	455.00
tblTripsAndVMT	WorkerTripNumber	15.00	92.00
tblTripsAndVMT	WorkerTripNumber	13.00	80.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.6327	19.4288	27.2680	0.0674	3.2556	0.8987	4.1543	0.8681	0.8370	1.7051	0.0000	5,565.0900	5,565.0900	0.7639	0.0000	5,581.1323
2022	2.3819	15.0704	26.3894	0.0651	3.2556	0.6866	3.9422	0.8681	0.6457	1.5138	0.0000	5,252.4182	5,252.4182	0.6281	0.0000	5,265.6080
2023	51.1716	25.6869	50.3631	0.1310	7.2585	1.2392	8.4977	1.9299	1.1637	3.0936	0.0000	10,197.6761	10,197.6761	1.1862	0.0000	10,222.5858
Total	**56.1861**	**60.1861**	**104.0204**	**0.2635**	**13.7696**	**2.8245**	**16.5941**	**3.6660**	**2.6463**	**6.3124**	**0.0000**	**21,015.1843**	**21,015.1843**	**2.5782**	**0.0000**	**21,069.3261**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2925	4.1461	28.5517	0.0674	3.2556	0.0963	3.3519	0.8681	0.0917	0.9598	0.0000	5,565.0900	5,565.0900	0.7639	0.0000	5,581.1323
2022	1.4628	5.1053	27.3008	0.0651	3.2556	0.1517	3.4073	0.8681	0.1472	1.0152	0.0000	5,252.4182	5,252.4182	0.6281	0.0000	5,265.6080

2023	49.5210	8.4496	52.0250	0.1310	7.2585	0.2679	7.5264	1.9299	0.2610	2.1909	0.0000	10,197.6761	10,197.6761	1.1862	0.0000	10,222.5858
Total	**52.2762**	**17.7009**	**107.8775**	**0.2635**	**13.7696**	**0.5158**	**14.2855**	**3.6660**	**0.4999**	**4.1660**	**0.0000**	**21,015.1843**	**21,015.1843**	**2.5782**	**0.0000**	**21,069.3261**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.96**	**70.59**	**-3.71**	**0.00**	**0.00**	**81.74**	**13.91**	**0.00**	**81.11**	**34.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/20/2021	4/19/2021	5	64	
2	Building Construction	Building Construction	4/20/2021	8/30/2021	5	95	
3	Building Construction 2	Building Construction	9/1/2021	1/30/2022	5	108	
4	Building Construction 3	Building Construction	2/1/2022	6/30/2022	5	108	
5	Building Construction 4	Building Construction	3/1/2023	12/7/2023	5	202	
6	Architectural Coating	Architectural Coating	7/1/2023	12/7/2023	5	114	
7	Paving	Paving	8/1/2023	12/7/2023	5	93	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 344,850; Non-Residential Outdoor: 114,950 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36

Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Building Construction 2	Air Compressors	1	8.00	78	0.48
Building Construction 2	Cranes	1	7.00	226	0.29
Building Construction 2	Forklifts	0	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45
Building Construction 3	Air Compressors	1	8.00	78	0.48
Building Construction 3	Cranes	1	7.00	226	0.29
Building Construction 3	Forklifts	1	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 3	Welders	1	8.00	46	0.45
Building Construction 4	Air Compressors	1	8.00	78	0.48
Building Construction 4	Cranes	1	7.00	226	0.29
Building Construction 4	Forklifts	2	8.00	89	0.20
Building Construction 4	Generator Sets	0	8.00	84	0.74
Building Construction 4	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 4	Welders	2	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	4	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	7	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	8	455.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5235	5.6834	3.8274	9.2300e-003		0.2381	0.2381		0.2190	0.2190		894.2007	894.2007	0.2892		900.2739
Total	**0.5235**	**5.6834**	**3.8274**	**9.2300e-003**	**0.0000**	**0.2381**	**0.2381**	**0.0000**	**0.2190**	**0.2190**		**894.2007**	**894.2007**	**0.2892**		**900.2739**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0135	0.1016	0.1999	4.3000e-004	0.0125	1.8900e-003	0.0144	3.5600e-003	1.7400e-003	5.3000e-003		40.0988	40.0988	3.0000e-004		40.1051
Worker	0.0504	0.0670	0.7033	2.3900e-003	0.2012	1.5400e-003	0.2027	0.0534	1.4300e-003	0.0548		168.8952	168.8952	7.9800e-003		169.0628
Total	**0.0639**	**0.1686**	**0.9033**	**2.8200e-003**	**0.2137**	**3.4300e-003**	**0.2171**	**0.0569**	**3.1700e-003**	**0.0601**		**208.9939**	**208.9939**	**8.2800e-003**		**209.1679**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1138	0.4931	5.1218	9.2300e-003		0.0152	0.0152		0.0152	0.0152	0.0000	894.2007	894.2007	0.2892		900.2739
Total	**0.1138**	**0.4931**	**5.1218**	**9.2300e-003**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**894.2007**	**894.2007**	**0.2892**		**900.2739**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0135	0.1016	0.1999	4.3000e-004	0.0125	1.8900e-003	0.0144	3.5600e-003	1.7400e-003	5.3000e-003		40.0988	40.0988	3.0000e-004		40.1051
Worker	0.0504	0.0670	0.7033	2.3900e-003	0.2012	1.5400e-003	0.2027	0.0534	1.4300e-003	0.0548		168.8952	168.8952	7.9800e-003		169.0628
Total	**0.0639**	**0.1686**	**0.9033**	**2.8200e-003**	**0.2137**	**3.4300e-003**	**0.2171**	**0.0569**	**3.1700e-003**	**0.0601**		**208.9939**	**208.9939**	**8.2800e-003**		**209.1679**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6197	16.4941	12.9193	0.0235		0.8397	0.8397		0.7825	0.7825		2,269.7861	2,269.7861	0.6385		2,283.1942
Total	**1.6197**	**16.4941**	**12.9193**	**0.0235**		**0.8397**	**0.8397**		**0.7825**	**0.7825**		**2,269.7861**	**2,269.7861**	**0.6385**		**2,283.1942**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2570	1.9303	3.7989	8.1500e-003	0.2376	0.0359	0.2735	0.0677	0.0331	0.1007		761.8762	761.8762	5.7300e-003		761.9966
Worker	0.7559	1.0045	10.5498	0.0358	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,533.4277	2,533.4277	0.1197		2,535.9415
Total	**1.0129**	**2.9348**	**14.3487**	**0.0439**	**3.2556**	**0.0590**	**3.3146**	**0.8681**	**0.0545**	**0.9225**		**3,295.3040**	**3,295.3040**	**0.1254**		**3,297.9381**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2795	1.2113	14.2030	0.0235		0.0373	0.0373		0.0373	0.0373	0.0000	2,269.7861	2,269.7861	0.6385		2,283.1942
Total	**0.2795**	**1.2113**	**14.2030**	**0.0235**		**0.0373**	**0.0373**		**0.0373**	**0.0373**	**0.0000**	**2,269.7861**	**2,269.7861**	**0.6385**		**2,283.1942**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2570	1.9303	3.7989	8.1500e-003	0.2376	0.0359	0.2735	0.0677	0.0331	0.1007		761.8762	761.8762	5.7300e-003		761.9966
Worker	0.7559	1.0045	10.5498	0.0358	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,533.4277	2,533.4277	0.1197		2,535.9415
Total	**1.0129**	**2.9348**	**14.3487**	**0.0439**	**3.2556**	**0.0590**	**3.3146**	**0.8681**	**0.0545**	**0.9225**		**3,295.3040**	**3,295.3040**	**0.1254**		**3,297.9381**

3.4 Building Construction 2 - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9731	9.5048	8.0763	0.0143		0.4896	0.4896		0.4605	0.4605		1,380.1534	1,380.1534	0.3508		1,387.5193
Total	**0.9731**	**9.5048**	**8.0763**	**0.0143**		**0.4896**	**0.4896**		**0.4605**	**0.4605**		**1,380.1534**	**1,380.1534**	**0.3508**		**1,387.5193**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2570	1.9303	3.7989	8.1500e-003	0.2376	0.0359	0.2735	0.0677	0.0331	0.1007		761.8762	761.8762	5.7300e-003		761.9966
Worker	0.7559	1.0045	10.5498	0.0358	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,533.4277	2,533.4277	0.1197		2,535.9415
Total	**1.0129**	**2.9348**	**14.3487**	**0.0439**	**3.2556**	**0.0590**	**3.3146**	**0.8681**	**0.0545**	**0.9225**		**3,295.3040**	**3,295.3040**	**0.1254**		**3,297.9381**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1668	0.7227	8.7670	0.0143		0.0222	0.0222		0.0222	0.0222	0.0000	1,380.1534	1,380.1534	0.3508		1,387.5193
Total	**0.1668**	**0.7227**	**8.7670**	**0.0143**		**0.0222**	**0.0222**		**0.0222**	**0.0222**	**0.0000**	**1,380.1534**	**1,380.1534**	**0.3508**		**1,387.5193**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2570	1.9303	3.7989	8.1500e-003	0.2376	0.0359	0.2735	0.0677	0.0331	0.1007		761.8762	761.8762	5.7300e-003		761.9966
Worker	0.7559	1.0045	10.5498	0.0358	3.0180	0.0231	3.0411	0.8004	0.0214	0.8218		2,533.4277	2,533.4277	0.1197		2,535.9415
Total	**1.0129**	**2.9348**	**14.3487**	**0.0439**	**3.2556**	**0.0590**	**3.3146**	**0.8681**	**0.0545**	**0.9225**		**3,295.3040**	**3,295.3040**	**0.1254**		**3,297.9381**

3.4 Building Construction 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8803	8.3923	7.9545	0.0144		0.4154	0.4154		0.3909	0.3909		1,380.8249	1,380.8249	0.3497		1,388.1675
Total	**0.8803**	**8.3923**	**7.9545**	**0.0144**		**0.4154**	**0.4154**		**0.3909**	**0.3909**		**1,380.8249**	**1,380.8249**	**0.3497**		**1,388.1675**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2513	1.7521	3.7100	8.1400e-003	0.2376	0.0355	0.2731	0.0677	0.0327	0.1004		761.1881	761.1881	5.8600e-003		761.3112
Worker	0.7159	0.9420	9.9171	0.0358	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,491.3126	2,491.3126	0.1146		2,493.7197
Total	**0.9672**	**2.6941**	**13.6271**	**0.0439**	**3.2556**	**0.0586**	**3.3142**	**0.8681**	**0.0541**	**0.9221**		**3,252.5007**	**3,252.5007**	**0.1205**		**3,255.0308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1668	0.7227	8.7670	0.0144		0.0222	0.0222		0.0222	0.0222	0.0000	1,380.8249	1,380.8249	0.3497		1,388.1675
Total	**0.1668**	**0.7227**	**8.7670**	**0.0144**		**0.0222**	**0.0222**		**0.0222**	**0.0222**	**0.0000**	**1,380.8249**	**1,380.8249**	**0.3497**		**1,388.1675**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2513	1.7521	3.7100	8.1400e-003	0.2376	0.0355	0.2731	0.0677	0.0327	0.1004		761.1881	761.1881	5.8600e-003		761.3112
Worker	0.7159	0.9420	9.9171	0.0358	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,491.3126	2,491.3126	0.1146		2,493.7197
Total	**0.9672**	**2.6941**	**13.6271**	**0.0439**	**3.2556**	**0.0586**	**3.3142**	**0.8681**	**0.0541**	**0.9221**		**3,252.5007**	**3,252.5007**	**0.1205**		**3,255.0308**

3.5 Building Construction 3 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4147	12.3763	12.7623	0.0212		0.6280	0.6280		0.5916	0.5916		1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**1.4147**	**12.3763**	**12.7623**	**0.0212**		**0.6280**	**0.6280**		**0.5916**	**0.5916**		**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2513	1.7521	3.7100	8.1400e-003	0.2376	0.0355	0.2731	0.0677	0.0327	0.1004		761.1881	761.1881	5.8600e-003		761.3112
Worker	0.7159	0.9420	9.9171	0.0358	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,491.3126	2,491.3126	0.1146		2,493.7197
Total	**0.9672**	**2.6941**	**13.6271**	**0.0439**	**3.2556**	**0.0586**	**3.3142**	**0.8681**	**0.0541**	**0.9221**		**3,252.5007**	**3,252.5007**	**0.1205**		**3,255.0308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4956	2.4112	13.6737	0.0212		0.0931	0.0931		0.0931	0.0931	0.0000	1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**0.4956**	**2.4112**	**13.6737**	**0.0212**		**0.0931**	**0.0931**		**0.0931**	**0.0931**	**0.0000**	**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2513	1.7521	3.7100	8.1400e-003	0.2376	0.0355	0.2731	0.0677	0.0327	0.1004		761.1881	761.1881	5.8600e-003		761.3112
Worker	0.7159	0.9420	9.9171	0.0358	3.0180	0.0231	3.0410	0.8004	0.0214	0.8218		2,491.3126	2,491.3126	0.1146		2,493.7197
Total	**0.9672**	**2.6941**	**13.6271**	**0.0439**	**3.2556**	**0.0586**	**3.3142**	**0.8681**	**0.0541**	**0.9221**		**3,252.5007**	**3,252.5007**	**0.1205**		**3,255.0308**

3.6 Building Construction 4 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	1.5353	12.4515	13.5355	0.0225		0.5924	0.5924		0.5614	0.5614		2,092.4232	2,092.4232	0.4889		2,102.6897
Total	**1.5353**	**12.4515**	**13.5355**	**0.0225**		**0.5924**	**0.5924**		**0.5614**	**0.5614**		**2,092.4232**	**2,092.4232**	**0.4889**		**2,102.6897**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2456	1.4652	3.7602	8.5200e-003	0.2501	0.0369	0.2870	0.0712	0.0340	0.1052		797.3788	797.3788	5.5700e-003		797.4957
Worker	1.1431	1.4937	15.7384	0.0603	5.0858	0.0389	5.1247	1.3488	0.0361	1.3848		4,133.5666	4,133.5666	0.1856		4,137.4640
Total	**1.3887**	**2.9590**	**19.4986**	**0.0688**	**5.3360**	**0.0758**	**5.4117**	**1.4200**	**0.0700**	**1.4901**		**4,930.9454**	**4,930.9454**	**0.1912**		**4,934.9597**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7134	3.7270	14.4460	0.0225		0.1375	0.1375		0.1375	0.1375	0.0000	2,092.4232	2,092.4232	0.4889		2,102.6897
Total	**0.7134**	**3.7270**	**14.4460**	**0.0225**		**0.1375**	**0.1375**		**0.1375**	**0.1375**	**0.0000**	**2,092.4232**	**2,092.4232**	**0.4889**		**2,102.6897**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2456	1.4652	3.7602	8.5200e-003	0.2501	0.0369	0.2870	0.0712	0.0340	0.1052		797.3788	797.3788	5.5700e-003		797.4957
Worker	1.1431	1.4937	15.7384	0.0603	5.0858	0.0389	5.1247	1.3488	0.0361	1.3848		4,133.5666	4,133.5666	0.1856		4,137.4640
Total	**1.3887**	**2.9590**	**19.4986**	**0.0688**	**5.3360**	**0.0758**	**5.4117**	**1.4200**	**0.0700**	**1.4901**		**4,930.9454**	**4,930.9454**	**0.1912**		**4,934.9597**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.7363					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8017
Total	**46.9279**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2311	0.3020	3.1823	0.0122	1.0283	7.8600e-003	1.0362	0.2727	7.2900e-003	0.2800		835.7981	835.7981	0.0375		836.5861
Total	**0.2311**	**0.3020**	**3.1823**	**0.0122**	**1.0283**	**7.8600e-003**	**1.0362**	**0.2727**	**7.2900e-003**	**0.2800**		**835.7981**	**835.7981**	**0.0375**		**836.5861**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	46.7363					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8017
Total	**46.7660**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2311	0.3020	3.1823	0.0122	1.0283	7.8600e-003	1.0362	0.2727	7.2900e-003	0.2800		835.7981	835.7981	0.0375		836.5861
Total	**0.2311**	**0.3020**	**3.1823**	**0.0122**	**1.0283**	**7.8600e-003**	**1.0362**	**0.2727**	**7.2900e-003**	**0.2800**		**835.7981**	**835.7981**	**0.0375**		**836.5861**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8875	8.4087	9.5685	0.0139		0.4855	0.4855		0.4478	0.4478		1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8875**	**8.4087**	**9.5685**	**0.0139**		**0.4855**	**0.4855**		**0.4478**	**0.4478**		**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2010	0.2626	2.7672	0.0106	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		726.7809	726.7809	0.0326		727.4662
Total	**0.2010**	**0.2626**	**2.7672**	**0.0106**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**726.7809**	**726.7809**	**0.0326**		**727.4662**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2985	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2208**	**1.0702**	**10.2985**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2010	0.2626	2.7672	0.0106	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		726.7809	726.7809	0.0326		727.4662
Total	**0.2010**	**0.2626**	**2.7672**	**0.0106**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**726.7809**	**726.7809**	**0.0326**		**727.4662**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase 3 Construction Emissions

Harbor UCLA Master Plan- Phase 3

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0
Unenclosed Parking with Elevator	580.00	Space	5.22	250,580.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Architectural Coating - Parking Lot- 6% of square footage= Interior Area

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	62.00

tblConstructionPhase	NumDays	230.00	355.00
tblConstructionPhase	NumDays	20.00	221.00
tblConstructionPhase	NumDays	20.00	121.00
tblConstructionPhase	NumDays	20.00	62.00
tblConstructionPhase	PhaseEndDate	6/22/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	5/4/2022	11/16/2021
tblConstructionPhase	PhaseEndDate	6/22/2023	3/28/2023
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2023
tblConstructionPhase	PhaseStartDate	11/17/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2023
tblGrading	MaterialExported	0.00	18,052.00
tblGrading	MaterialImported	0.00	30,126.00
tblLandUse	LandUseSquareFeet	232,000.00	250,580.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblTripsAndVMT	HaulingTripNumber	201.00	3,859.00
tblTripsAndVMT	HaulingTripNumber	6,022.00	8,030.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	140.00
tblTripsAndVMT	WorkerTripNumber	10.00	280.00

tblTripsAndVMT	WorkerTripNumber	109.00	715.00
tblTripsAndVMT	WorkerTripNumber	13.00	48.00
tblTripsAndVMT	WorkerTripNumber	22.00	80.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.1373	61.9759	75.5978	0.1852	12.9747	2.6756	15.6502	5.0564	2.4895	7.5459	0.0000	16,187.6570	16,187.6570	1.8970	0.0000	16,227.4949
2022	3.1857	13.6150	41.0362	0.1256	8.2609	0.5555	8.8164	2.1961	0.5178	2.7139	0.0000	9,321.0800	9,321.0800	0.7131	0.0000	9,336.0551
2023	101.8004	22.4873	55.4435	0.1606	9.6916	1.0656	10.7572	2.5755	0.9932	3.5688	0.0000	12,062.8442	12,062.8442	1.1868	0.0000	12,087.7658
Total	**112.1234**	**98.0782**	**172.0774**	**0.4714**	**30.9272**	**4.2967**	**35.2238**	**9.8280**	**4.0005**	**13.8285**	**0.0000**	**37,571.5812**	**37,571.5812**	**3.7969**	**0.0000**	**37,651.3158**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.2006	19.2938	71.8046	0.1852	8.8304	0.4621	9.2925	2.9799	0.4334	3.4132	0.0000	16,187.6570	16,187.6570	1.8970	0.0000	16,227.4948
2022	2.6105	6.6784	41.8314	0.1256	8.2609	0.1987	8.4596	2.1961	0.1911	2.3872	0.0000	9,321.0800	9,321.0800	0.7131	0.0000	9,336.0551
2023	100.4494	7.6937	57.0602	0.1606	9.6916	0.2402	9.9318	2.5755	0.2318	2.8074	0.0000	12,062.8442	12,062.8442	1.1868	0.0000	12,087.7658
Total	**106.2605**	**33.6659**	**170.6962**	**0.4714**	**26.7829**	**0.9009**	**27.6838**	**7.7515**	**0.8562**	**8.6078**	**0.0000**	**37,571.5812**	**37,571.5812**	**3.7969**	**0.0000**	**37,651.3158**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.23**	**65.67**	**0.80**	**0.00**	**13.40**	**79.03**	**21.41**	**21.13**	**78.60**	**37.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/12/2021	11/16/2021	5	221	
2	Grading	Grading	6/1/2021	11/16/2021	5	121	
3	Building Construction	Building Construction	11/17/2021	3/28/2023	5	355	
4	Paving	Paving	1/1/2023	3/28/2023	5	62	
5	Architectural Coating	Architectural Coating	1/1/2023	3/28/2023	5	62	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 390,870; Non-Residential Outdoor: 130,290 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	140.00	2.00	3,859.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	280.00	2.00	8,030.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	715.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	48.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1966	0.0000	0.1966	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	2.7882	26.8993	26.3204	0.0422		1.3324	1.3324		1.2535	1.2535		4,055.8690	4,055.8690	0.9972		4,076.8106
Total	**2.7882**	**26.8993**	**26.3204**	**0.0422**	**0.1966**	**1.3324**	**1.5290**	**0.0298**	**1.2535**	**1.2833**		**4,055.8690**	**4,055.8690**	**0.9972**		**4,076.8106**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2648	3.0062	3.0476	0.0128	0.3044	0.0672	0.3716	0.0834	0.0619	0.1452		1,204.0587	1,204.0587	9.3700e-003		1,204.2555
Vendor	0.0125	0.0993	0.1617	4.3000e-004	0.0125	1.8800e-003	0.0144	3.5600e-003	1.7300e-003	5.2900e-003		40.4419	40.4419	2.9000e-004		40.4480
Worker	0.3858	0.4750	6.0186	0.0198	1.5649	0.0120	1.5769	0.4150	0.0111	0.4261		1,401.7225	1,401.7225	0.0621		1,403.0260
Total	**0.6630**	**3.5806**	**9.2278**	**0.0330**	**1.8817**	**0.0811**	**1.9628**	**0.5019**	**0.0747**	**0.5766**		**2,646.2231**	**2,646.2231**	**0.0717**		**2,647.7295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0767	0.0000	0.0767	0.0116	0.0000	0.0116			0.0000			0.0000
Off-Road	0.4880	2.1146	25.4982	0.0422		0.0651	0.0651		0.0651	0.0651	0.0000	4,055.8690	4,055.8690	0.9972		4,076.8106
Total	**0.4880**	**2.1146**	**25.4982**	**0.0422**	**0.0767**	**0.0651**	**0.1417**	**0.0116**	**0.0651**	**0.0767**	**0.0000**	**4,055.8690**	**4,055.8690**	**0.9972**		**4,076.8106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2648	3.0062	3.0476	0.0128	0.3044	0.0672	0.3716	0.0834	0.0619	0.1452		1,204.0587	1,204.0587	9.3700e-003		1,204.2555
Vendor	0.0125	0.0993	0.1617	4.3000e-004	0.0125	1.8800e-003	0.0144	3.5600e-003	1.7300e-003	5.2900e-003		40.4419	40.4419	2.9000e-004		40.4480
Worker	0.3858	0.4750	6.0186	0.0198	1.5649	0.0120	1.5769	0.4150	0.0111	0.4261		1,401.7225	1,401.7225	0.0621		1,403.0260
Total	**0.6630**	**3.5806**	**9.2278**	**0.0330**	**1.8817**	**0.0811**	**1.9628**	**0.5019**	**0.0747**	**0.5766**		**2,646.2231**	**2,646.2231**	**0.0717**		**2,647.7295**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5974	0.0000	6.5974	3.3743	0.0000	3.3743			0.0000			0.0000
Off-Road	1.8959	19.0213	16.2682	0.0213		0.9807	0.9807		0.9023	0.9023		2,065.5797	2,065.5797	0.6681		2,079.6088
Total	**1.8959**	**19.0213**	**16.2682**	**0.0213**	**6.5974**	**0.9807**	**7.5781**	**3.3743**	**0.9023**	**4.2766**		**2,065.5797**	**2,065.5797**	**0.6681**		**2,079.6088**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0062	11.4253	11.5825	0.0487	1.1568	0.2555	1.4123	0.3168	0.2351	0.5519		4,576.0982	4,576.0982	0.0356		4,576.8461
Vendor	0.0125	0.0993	0.1617	4.3000e-004	0.0125	1.8800e-003	0.0144	3.5600e-003	1.7300e-003	5.2900e-003		40.4419	40.4419	2.9000e-004		40.4480
Worker	0.7715	0.9501	12.0371	0.0396	3.1297	0.0240	3.1537	0.8300	0.0222	0.8522		2,803.4450	2,803.4450	0.1241		2,806.0519
Total	**1.7902**	**12.4747**	**23.7813**	**0.0887**	**4.2990**	**0.2814**	**4.5803**	**1.1504**	**0.2590**	**1.4094**		**7,419.9851**	**7,419.9851**	**0.1600**		**7,423.3460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5730	0.0000	2.5730	1.3160	0.0000	1.3160			0.0000			0.0000
Off-Road	0.2594	1.1240	13.2973	0.0213		0.0346	0.0346		0.0346	0.0346	0.0000	2,065.5797	2,065.5797	0.6681		2,079.6088
Total	**0.2594**	**1.1240**	**13.2973**	**0.0213**	**2.5730**	**0.0346**	**2.6076**	**1.3160**	**0.0346**	**1.3506**	**0.0000**	**2,065.5797**	**2,065.5797**	**0.6681**		**2,079.6088**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0062	11.4253	11.5825	0.0487	1.1568	0.2555	1.4123	0.3168	0.2351	0.5519		4,576.0982	4,576.0982	0.0356		4,576.8461
Vendor	0.0125	0.0993	0.1617	4.3000e-004	0.0125	1.8800e-003	0.0144	3.5600e-003	1.7300e-003	5.2900e-003		40.4419	40.4419	2.9000e-004		40.4480
Worker	0.7715	0.9501	12.0371	0.0396	3.1297	0.0240	3.1537	0.8300	0.0222	0.8522		2,803.4450	2,803.4450	0.1241		2,806.0519
Total	**1.7902**	**12.4747**	**23.7813**	**0.0887**	**4.2990**	**0.2814**	**4.5803**	**1.1504**	**0.2590**	**1.4094**		**7,419.9851**	**7,419.9851**	**0.1600**		**7,423.3460**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1719	10.5252	8.8479	0.0152		0.5363	0.5363		0.5004	0.5004		1,410.9143	1,410.9143	0.4051		1,419.4222
Total	**1.1719**	**10.5252**	**8.8479**	**0.0152**		**0.5363**	**0.5363**		**0.5004**	**0.5004**		**1,410.9143**	**1,410.9143**	**0.4051**		**1,419.4222**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2686	2.1356	3.4763	9.2800e-003	0.2689	0.0403	0.3092	0.0766	0.0371	0.1137		869.5009	869.5009	6.2600e-003		869.6324
Worker	1.9701	2.4260	30.7376	0.1012	7.9920	0.0612	8.0532	2.1195	0.0567	2.1763		7,158.7972	7,158.7972	0.3170		7,165.4540
Total	**2.2388**	**4.5616**	**34.2139**	**0.1105**	**8.2609**	**0.1015**	**8.3624**	**2.1961**	**0.0938**	**2.2899**		**8,028.2981**	**8,028.2981**	**0.3233**		**8,035.0864**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5074	2.5097	9.5125	0.0152		0.1079	0.1079		0.1079	0.1079	0.0000	1,410.9143	1,410.9143	0.4051		1,419.4222
Total	**0.5074**	**2.5097**	**9.5125**	**0.0152**		**0.1079**	**0.1079**		**0.1079**	**0.1079**	**0.0000**	**1,410.9143**	**1,410.9143**	**0.4051**		**1,419.4222**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2686	2.1356	3.4763	9.2800e-003	0.2689	0.0403	0.3092	0.0766	0.0371	0.1137		869.5009	869.5009	6.2600e-003		869.6324
Worker	1.9701	2.4260	30.7376	0.1012	7.9920	0.0612	8.0532	2.1195	0.0567	2.1763		7,158.7972	7,158.7972	0.3170		7,165.4540
Total	**2.2388**	**4.5616**	**34.2139**	**0.1105**	**8.2609**	**0.1015**	**8.3624**	**2.1961**	**0.0938**	**2.2899**		**8,028.2981**	**8,028.2981**	**0.3233**		**8,035.0864**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0566	9.4003	8.6944	0.0152		0.4545	0.4545		0.4244	0.4244		1,411.5857	1,411.5857	0.4032		1,420.0522
Total	**1.0566**	**9.4003**	**8.6944**	**0.0152**		**0.4545**	**0.4545**		**0.4244**	**0.4244**		**1,411.5857**	**1,411.5857**	**0.4032**		**1,420.0522**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2632	1.9384	3.3959	9.2700e-003	0.2689	0.0399	0.3088	0.0766	0.0367	0.1133		868.7174	868.7174	6.3900e-003		868.8516
Worker	1.8659	2.2763	28.9459	0.1012	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		7,040.7770	7,040.7770	0.3035		7,047.1513
Total	**2.1291**	**4.2147**	**32.3418**	**0.1104**	**8.2609**	**0.1010**	**8.3619**	**2.1961**	**0.0934**	**2.2895**		**7,909.4943**	**7,909.4943**	**0.3099**		**7,916.0030**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4815	2.4637	9.4896	0.0152		0.0977	0.0977		0.0977	0.0977	0.0000	1,411.5857	1,411.5857	0.4032		1,420.0522
Total	**0.4815**	**2.4637**	**9.4896**	**0.0152**		**0.0977**	**0.0977**		**0.0977**	**0.0977**	**0.0000**	**1,411.5857**	**1,411.5857**	**0.4032**		**1,420.0522**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2632	1.9384	3.3959	9.2700e-003	0.2689	0.0399	0.3088	0.0766	0.0367	0.1133		868.7174	868.7174	6.3900e-003		868.8516
Worker	1.8659	2.2763	28.9459	0.1012	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		7,040.7770	7,040.7770	0.3035		7,047.1513
Total	**2.1291**	**4.2147**	**32.3418**	**0.1104**	**8.2609**	**0.1010**	**8.3619**	**2.1961**	**0.0934**	**2.2895**		**7,909.4943**	**7,909.4943**	**0.3099**		**7,916.0030**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9815	8.7022	8.6063	0.0152		0.3978	0.3978		0.3716	0.3716		1,412.1669	1,412.1669	0.4012		1,420.5913
Total	**0.9815**	**8.7022**	**8.6063**	**0.0152**		**0.3978**	**0.3978**		**0.3716**	**0.3716**		**1,412.1669**	**1,412.1669**	**0.4012**		**1,420.5913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2437	1.5465	3.2578	9.2300e-003	0.2689	0.0394	0.3083	0.0766	0.0362	0.1128		864.5566	864.5566	5.7500e-003		864.6773
Worker	1.7676	2.1433	27.3106	0.1011	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		6,933.2035	6,933.2035	0.2916		6,939.3279
Total	**2.0113**	**3.6897**	**30.5684**	**0.1104**	**8.2609**	**0.1005**	**8.3614**	**2.1961**	**0.0929**	**2.2890**		**7,797.7600**	**7,797.7600**	**0.2974**		**7,804.0052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4592	2.4213	9.4716	0.0152		0.0889	0.0889		0.0889	0.0889	0.0000	1,412.1669	1,412.1669	0.4012		1,420.5913
Total	**0.4592**	**2.4213**	**9.4716**	**0.0152**		**0.0889**	**0.0889**		**0.0889**	**0.0889**	**0.0000**	**1,412.1669**	**1,412.1669**	**0.4012**		**1,420.5913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2437	1.5465	3.2578	9.2300e-003	0.2689	0.0394	0.3083	0.0766	0.0362	0.1128		864.5566	864.5566	5.7500e-003		864.6773
Worker	1.7676	2.1433	27.3106	0.1011	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		6,933.2035	6,933.2035	0.2916		6,939.3279
Total	**2.0113**	**3.6897**	**30.5684**	**0.1104**	**8.2609**	**0.1005**	**8.3614**	**2.1961**	**0.0929**	**2.2890**		**7,797.7600**	**7,797.7600**	**0.2974**		**7,804.0052**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8875	8.4087	9.5685	0.0139		0.4855	0.4855		0.4478	0.4478		1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	9.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8973**	**8.4087**	**9.5685**	**0.0139**		**0.4855**	**0.4855**		**0.4478**	**0.4478**		**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1187	0.1439	1.8334	6.7900e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		465.4458	465.4458	0.0196		465.8570
Total	**0.1187**	**0.1439**	**1.8334**	**6.7900e-003**	**0.5365**	**4.1000e-003**	**0.5406**	**0.1423**	**3.8000e-003**	**0.1461**		**465.4458**	**465.4458**	**0.0196**		**465.8570**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2985	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	9.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2305**	**1.0702**	**10.2985**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1187	0.1439	1.8334	6.7900e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		465.4458	465.4458	0.0196		465.8570
Total	**0.1187**	**0.1439**	**1.8334**	**6.7900e-003**	**0.5365**	**4.1000e-003**	**0.5406**	**0.1423**	**3.8000e-003**	**0.1461**		**465.4458**	**465.4458**	**0.0196**		**465.8570**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	97.4023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8017
Total	**97.5939**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1978	0.2398	3.0557	0.0113	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		775.7430	775.7430	0.0326		776.4283
Total	**0.1978**	**0.2398**	**3.0557**	**0.0113**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**775.7430**	**775.7430**	**0.0326**		**776.4283**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	97.4023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8017
Total	**97.4320**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1978	0.2398	3.0557	0.0113	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		775.7430	775.7430	0.0326		776.4283
Total	**0.1978**	**0.2398**	**3.0557**	**0.0113**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**775.7430**	**775.7430**	**0.0326**		**776.4283**

Harbor UCLA Master Plan- Phase 3

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0
Unenclosed Parking with Elevator	580.00	Space	5.22	250,580.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Architectural Coating - Parking Lot- 6% of square footage= Interior Area

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	62.00

tblConstructionPhase	NumDays	230.00	355.00
tblConstructionPhase	NumDays	20.00	221.00
tblConstructionPhase	NumDays	20.00	121.00
tblConstructionPhase	NumDays	20.00	62.00
tblConstructionPhase	PhaseEndDate	6/22/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	5/4/2022	11/16/2021
tblConstructionPhase	PhaseEndDate	6/22/2023	3/28/2023
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2023
tblConstructionPhase	PhaseStartDate	11/17/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2023
tblGrading	MaterialExported	0.00	18,052.00
tblGrading	MaterialImported	0.00	30,126.00
tblLandUse	LandUseSquareFeet	232,000.00	250,580.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblTripsAndVMT	HaulingTripNumber	201.00	3,859.00
tblTripsAndVMT	HaulingTripNumber	6,022.00	8,030.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	140.00
tblTripsAndVMT	WorkerTripNumber	10.00	280.00

tblTripsAndVMT	WorkerTripNumber	109.00	715.00
tblTripsAndVMT	WorkerTripNumber	13.00	48.00
tblTripsAndVMT	WorkerTripNumber	22.00	80.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.2109	62.6323	76.4315	0.1813	12.9747	2.6763	15.6509	5.0564	2.4901	7.5465	0.0000	15,908.8893	15,908.8893	1.8978	0.0000	15,948.7421
2022	3.2368	13.8775	39.1545	0.1191	8.2609	0.5558	8.8167	2.1961	0.5181	2.7142	0.0000	8,870.2949	8,870.2949	0.7133	0.0000	8,885.2750
2023	101.8546	22.7565	53.1873	0.1529	9.6916	1.0659	10.7575	2.5755	0.9935	3.5691	0.0000	11,539.5317	11,539.5317	1.1870	0.0000	11,564.4584
Total	**112.3024**	**99.2662**	**168.7733**	**0.4533**	**30.9272**	**4.2980**	**35.2251**	**9.8280**	**4.0017**	**13.8297**	**0.0000**	**36,318.7160**	**36,318.7160**	**3.7981**	**0.0000**	**36,398.4754**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.2742	19.9502	72.6383	0.1813	8.8304	0.4628	9.2931	2.9799	0.4340	3.4139	0.0000	15,908.8893	15,908.8893	1.8978	0.0000	15,948.7421
2022	2.6617	6.9408	39.9498	0.1191	8.2609	0.1990	8.4599	2.1961	0.1913	2.3874	0.0000	8,870.2949	8,870.2949	0.7133	0.0000	8,885.2750
2023	100.5036	7.9630	54.8040	0.1529	9.6916	0.2405	9.9321	2.5755	0.2321	2.8076	0.0000	11,539.5317	11,539.5317	1.1870	0.0000	11,564.4583
Total	**106.4395**	**34.8540**	**167.3921**	**0.4533**	**26.7829**	**0.9022**	**27.6851**	**7.7515**	**0.8574**	**8.6090**	**0.0000**	**36,318.7160**	**36,318.7160**	**3.7981**	**0.0000**	**36,398.4754**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.22**	**64.89**	**0.82**	**0.00**	**13.40**	**79.01**	**21.41**	**21.13**	**78.57**	**37.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/12/2021	11/16/2021	5	221	
2	Grading	Grading	6/1/2021	11/16/2021	5	121	
3	Building Construction	Building Construction	11/17/2021	3/28/2023	5	355	
4	Paving	Paving	1/1/2023	3/28/2023	5	62	
5	Architectural Coating	Architectural Coating	1/1/2023	3/28/2023	5	62	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 390,870; Non-Residential Outdoor: 130,290 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	140.00	2.00	3,859.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	280.00	2.00	8,030.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	715.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	48.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1966	0.0000	0.1966	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	2.7882	26.8993	26.3204	0.0422		1.3324	1.3324		1.2535	1.2535		4,055.8690	4,055.8690	0.9972		4,076.8106
Total	**2.7882**	**26.8993**	**26.3204**	**0.0422**	**0.1966**	**1.3324**	**1.5290**	**0.0298**	**1.2535**	**1.2833**		**4,055.8690**	**4,055.8690**	**0.9972**		**4,076.8106**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2758	3.1134	3.5480	0.0128	0.3044	0.0674	0.3717	0.0834	0.0620	0.1453		1,201.1838	1,201.1838	9.5100e-003		1,201.3836
Vendor	0.0135	0.1016	0.1999	4.3000e-004	0.0125	1.8900e-003	0.0144	3.5600e-003	1.7400e-003	5.3000e-003		40.0988	40.0988	3.0000e-004		40.1051
Worker	0.3920	0.5208	5.4703	0.0186	1.5649	0.0120	1.5769	0.4150	0.0111	0.4261		1,313.6292	1,313.6292	0.0621		1,314.9326
Total	**0.6813**	**3.7358**	**9.2182**	**0.0318**	**1.8817**	**0.0812**	**1.9630**	**0.5019**	**0.0748**	**0.5768**		**2,554.9117**	**2,554.9117**	**0.0719**		**2,556.4213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0767	0.0000	0.0767	0.0116	0.0000	0.0116			0.0000			0.0000
Off-Road	0.4880	2.1146	25.4982	0.0422		0.0651	0.0651		0.0651	0.0651	0.0000	4,055.8690	4,055.8690	0.9972		4,076.8106
Total	**0.4880**	**2.1146**	**25.4982**	**0.0422**	**0.0767**	**0.0651**	**0.1417**	**0.0116**	**0.0651**	**0.0767**	**0.0000**	**4,055.8690**	**4,055.8690**	**0.9972**		**4,076.8106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.2758	3.1134	3.5480	0.0128	0.3044	0.0674	0.3717	0.0834	0.0620	0.1453		1,201.1838	1,201.1838	9.5100e-003		1,201.3836
Vendor	0.0135	0.1016	0.1999	4.3000e-004	0.0125	1.8900e-003	0.0144	3.5600e-003	1.7400e-003	5.3000e-003		40.0988	40.0988	3.0000e-004		40.1051
Worker	0.3920	0.5208	5.4703	0.0186	1.5649	0.0120	1.5769	0.4150	0.0111	0.4261		1,313.6292	1,313.6292	0.0621		1,314.9326
Total	**0.6813**	**3.7358**	**9.2182**	**0.0318**	**1.8817**	**0.0812**	**1.9630**	**0.5019**	**0.0748**	**0.5768**		**2,554.9117**	**2,554.9117**	**0.0719**		**2,556.4213**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					6.5974	0.0000	6.5974	3.3743	0.0000	3.3743			0.0000			0.0000
Off-Road	1.8959	19.0213	16.2682	0.0213		0.9807	0.9807		0.9023	0.9023		2,065.5797	2,065.5797	0.6681		2,079.6088
Total	**1.8959**	**19.0213**	**16.2682**	**0.0213**	**6.5974**	**0.9807**	**7.5781**	**3.3743**	**0.9023**	**4.2766**		**2,065.5797**	**2,065.5797**	**0.6681**		**2,079.6088**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	1.0481	11.8326	13.4842	0.0486	1.1568	0.2560	1.4128	0.3168	0.2356	0.5523		4,565.1718	4,565.1718	0.0362		4,565.9311
Vendor	0.0135	0.1016	0.1999	4.3000e-004	0.0125	1.8900e-003	0.0144	3.5600e-003	1.7400e-003	5.3000e-003		40.0988	40.0988	3.0000e-004		40.1051
Worker	0.7839	1.0417	10.9405	0.0371	3.1297	0.0240	3.1537	0.8300	0.0222	0.8522		2,627.2584	2,627.2584	0.1241		2,629.8653
Total	**1.8456**	**12.9758**	**24.6247**	**0.0861**	**4.2990**	**0.2819**	**4.5809**	**1.1504**	**0.2595**	**1.4099**		**7,232.5289**	**7,232.5289**	**0.1606**		**7,235.9014**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5730	0.0000	2.5730	1.3160	0.0000	1.3160			0.0000			0.0000
Off-Road	0.2594	1.1240	13.2973	0.0213		0.0346	0.0346		0.0346	0.0346	0.0000	2,065.5797	2,065.5797	0.6681		2,079.6088
Total	**0.2594**	**1.1240**	**13.2973**	**0.0213**	**2.5730**	**0.0346**	**2.6076**	**1.3160**	**0.0346**	**1.3506**	**0.0000**	**2,065.5797**	**2,065.5797**	**0.6681**		**2,079.6088**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0481	11.8326	13.4842	0.0486	1.1568	0.2560	1.4128	0.3168	0.2356	0.5523		4,565.1718	4,565.1718	0.0362		4,565.9311
Vendor	0.0135	0.1016	0.1999	4.3000e-004	0.0125	1.8900e-003	0.0144	3.5600e-003	1.7400e-003	5.3000e-003		40.0988	40.0988	3.0000e-004		40.1051
Worker	0.7839	1.0417	10.9405	0.0371	3.1297	0.0240	3.1537	0.8300	0.0222	0.8522		2,627.2584	2,627.2584	0.1241		2,629.8653
Total	**1.8456**	**12.9758**	**24.6247**	**0.0861**	**4.2990**	**0.2819**	**4.5809**	**1.1504**	**0.2595**	**1.4099**		**7,232.5289**	**7,232.5289**	**0.1606**		**7,235.9014**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1719	10.5252	8.8479	0.0152		0.5363	0.5363		0.5004	0.5004		1,410.9143	1,410.9143	0.4051		1,419.4222
Total	**1.1719**	**10.5252**	**8.8479**	**0.0152**		**0.5363**	**0.5363**		**0.5004**	**0.5004**		**1,410.9143**	**1,410.9143**	**0.4051**		**1,419.4222**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2908	2.1843	4.2988	9.2200e-003	0.2689	0.0407	0.3095	0.0766	0.0374	0.1140		862.1231	862.1231	6.4900e-003		862.2593
Worker	2.0018	2.6600	27.9374	0.0947	7.9920	0.0612	8.0532	2.1195	0.0567	2.1763		6,708.8920	6,708.8920	0.3170		6,715.5488
Total	**2.2926**	**4.8443**	**32.2362**	**0.1040**	**8.2609**	**0.1018**	**8.3627**	**2.1961**	**0.0941**	**2.2902**		**7,571.0151**	**7,571.0151**	**0.3235**		**7,577.8081**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5074	2.5097	9.5125	0.0152		0.1079	0.1079		0.1079	0.1079	0.0000	1,410.9143	1,410.9143	0.4051		1,419.4222
Total	**0.5074**	**2.5097**	**9.5125**	**0.0152**		**0.1079**	**0.1079**		**0.1079**	**0.1079**	**0.0000**	**1,410.9143**	**1,410.9143**	**0.4051**		**1,419.4222**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2908	2.1843	4.2988	9.2200e-003	0.2689	0.0407	0.3095	0.0766	0.0374	0.1140		862.1231	862.1231	6.4900e-003		862.2593
Worker	2.0018	2.6600	27.9374	0.0947	7.9920	0.0612	8.0532	2.1195	0.0567	2.1763		6,708.8920	6,708.8920	0.3170		6,715.5488
Total	**2.2926**	**4.8443**	**32.2362**	**0.1040**	**8.2609**	**0.1018**	**8.3627**	**2.1961**	**0.0941**	**2.2902**		**7,571.0151**	**7,571.0151**	**0.3235**		**7,577.8081**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0566	9.4003	8.6944	0.0152		0.4545	0.4545		0.4244	0.4244		1,411.5857	1,411.5857	0.4032		1,420.0522
Total	**1.0566**	**9.4003**	**8.6944**	**0.0152**		**0.4545**	**0.4545**		**0.4244**	**0.4244**		**1,411.5857**	**1,411.5857**	**0.4032**		**1,420.0522**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2843	1.9826	4.1982	9.2100e-003	0.2689	0.0402	0.3091	0.0766	0.0370	0.1136		861.3444	861.3444	6.6300e-003		861.4837
Worker	1.8959	2.4945	26.2620	0.0947	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		6,597.3648	6,597.3648	0.3035		6,603.7392
Total	**2.1802**	**4.4771**	**30.4602**	**0.1039**	**8.2609**	**0.1013**	**8.3622**	**2.1961**	**0.0937**	**2.2898**		**7,458.7093**	**7,458.7093**	**0.3102**		**7,465.2228**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4815	2.4637	9.4896	0.0152		0.0977	0.0977		0.0977	0.0977	0.0000	1,411.5857	1,411.5857	0.4032		1,420.0522
Total	**0.4815**	**2.4637**	**9.4896**	**0.0152**		**0.0977**	**0.0977**		**0.0977**	**0.0977**	**0.0000**	**1,411.5857**	**1,411.5857**	**0.4032**		**1,420.0522**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2843	1.9826	4.1982	9.2100e-003	0.2689	0.0402	0.3091	0.0766	0.0370	0.1136		861.3444	861.3444	6.6300e-003		861.4837
Worker	1.8959	2.4945	26.2620	0.0947	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		6,597.3648	6,597.3648	0.3035		6,603.7392
Total	**2.1802**	**4.4771**	**30.4602**	**0.1039**	**8.2609**	**0.1013**	**8.3622**	**2.1961**	**0.0937**	**2.2898**		**7,458.7093**	**7,458.7093**	**0.3102**		**7,465.2228**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9815	8.7022	8.6063	0.0152		0.3978	0.3978		0.3716	0.3716		1,412.1669	1,412.1669	0.4012		1,420.5913
Total	**0.9815**	**8.7022**	**8.6063**	**0.0152**		**0.3978**	**0.3978**		**0.3716**	**0.3716**		**1,412.1669**	**1,412.1669**	**0.4012**		**1,420.5913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2640	1.5751	4.0422	9.1600e-003	0.2689	0.0397	0.3086	0.0766	0.0365	0.1131		857.1822	857.1822	5.9900e-003		857.3079
Worker	1.7963	2.3473	24.7317	0.0947	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		6,495.6047	6,495.6047	0.2916		6,501.7291
Total	**2.0604**	**3.9224**	**28.7740**	**0.1039**	**8.2609**	**0.1008**	**8.3617**	**2.1961**	**0.0932**	**2.2893**		**7,352.7869**	**7,352.7869**	**0.2976**		**7,359.0370**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4592	2.4213	9.4716	0.0152		0.0889	0.0889		0.0889	0.0889	0.0000	1,412.1669	1,412.1669	0.4012		1,420.5913
Total	**0.4592**	**2.4213**	**9.4716**	**0.0152**		**0.0889**	**0.0889**		**0.0889**	**0.0889**	**0.0000**	**1,412.1669**	**1,412.1669**	**0.4012**		**1,420.5913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2640	1.5751	4.0422	9.1600e-003	0.2689	0.0397	0.3086	0.0766	0.0365	0.1131		857.1822	857.1822	5.9900e-003		857.3079
Worker	1.7963	2.3473	24.7317	0.0947	7.9920	0.0611	8.0531	2.1195	0.0567	2.1762		6,495.6047	6,495.6047	0.2916		6,501.7291
Total	**2.0604**	**3.9224**	**28.7740**	**0.1039**	**8.2609**	**0.1008**	**8.3617**	**2.1961**	**0.0932**	**2.2893**		**7,352.7869**	**7,352.7869**	**0.2976**		**7,359.0370**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8875	8.4087	9.5685	0.0139		0.4855	0.4855		0.4478	0.4478		1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	9.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8973**	**8.4087**	**9.5685**	**0.0139**		**0.4855**	**0.4855**		**0.4478**	**0.4478**		**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1206	0.1576	1.6603	6.3600e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		436.0686	436.0686	0.0196		436.4797
Total	**0.1206**	**0.1576**	**1.6603**	**6.3600e-003**	**0.5365**	**4.1000e-003**	**0.5406**	**0.1423**	**3.8000e-003**	**0.1461**		**436.0686**	**436.0686**	**0.0196**		**436.4797**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2208	1.0702	10.2985	0.0139		0.0359	0.0359		0.0359	0.0359	0.0000	1,330.2804	1,330.2804	0.4192		1,339.0824
Paving	9.7200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2305**	**1.0702**	**10.2985**	**0.0139**		**0.0359**	**0.0359**		**0.0359**	**0.0359**	**0.0000**	**1,330.2804**	**1,330.2804**	**0.4192**		**1,339.0824**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1206	0.1576	1.6603	6.3600e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		436.0686	436.0686	0.0196		436.4797
Total	**0.1206**	**0.1576**	**1.6603**	**6.3600e-003**	**0.5365**	**4.1000e-003**	**0.5406**	**0.1423**	**3.8000e-003**	**0.1461**		**436.0686**	**436.0686**	**0.0196**		**436.4797**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	97.4023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8017
Total	**97.5939**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2010	0.2626	2.7672	0.0106	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		726.7809	726.7809	0.0326		727.4662
Total	**0.2010**	**0.2626**	**2.7672**	**0.0106**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**726.7809**	**726.7809**	**0.0326**		**727.4662**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	97.4023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8017
Total	**97.4320**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2010	0.2626	2.7672	0.0106	0.8942	6.8300e-003	0.9011	0.2372	6.3400e-003	0.2435		726.7809	726.7809	0.0326		727.4662
Total	**0.2010**	**0.2626**	**2.7672**	**0.0106**	**0.8942**	**6.8300e-003**	**0.9011**	**0.2372**	**6.3400e-003**	**0.2435**		**726.7809**	**726.7809**	**0.0326**		**727.4662**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase 4 Construction Emissions

Harbor UCLA Master Plan- Phase 4

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	450.00	1000sqft	10.33	450,000.00	0
Hospital	505.10	1000sqft	11.60	505,101.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	154.00
tblConstructionPhase	NumDays	370.00	283.00
tblConstructionPhase	NumDays	370.00	305.00
tblConstructionPhase	NumDays	35.00	154.00
tblConstructionPhase	NumDays	20.00	162.00
tblConstructionPhase	PhaseEndDate	9/3/2026	1/30/2026

tblConstructionPhase	PhaseEndDate	11/28/2024	11/30/2024
tblConstructionPhase	PhaseEndDate	9/15/2026	8/16/2027
tblConstructionPhase	PhaseStartDate	1/31/2026	7/1/2025
tblConstructionPhase	PhaseStartDate	10/31/2023	11/1/2023
tblConstructionPhase	PhaseStartDate	1/31/2026	1/1/2027
tblGrading	MaterialExported	0.00	22,675.00
tblGrading	MaterialImported	0.00	38,726.00
tblLandUse	LandUseSquareFeet	505,100.00	505,101.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	HaulingTripNumber	7,675.00	12,067.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	536.00
tblTripsAndVMT	WorkerTripNumber	306.00	3,654.00
tblTripsAndVMT	WorkerTripNumber	306.00	3,654.00
tblTripsAndVMT	WorkerTripNumber	61.00	360.00
tblTripsAndVMT	WorkerTripNumber	20.00	118.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	13.3289	46.1400	183.8585	0.6070	41.8248	1.8195	43.6443	11.1114	1.7046	12.8160	0.0000	43,919.1539	43,919.1539	2.9042	0.0000	43,980.1411
2024	12.6767	43.5723	176.8442	0.6099	41.8248	1.6574	43.4823	11.1114	1.5517	12.6631	0.0000	43,626.4431	43,626.4431	2.8578	0.0000	43,686.4564
2025	154.9427	26.8273	163.8082	0.6269	45.8488	0.9041	46.7529	12.1786	0.8506	13.0292	0.0000	43,349.0579	43,349.0579	1.9654	0.0000	43,390.3314
2026	154.5239	26.1842	157.8783	0.6268	45.8489	0.9001	46.7490	12.1786	0.8470	13.0256	0.0000	42,925.8404	42,925.8404	1.9209	0.0000	42,966.1793
2027	1.4760	11.1984	18.3241	0.0379	1.3190	0.5528	1.8717	0.3498	0.5131	0.8628	0.0000	3,085.2188	3,085.2188	0.6275	0.0000	3,098.3961
Total	**336.9482**	**153.9223**	**700.7133**	**2.5086**	**176.6663**	**5.8339**	**182.5002**	**46.9298**	**5.4670**	**52.3968**	**0.0000**	**176,905.7140**	**176,905.7140**	**10.2757**	**0.0000**	**177,121.5042**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.2663	23.3744	187.3334	0.6070	41.8248	0.6987	42.5235	11.1114	0.6646	11.7760	0.0000	43,919.1539	43,919.1539	2.9042	0.0000	43,980.1411
2024	10.7618	22.6489	180.4184	0.6099	41.8248	0.6790	42.5039	11.1114	0.6447	11.7561	0.0000	43,626.4431	43,626.4431	2.8578	0.0000	43,686.4564
2025	154.2415	19.9576	164.7979	0.6269	45.8488	0.6002	46.4490	12.1786	0.5635	12.7421	0.0000	43,349.0579	43,349.0579	1.9654	0.0000	43,390.3314
2026	153.8227	19.3145	158.8679	0.6268	45.8489	0.5962	46.4451	12.1786	0.5599	12.7385	0.0000	42,925.8404	42,925.8404	1.9209	0.0000	42,966.1793
2027	0.7401	2.9505	19.2357	0.0379	1.3190	0.0947	1.4137	0.3498	0.0940	0.4438	0.0000	3,085.2188	3,085.2188	0.6275	0.0000	3,098.3961
Total	**330.8323**	**88.2458**	**710.6533**	**2.5086**	**176.6663**	**2.6688**	**179.3351**	**46.9298**	**2.5266**	**49.4565**	**0.0000**	**176,905.7140**	**176,905.7140**	**10.2757**	**0.0000**	**177,121.5042**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.82**	**42.67**	**-1.42**	**0.00**	**0.00**	**54.25**	**1.73**	**0.00**	**53.78**	**5.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/29/2023	10/30/2023	5	154	
2	Building Construction 2	Building Construction	11/1/2023	11/30/2024	5	283	
3	Building Construction 3	Building Construction	12/1/2024	1/30/2026	5	305	
4	Architectural Coating	Architectural Coating	7/1/2025	1/30/2026	5	154	
5	Paving	Paving	1/1/2027	8/16/2027	5	162	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 77

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,432,652; Non-Residential Outdoor: 477,551 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction 2	Air Compressors	2	8.00	78	0.48
Building Construction 2	Cranes	2	7.00	226	0.29
Building Construction 2	Forklifts	2	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Rubber Tired Loaders	1	8.00	199	0.36

Building Construction 2	Tractors/Loaders/Backhoes	8	7.00	97	0.37
Building Construction 2	Welders	3	8.00	46	0.45
Building Construction 3	Air Compressors	1	8.00	78	0.48
Building Construction 3	Cranes	1	7.00	226	0.29
Building Construction 3	Forklifts	0	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 3	Welders	2	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Forklifts	1	8.00	89	0.20
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Paving	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	536.00	2.00	12,067.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	18	3,654.00	157.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	6	3,654.00	157.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	360.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	118.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5974	0.0000	6.5974	3.3743	0.0000	3.3743			0.0000			0.0000
Off-Road	1.7480	17.0015	17.6662	0.0245		0.8357	0.8357		0.7688	0.7688		2,369.2913	2,369.2913	0.7663		2,385.3831
Total	**1.7480**	**17.0015**	**17.6662**	**0.0245**	**6.5974**	**0.8357**	**7.4331**	**3.3743**	**0.7688**	**4.1432**		**2,369.2913**	**2,369.2913**	**0.7663**		**2,385.3831**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0534	8.8061	12.8028	0.0570	1.3660	0.2973	1.6633	0.3741	0.2735	0.6476		5,360.7156	5,360.7156	0.0370		5,361.4935
Vendor	0.0113	0.0719	0.1515	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.2119	40.2119	2.7000e-004		40.2176
Worker	1.3250	1.6067	20.4734	0.0758	5.9912	0.0458	6.0370	1.5889	0.0425	1.6314		5,197.4784	5,197.4784	0.2186		5,202.0696
Total	**2.3898**	**10.4848**	**33.4278**	**0.1332**	**7.3697**	**0.3449**	**7.7146**	**1.9666**	**0.3177**	**2.2842**		**10,598.4059**	**10,598.4059**	**0.2559**		**10,603.7806**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5730	0.0000	2.5730	1.3160	0.0000	1.3160			0.0000			0.0000
Off-Road	0.2974	1.2886	15.6394	0.0245		0.0397	0.0397		0.0397	0.0397	0.0000	2,369.2913	2,369.2913	0.7663		2,385.3831
Total	**0.2974**	**1.2886**	**15.6394**	**0.0245**	**2.5730**	**0.0397**	**2.6127**	**1.3160**	**0.0397**	**1.3556**	**0.0000**	**2,369.2913**	**2,369.2913**	**0.7663**		**2,385.3831**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0534	8.8061	12.8028	0.0570	1.3660	0.2973	1.6633	0.3741	0.2735	0.6476		5,360.7156	5,360.7156	0.0370		5,361.4935
Vendor	0.0113	0.0719	0.1515	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.2119	40.2119	2.7000e-004		40.2176
Worker	1.3250	1.6067	20.4734	0.0758	5.9912	0.0458	6.0370	1.5889	0.0425	1.6314		5,197.4784	5,197.4784	0.2186		5,202.0696
Total	**2.3898**	**10.4848**	**33.4278**	**0.1332**	**7.3697**	**0.3449**	**7.7146**	**1.9666**	**0.3177**	**2.2842**		**10,598.4059**	**10,598.4059**	**0.2559**		**10,603.7806**

3.3 Building Construction 2 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4059	29.5404	32.3930	0.0565		1.3635	1.3635		1.2827	1.2827		5,330.4536	5,330.4536	1.3927		5,359.7012
Total	**3.4059**	**29.5404**	**32.3930**	**0.0565**		**1.3635**	**1.3635**		**1.2827**	**1.2827**		**5,330.4536**	**5,330.4536**	**1.3927**		**5,359.7012**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8899	5.6464	11.8949	0.0337	0.9817	0.1438	1.1255	0.2796	0.1323	0.4119		3,156.6367	3,156.6367	0.0210		3,157.0775
Worker	9.0331	10.9533	139.5706	0.5169	40.8431	0.3122	41.1553	10.8318	0.2896	11.1213		35,432.0636	35,432.0636	1.4904		35,463.3624
Total	**9.9230**	**16.5996**	**151.4655**	**0.5506**	**41.8248**	**0.4560**	**42.2808**	**11.1114**	**0.4219**	**11.5333**		**38,588.7002**	**38,588.7002**	**1.5114**		**38,620.4399**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3434	6.7748	35.8679	0.0565		0.2427	0.2427		0.2427	0.2427	0.0000	5,330.4536	5,330.4536	1.3927		5,359.7012
Total	**1.3434**	**6.7748**	**35.8679**	**0.0565**		**0.2427**	**0.2427**		**0.2427**	**0.2427**	**0.0000**	**5,330.4536**	**5,330.4536**	**1.3927**		**5,359.7012**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8899	5.6464	11.8949	0.0337	0.9817	0.1438	1.1255	0.2796	0.1323	0.4119		3,156.6367	3,156.6367	0.0210		3,157.0775
Worker	9.0331	10.9533	139.5706	0.5169	40.8431	0.3122	41.1553	10.8318	0.2896	11.1213		35,432.0636	35,432.0636	1.4904		35,463.3624
Total	**9.9230**	**16.5996**	**151.4655**	**0.5506**	**41.8248**	**0.4560**	**42.2808**	**11.1114**	**0.4219**	**11.5333**		**38,588.7002**	**38,588.7002**	**1.5114**		**38,620.4399**

3.3 Building Construction 2 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2024	27.5788	32.2510	0.0565		1.1981	1.1981		1.1267	1.1267		5,331.7188	5,331.7188	1.3861		5,360.8275
Total	**3.2024**	**27.5788**	**32.2510**	**0.0565**		**1.1981**	**1.1981**		**1.1267**	**1.1267**		**5,331.7188**	**5,331.7188**	**1.3861**		**5,360.8275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8771	5.6174	11.6689	0.0338	0.9817	0.1439	1.1256	0.2796	0.1324	0.4120		3,165.1500	3,165.1500	0.0213		3,165.5972
Worker	8.5972	10.3762	132.9244	0.5196	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		35,129.5743	35,129.5743	1.4504		35,160.0317
Total	**9.4743**	**15.9935**	**144.5932**	**0.5534**	**41.8248**	**0.4593**	**42.2842**	**11.1114**	**0.4250**	**11.5364**		**38,294.7243**	**38,294.7243**	**1.4717**		**38,325.6289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2875	6.6554	35.8252	0.0565		0.2197	0.2197		0.2197	0.2197	0.0000	5,331.7188	5,331.7188	1.3861		5,360.8275
Total	**1.2875**	**6.6554**	**35.8252**	**0.0565**		**0.2197**	**0.2197**		**0.2197**	**0.2197**	**0.0000**	**5,331.7188**	**5,331.7188**	**1.3861**		**5,360.8275**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8771	5.6174	11.6689	0.0338	0.9817	0.1439	1.1256	0.2796	0.1324	0.4120		3,165.1500	3,165.1500	0.0213		3,165.5972
Worker	8.5972	10.3762	132.9244	0.5196	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		35,129.5743	35,129.5743	1.4504		35,160.0317
Total	**9.4743**	**15.9935**	**144.5932**	**0.5534**	**41.8248**	**0.4593**	**42.2842**	**11.1114**	**0.4250**	**11.5364**		**38,294.7243**	**38,294.7243**	**1.4717**		**38,325.6289**

3.4 Building Construction 3 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2486	9.9209	11.1725	0.0195		0.4173	0.4173		0.3980	0.3980		1,796.6843	1,796.6843	0.3890		1,804.8531
Total	**1.2486**	**9.9209**	**11.1725**	**0.0195**		**0.4173**	**0.4173**		**0.3980**	**0.3980**		**1,796.6843**	**1,796.6843**	**0.3890**		**1,804.8531**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8771	5.6174	11.6689	0.0338	0.9817	0.1439	1.1256	0.2796	0.1324	0.4120		3,165.1500	3,165.1500	0.0213		3,165.5972
Worker	8.5972	10.3762	132.9244	0.5196	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		35,129.5743	35,129.5743	1.4504		35,160.0317
Total	**9.4743**	**15.9935**	**144.5932**	**0.5534**	**41.8248**	**0.4593**	**42.2842**	**11.1114**	**0.4250**	**11.5364**		**38,294.7243**	**38,294.7243**	**1.4717**		**38,325.6289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6385	3.4842	12.0944	0.0195		0.1172	0.1172		0.1172	0.1172	0.0000	1,796.6843	1,796.6843	0.3890		1,804.8531
Total	**0.6385**	**3.4842**	**12.0944**	**0.0195**		**0.1172**	**0.1172**		**0.1172**	**0.1172**	**0.0000**	**1,796.6843**	**1,796.6843**	**0.3890**		**1,804.8531**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8771	5.6174	11.6689	0.0338	0.9817	0.1439	1.1256	0.2796	0.1324	0.4120		3,165.1500	3,165.1500	0.0213		3,165.5972
Worker	8.5972	10.3762	132.9244	0.5196	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		35,129.5743	35,129.5743	1.4504		35,160.0317
Total	**9.4743**	**15.9935**	**144.5932**	**0.5534**	**41.8248**	**0.4593**	**42.2842**	**11.1114**	**0.4250**	**11.5364**		**38,294.7243**	**38,294.7243**	**1.4717**		**38,325.6289**

3.4 Building Construction 3 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1664	9.2598	11.1039	0.0195		0.3604	0.3604		0.3436	0.3436		1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**1.1664**	**9.2598**	**11.1039**	**0.0195**		**0.3604**	**0.3604**		**0.3436**	**0.3436**		**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8619	5.5789	11.4714	0.0338	0.9818	0.1446	1.1264	0.2797	0.1330	0.4127		3,165.2319	3,165.2319	0.0214		3,165.6808
Worker	8.2049	9.8707	126.9195	0.5195	40.8431	0.3164	41.1595	10.8318	0.2936	11.1253		34,687.6674	34,687.6674	1.4047		34,717.1661
Total	**9.0668**	**15.4495**	**138.3908**	**0.5533**	**41.8249**	**0.4610**	**42.2859**	**11.1114**	**0.4266**	**11.5380**		**37,852.8993**	**37,852.8993**	**1.4261**		**37,882.8469**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6063	3.4068	12.0703	0.0195		0.1040	0.1040		0.1040	0.1040	0.0000	1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**0.6063**	**3.4068**	**12.0703**	**0.0195**		**0.1040**	**0.1040**		**0.1040**	**0.1040**	**0.0000**	**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8619	5.5789	11.4714	0.0338	0.9818	0.1446	1.1264	0.2797	0.1330	0.4127		3,165.2319	3,165.2319	0.0214		3,165.6808
Worker	8.2049	9.8707	126.9195	0.5195	40.8431	0.3164	41.1595	10.8318	0.2936	11.1253		34,687.6674	34,687.6674	1.4047		34,717.1661
Total	**9.0668**	**15.4495**	**138.3908**	**0.5533**	**41.8249**	**0.4610**	**42.2859**	**11.1114**	**0.4266**	**11.5380**		**37,852.8993**	**37,852.8993**	**1.4261**		**37,882.8469**

3.4 Building Construction 3 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1664	9.2598	11.1039	0.0195		0.3604	0.3604		0.3436	0.3436		1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**1.1664**	**9.2598**	**11.1039**	**0.0195**		**0.3604**	**0.3604**		**0.3436**	**0.3436**		**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8350	5.4148	11.2530	0.0338	0.9818	0.1386	1.1204	0.2797	0.1275	0.4071		3,164.5194	3,164.5194	0.0207		3,164.9545
Worker	7.8480	9.4346	121.7201	0.5195	40.8431	0.3183	41.1614	10.8318	0.2953	11.1271		34,303.0552	34,303.0552	1.3648		34,331.7157
Total	**8.6830**	**14.8494**	**132.9731**	**0.5532**	**41.8249**	**0.4569**	**42.2818**	**11.1114**	**0.4228**	**11.5342**		**37,467.5746**	**37,467.5746**	**1.3855**		**37,496.6703**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6063	3.4068	12.0703	0.0195		0.1040	0.1040		0.1040	0.1040	0.0000	1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**0.6063**	**3.4068**	**12.0703**	**0.0195**		**0.1040**	**0.1040**		**0.1040**	**0.1040**	**0.0000**	**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8350	5.4148	11.2530	0.0338	0.9818	0.1386	1.1204	0.2797	0.1275	0.4071		3,164.5194	3,164.5194	0.0207		3,164.9545
Worker	7.8480	9.4346	121.7201	0.5195	40.8431	0.3183	41.1614	10.8318	0.2953	11.1271		34,303.0552	34,303.0552	1.3648		34,331.7157
Total	**8.6830**	**14.8494**	**132.9731**	**0.5532**	**41.8249**	**0.4569**	**42.2818**	**11.1114**	**0.4228**	**11.5342**		**37,467.5746**	**37,467.5746**	**1.3855**		**37,496.6703**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**143.9012**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.8084	0.9725	12.5044	0.0512	4.0240	0.0312	4.0551	1.0672	0.0289	1.0961		3,417.5042	3,417.5042	0.1384		3,420.4105
Total	**0.8084**	**0.9725**	**12.5044**	**0.0512**	**4.0240**	**0.0312**	**4.0551**	**1.0672**	**0.0289**	**1.0961**		**3,417.5042**	**3,417.5042**	**0.1384**		**3,420.4105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**143.7601**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.8084	0.9725	12.5044	0.0512	4.0240	0.0312	4.0551	1.0672	0.0289	1.0961		3,417.5042	3,417.5042	0.1384		3,420.4105
Total	**0.8084**	**0.9725**	**12.5044**	**0.0512**	**4.0240**	**0.0312**	**4.0551**	**1.0672**	**0.0289**	**1.0961**		**3,417.5042**	**3,417.5042**	**0.1384**		**3,420.4105**

3.5 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**143.9012**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7732	0.9295	11.9921	0.0512	4.0240	0.0314	4.0553	1.0672	0.0291	1.0963		3,379.6114	3,379.6114	0.1345		3,382.4351
Total	**0.7732**	**0.9295**	**11.9921**	**0.0512**	**4.0240**	**0.0314**	**4.0553**	**1.0672**	**0.0291**	**1.0963**		**3,379.6114**	**3,379.6114**	**0.1345**		**3,382.4351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**143.7601**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7732	0.9295	11.9921	0.0512	4.0240	0.0314	4.0553	1.0672	0.0291	1.0963		3,379.6114	3,379.6114	0.1345		3,382.4351
Total	**0.7732**	**0.9295**	**11.9921**	**0.0512**	**4.0240**	**0.0314**	**4.0553**	**1.0672**	**0.0291**	**1.0963**		**3,379.6114**	**3,379.6114**	**0.1345**		**3,382.4351**

3.6 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2333	10.9063	14.5422	0.0211		0.5425	0.5425		0.5035	0.5035		1,988.2800	1,988.2800	0.5846		2,000.5559
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2333**	**10.9063**	**14.5422**	**0.0211**		**0.5425**	**0.5425**		**0.5035**	**0.5035**		**1,988.2800**	**1,988.2800**	**0.5846**		**2,000.5559**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2427	0.2921	3.7819	0.0168	1.3190	0.0103	1.3293	0.3498	9.5800e-003	0.3594		1,096.9388	1,096.9388	0.0429		1,097.8402
Total	**0.2427**	**0.2921**	**3.7819**	**0.0168**	**1.3190**	**0.0103**	**1.3293**	**0.3498**	**9.5800e-003**	**0.3594**		**1,096.9388**	**1,096.9388**	**0.0429**		**1,097.8402**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4974	2.6585	15.4538	0.0211		0.0844	0.0844		0.0844	0.0844	0.0000	1,988.2800	1,988.2800	0.5846		2,000.5559
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4974**	**2.6585**	**15.4538**	**0.0211**		**0.0844**	**0.0844**		**0.0844**	**0.0844**	**0.0000**	**1,988.2800**	**1,988.2800**	**0.5846**		**2,000.5559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2427	0.2921	3.7819	0.0168	1.3190	0.0103	1.3293	0.3498	9.5800e-003	0.3594		1,096.9388	1,096.9388	0.0429		1,097.8402
Total	**0.2427**	**0.2921**	**3.7819**	**0.0168**	**1.3190**	**0.0103**	**1.3293**	**0.3498**	**9.5800e-003**	**0.3594**		**1,096.9388**	**1,096.9388**	**0.0429**		**1,097.8402**

Harbor UCLA Master Plan- Phase 4

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	450.00	1000sqft	10.33	450,000.00	0
Hospital	505.10	1000sqft	11.60	505,101.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	154.00
tblConstructionPhase	NumDays	370.00	283.00
tblConstructionPhase	NumDays	370.00	305.00
tblConstructionPhase	NumDays	35.00	154.00
tblConstructionPhase	NumDays	20.00	162.00
tblConstructionPhase	PhaseEndDate	9/3/2026	1/30/2026

tblConstructionPhase	PhaseEndDate	11/28/2024	11/30/2024
tblConstructionPhase	PhaseEndDate	9/15/2026	8/16/2027
tblConstructionPhase	PhaseStartDate	1/31/2026	7/1/2025
tblConstructionPhase	PhaseStartDate	10/31/2023	11/1/2023
tblConstructionPhase	PhaseStartDate	1/31/2026	1/1/2027
tblGrading	MaterialExported	0.00	22,675.00
tblGrading	MaterialImported	0.00	38,726.00
tblLandUse	LandUseSquareFeet	505,100.00	505,101.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	HaulingTripNumber	7,675.00	12,067.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	536.00
tblTripsAndVMT	WorkerTripNumber	306.00	3,654.00
tblTripsAndVMT	WorkerTripNumber	306.00	3,654.00
tblTripsAndVMT	WorkerTripNumber	61.00	360.00
tblTripsAndVMT	WorkerTripNumber	20.00	118.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	13.5501	47.2874	173.5431	0.5738	41.8248	1.8206	43.6454	11.1114	1.7056	12.8170	0.0000	41,655.8851	41,655.8851	2.9050	0.0000	41,716.8905
2024	12.8862	44.6555	166.8317	0.5764	41.8248	1.6585	43.4834	11.1114	1.5527	12.6641	0.0000	41,373.4860	41,373.4860	2.8586	0.0000	41,433.5174
2025	155.1561	27.9464	152.9133	0.5901	45.8488	0.9052	46.7540	12.1786	0.8516	13.0302	0.0000	40,902.2845	40,902.2845	1.9663	0.0000	40,943.5762
2026	154.7290	27.2461	147.3240	0.5900	45.8489	0.9012	46.7501	12.1786	0.8480	13.0266	0.0000	40,501.0812	40,501.0812	1.9218	0.0000	40,541.4384
2027	1.4799	11.2255	17.9444	0.0368	1.3190	0.5528	1.8717	0.3498	0.5131	0.8628	0.0000	3,015.2778	3,015.2778	0.6275	0.0000	3,028.4550
Total	**337.8014**	**158.3609**	**658.5564**	**2.3671**	**176.6663**	**5.8382**	**182.5045**	**46.9298**	**5.4710**	**52.4008**	**0.0000**	**167,448.0146**	**167,448.0146**	**10.2792**	**0.0000**	**167,663.8775**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.4875	24.5217	177.0179	0.5738	41.8248	0.6998	42.5246	11.1114	0.6656	11.7770	0.0000	41,655.8851	41,655.8851	2.9050	0.0000	41,716.8905
2024	10.9713	23.7321	170.4059	0.5764	41.8248	0.6801	42.5050	11.1114	0.6457	11.7571	0.0000	41,373.4860	41,373.4860	2.8586	0.0000	41,433.5174
2025	154.4549	21.0767	153.9029	0.5901	45.8488	0.6013	46.4501	12.1786	0.5645	12.7431	0.0000	40,902.2845	40,902.2845	1.9663	0.0000	40,943.5762
2026	154.0278	20.3764	148.3137	0.5900	45.8489	0.5973	46.4462	12.1786	0.5609	12.7395	0.0000	40,501.0812	40,501.0812	1.9218	0.0000	40,541.4384
2027	0.7440	2.9777	18.8560	0.0368	1.3190	0.0947	1.4137	0.3498	0.0940	0.4438	0.0000	3,015.2778	3,015.2778	0.6275	0.0000	3,028.4550
Total	**331.6855**	**92.6845**	**668.4964**	**2.3671**	**176.6663**	**2.6731**	**179.3394**	**46.9298**	**2.5306**	**49.4605**	**0.0000**	**167,448.0146**	**167,448.0146**	**10.2792**	**0.0000**	**167,663.8775**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.81**	**41.47**	**-1.51**	**0.00**	**0.00**	**54.21**	**1.73**	**0.00**	**53.74**	**5.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/29/2023	10/30/2023	5	154	
2	Building Construction 2	Building Construction	11/1/2023	11/30/2024	5	283	
3	Building Construction 3	Building Construction	12/1/2024	1/30/2026	5	305	
4	Architectural Coating	Architectural Coating	7/1/2025	1/30/2026	5	154	
5	Paving	Paving	1/1/2027	8/16/2027	5	162	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 77

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,432,652; Non-Residential Outdoor: 477,551 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction 2	Air Compressors	2	8.00	78	0.48
Building Construction 2	Cranes	2	7.00	226	0.29
Building Construction 2	Forklifts	2	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Rubber Tired Loaders	1	8.00	199	0.36

Building Construction 2	Tractors/Loaders/Backhoes	8	7.00	97	0.37
Building Construction 2	Welders	3	8.00	46	0.45
Building Construction 3	Air Compressors	1	8.00	78	0.48
Building Construction 3	Cranes	1	7.00	226	0.29
Building Construction 3	Forklifts	0	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 3	Welders	2	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Forklifts	1	8.00	89	0.20
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Paving	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	536.00	2.00	12,067.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	18	3,654.00	157.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	6	3,654.00	157.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	360.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	118.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5974	0.0000	6.5974	3.3743	0.0000	3.3743			0.0000			0.0000
Off-Road	1.7480	17.0015	17.6662	0.0245		0.8357	0.8357		0.7688	0.7688		2,369.2913	2,369.2913	0.7663		2,385.3831
Total	**1.7480**	**17.0015**	**17.6662**	**0.0245**	**6.5974**	**0.8357**	**7.4331**	**3.3743**	**0.7688**	**4.1432**		**2,369.2913**	**2,369.2913**	**0.7663**		**2,385.3831**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0990	9.1069	14.9738	0.0569	1.3660	0.2979	1.6639	0.3741	0.2741	0.6482		5,347.8238	5,347.8238	0.0377		5,348.6157
Vendor	0.0123	0.0733	0.1880	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.8689	39.8689	2.8000e-004		39.8748
Worker	1.3466	1.7597	18.5401	0.0710	5.9912	0.0458	6.0370	1.5889	0.0425	1.6314		4,869.4323	4,869.4323	0.2186		4,874.0235
Total	**2.4579**	**10.9399**	**33.7019**	**0.1283**	**7.3697**	**0.3455**	**7.7152**	**1.9666**	**0.3182**	**2.2848**		**10,257.1251**	**10,257.1251**	**0.2566**		**10,262.5140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5730	0.0000	2.5730	1.3160	0.0000	1.3160			0.0000			0.0000
Off-Road	0.2974	1.2886	15.6394	0.0245		0.0397	0.0397		0.0397	0.0397	0.0000	2,369.2913	2,369.2913	0.7663		2,385.3831
Total	**0.2974**	**1.2886**	**15.6394**	**0.0245**	**2.5730**	**0.0397**	**2.6127**	**1.3160**	**0.0397**	**1.3556**	**0.0000**	**2,369.2913**	**2,369.2913**	**0.7663**		**2,385.3831**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0990	9.1069	14.9738	0.0569	1.3660	0.2979	1.6639	0.3741	0.2741	0.6482		5,347.8238	5,347.8238	0.0377		5,348.6157
Vendor	0.0123	0.0733	0.1880	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.8689	39.8689	2.8000e-004		39.8748
Worker	1.3466	1.7597	18.5401	0.0710	5.9912	0.0458	6.0370	1.5889	0.0425	1.6314		4,869.4323	4,869.4323	0.2186		4,874.0235
Total	**2.4579**	**10.9399**	**33.7019**	**0.1283**	**7.3697**	**0.3455**	**7.7152**	**1.9666**	**0.3182**	**2.2848**		**10,257.1251**	**10,257.1251**	**0.2566**		**10,262.5140**

3.3 Building Construction 2 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4059	29.5404	32.3930	0.0565		1.3635	1.3635		1.2827	1.2827		5,330.4536	5,330.4536	1.3927		5,359.7012
Total	**3.4059**	**29.5404**	**32.3930**	**0.0565**		**1.3635**	**1.3635**		**1.2827**	**1.2827**		**5,330.4536**	**5,330.4536**	**1.3927**		**5,359.7012**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9641	5.7510	14.7589	0.0335	0.9817	0.1449	1.1266	0.2796	0.1333	0.4129		3,129.7118	3,129.7118	0.0219		3,130.1708
Worker	9.1801	11.9959	126.3912	0.4839	40.8431	0.3122	41.1553	10.8318	0.2896	11.1213		33,195.7196	33,195.7196	1.4904		33,227.0185
Total	**10.1442**	**17.7470**	**141.1500**	**0.5173**	**41.8248**	**0.4571**	**42.2819**	**11.1114**	**0.4229**	**11.5343**		**36,325.4315**	**36,325.4315**	**1.5123**		**36,357.1893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3434	6.7748	35.8679	0.0565		0.2427	0.2427		0.2427	0.2427	0.0000	5,330.4536	5,330.4536	1.3927		5,359.7012
Total	**1.3434**	**6.7748**	**35.8679**	**0.0565**		**0.2427**	**0.2427**		**0.2427**	**0.2427**	**0.0000**	**5,330.4536**	**5,330.4536**	**1.3927**		**5,359.7012**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9641	5.7510	14.7589	0.0335	0.9817	0.1449	1.1266	0.2796	0.1333	0.4129		3,129.7118	3,129.7118	0.0219		3,130.1708
Worker	9.1801	11.9959	126.3912	0.4839	40.8431	0.3122	41.1553	10.8318	0.2896	11.1213		33,195.7196	33,195.7196	1.4904		33,227.0185
Total	**10.1442**	**17.7470**	**141.1500**	**0.5173**	**41.8248**	**0.4571**	**42.2819**	**11.1114**	**0.4229**	**11.5343**		**36,325.4315**	**36,325.4315**	**1.5123**		**36,357.1893**

3.3 Building Construction 2 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2024	27.5788	32.2510	0.0565		1.1981	1.1981		1.1267	1.1267		5,331.7188	5,331.7188	1.3861		5,360.8275
Total	**3.2024**	**27.5788**	**32.2510**	**0.0565**		**1.1981**	**1.1981**		**1.1267**	**1.1267**		**5,331.7188**	**5,331.7188**	**1.3861**		**5,360.8275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9481	5.7203	14.4657	0.0335	0.9817	0.1450	1.1267	0.2796	0.1334	0.4130		3,138.2223	3,138.2223	0.0222		3,138.6877
Worker	8.7356	11.3564	120.1150	0.4864	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		32,903.5448	32,903.5448	1.4504		32,934.0021
Total	**9.6838**	**17.0767**	**134.5807**	**0.5199**	**41.8248**	**0.4604**	**42.2853**	**11.1114**	**0.4260**	**11.5374**		**36,041.7672**	**36,041.7672**	**1.4725**		**36,072.6899**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2875	6.6554	35.8252	0.0565		0.2197	0.2197		0.2197	0.2197	0.0000	5,331.7188	5,331.7188	1.3861		5,360.8275
Total	**1.2875**	**6.6554**	**35.8252**	**0.0565**		**0.2197**	**0.2197**		**0.2197**	**0.2197**	**0.0000**	**5,331.7188**	**5,331.7188**	**1.3861**		**5,360.8275**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9481	5.7203	14.4657	0.0335	0.9817	0.1450	1.1267	0.2796	0.1334	0.4130		3,138.2223	3,138.2223	0.0222		3,138.6877
Worker	8.7356	11.3564	120.1150	0.4864	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		32,903.5448	32,903.5448	1.4504		32,934.0021
Total	**9.6838**	**17.0767**	**134.5807**	**0.5199**	**41.8248**	**0.4604**	**42.2853**	**11.1114**	**0.4260**	**11.5374**		**36,041.7672**	**36,041.7672**	**1.4725**		**36,072.6899**

3.4 Building Construction 3 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2486	9.9209	11.1725	0.0195		0.4173	0.4173		0.3980	0.3980		1,796.6843	1,796.6843	0.3890		1,804.8531
Total	**1.2486**	**9.9209**	**11.1725**	**0.0195**		**0.4173**	**0.4173**		**0.3980**	**0.3980**		**1,796.6843**	**1,796.6843**	**0.3890**		**1,804.8531**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9481	5.7203	14.4657	0.0335	0.9817	0.1450	1.1267	0.2796	0.1334	0.4130		3,138.2223	3,138.2223	0.0222		3,138.6877
Worker	8.7356	11.3564	120.1150	0.4864	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		32,903.5448	32,903.5448	1.4504		32,934.0021
Total	**9.6838**	**17.0767**	**134.5807**	**0.5199**	**41.8248**	**0.4604**	**42.2853**	**11.1114**	**0.4260**	**11.5374**		**36,041.7672**	**36,041.7672**	**1.4725**		**36,072.6899**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6385	3.4842	12.0944	0.0195		0.1172	0.1172		0.1172	0.1172	0.0000	1,796.6843	1,796.6843	0.3890		1,804.8531
Total	**0.6385**	**3.4842**	**12.0944**	**0.0195**		**0.1172**	**0.1172**		**0.1172**	**0.1172**	**0.0000**	**1,796.6843**	**1,796.6843**	**0.3890**		**1,804.8531**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9481	5.7203	14.4657	0.0335	0.9817	0.1450	1.1267	0.2796	0.1334	0.4130		3,138.2223	3,138.2223	0.0222		3,138.6877
Worker	8.7356	11.3564	120.1150	0.4864	40.8431	0.3154	41.1585	10.8318	0.2926	11.1244		32,903.5448	32,903.5448	1.4504		32,934.0021
Total	**9.6838**	**17.0767**	**134.5807**	**0.5199**	**41.8248**	**0.4604**	**42.2853**	**11.1114**	**0.4260**	**11.5374**		**36,041.7672**	**36,041.7672**	**1.4725**		**36,072.6899**

3.4 Building Construction 3 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1664	9.2598	11.1039	0.0195		0.3604	0.3604		0.3436	0.3436		1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**1.1664**	**9.2598**	**11.1039**	**0.0195**		**0.3604**	**0.3604**		**0.3436**	**0.3436**		**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9302	5.6800	14.2097	0.0335	0.9818	0.1457	1.1275	0.2797	0.1340	0.4137		3,138.3019	3,138.3019	0.0223		3,138.7690
Worker	8.3369	10.7973	114.5089	0.4862	40.8431	0.3164	41.1595	10.8318	0.2936	11.1253		32,484.8503	32,484.8503	1.4047		32,514.3490
Total	**9.2671**	**16.4774**	**128.7186**	**0.5198**	**41.8249**	**0.4621**	**42.2870**	**11.1114**	**0.4276**	**11.5390**		**35,623.1522**	**35,623.1522**	**1.4270**		**35,653.1180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6063	3.4068	12.0703	0.0195		0.1040	0.1040		0.1040	0.1040	0.0000	1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**0.6063**	**3.4068**	**12.0703**	**0.0195**		**0.1040**	**0.1040**		**0.1040**	**0.1040**	**0.0000**	**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9302	5.6800	14.2097	0.0335	0.9818	0.1457	1.1275	0.2797	0.1340	0.4137		3,138.3019	3,138.3019	0.0223		3,138.7690
Worker	8.3369	10.7973	114.5089	0.4862	40.8431	0.3164	41.1595	10.8318	0.2936	11.1253		32,484.8503	32,484.8503	1.4047		32,514.3490
Total	**9.2671**	**16.4774**	**128.7186**	**0.5198**	**41.8249**	**0.4621**	**42.2870**	**11.1114**	**0.4276**	**11.5390**		**35,623.1522**	**35,623.1522**	**1.4270**		**35,653.1180**

3.4 Building Construction 3 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1664	9.2598	11.1039	0.0195		0.3604	0.3604		0.3436	0.3436		1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**1.1664**	**9.2598**	**11.1039**	**0.0195**		**0.3604**	**0.3604**		**0.3436**	**0.3436**		**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9014	5.5092	13.9515	0.0335	0.9818	0.1396	1.1214	0.2797	0.1285	0.4081		3,137.5873	3,137.5873	0.0216		3,138.0406
Worker	7.9744	10.3153	109.6560	0.4861	40.8431	0.3183	41.1614	10.8318	0.2953	11.1271		32,120.2799	32,120.2799	1.3648		32,148.9405
Total	**8.8757**	**15.8245**	**123.6075**	**0.5196**	**41.8249**	**0.4579**	**42.2829**	**11.1114**	**0.4238**	**11.5352**		**35,257.8672**	**35,257.8672**	**1.3864**		**35,286.9811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6063	3.4068	12.0703	0.0195		0.1040	0.1040		0.1040	0.1040	0.0000	1,797.2064	1,797.2064	0.3856		1,805.3036
Total	**0.6063**	**3.4068**	**12.0703**	**0.0195**		**0.1040**	**0.1040**		**0.1040**	**0.1040**	**0.0000**	**1,797.2064**	**1,797.2064**	**0.3856**		**1,805.3036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9014	5.5092	13.9515	0.0335	0.9818	0.1396	1.1214	0.2797	0.1285	0.4081		3,137.5873	3,137.5873	0.0216		3,138.0406
Worker	7.9744	10.3153	109.6560	0.4861	40.8431	0.3183	41.1614	10.8318	0.2953	11.1271		32,120.2799	32,120.2799	1.3648		32,148.9405
Total	**8.8757**	**15.8245**	**123.6075**	**0.5196**	**41.8249**	**0.4579**	**42.2829**	**11.1114**	**0.4238**	**11.5352**		**35,257.8672**	**35,257.8672**	**1.3864**		**35,286.9811**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**143.9012**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.8214	1.0638	11.2817	0.0479	4.0240	0.0312	4.0551	1.0672	0.0289	1.0961		3,200.4779	3,200.4779	0.1384		3,203.3841
Total	**0.8214**	**1.0638**	**11.2817**	**0.0479**	**4.0240**	**0.0312**	**4.0551**	**1.0672**	**0.0289**	**1.0961**		**3,200.4779**	**3,200.4779**	**0.1384**		**3,203.3841**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**143.7601**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.8214	1.0638	11.2817	0.0479	4.0240	0.0312	4.0551	1.0672	0.0289	1.0961		3,200.4779	3,200.4779	0.1384		3,203.3841
Total	**0.8214**	**1.0638**	**11.2817**	**0.0479**	**4.0240**	**0.0312**	**4.0551**	**1.0672**	**0.0289**	**1.0961**		**3,200.4779**	**3,200.4779**	**0.1384**		**3,203.3841**

3.5 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**143.9012**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7857	1.0163	10.8035	0.0479	4.0240	0.0314	4.0553	1.0672	0.0291	1.0963		3,164.5596	3,164.5596	0.1345		3,167.3833
Total	**0.7857**	**1.0163**	**10.8035**	**0.0479**	**4.0240**	**0.0314**	**4.0553**	**1.0672**	**0.0291**	**1.0963**		**3,164.5596**	**3,164.5596**	**0.1345**		**3,167.3833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	143.7304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**143.7601**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7857	1.0163	10.8035	0.0479	4.0240	0.0314	4.0553	1.0672	0.0291	1.0963		3,164.5596	3,164.5596	0.1345		3,167.3833
Total	**0.7857**	**1.0163**	**10.8035**	**0.0479**	**4.0240**	**0.0314**	**4.0553**	**1.0672**	**0.0291**	**1.0963**		**3,164.5596**	**3,164.5596**	**0.1345**		**3,167.3833**

3.6 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2333	10.9063	14.5422	0.0211		0.5425	0.5425		0.5035	0.5035		1,988.2800	1,988.2800	0.5846		2,000.5559
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2333**	**10.9063**	**14.5422**	**0.0211**		**0.5425**	**0.5425**		**0.5035**	**0.5035**		**1,988.2800**	**1,988.2800**	**0.5846**		**2,000.5559**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2466	0.3192	3.4021	0.0157	1.3190	0.0103	1.3293	0.3498	9.5800e-003	0.3594		1,026.9978	1,026.9978	0.0429		1,027.8991
Total	**0.2466**	**0.3192**	**3.4021**	**0.0157**	**1.3190**	**0.0103**	**1.3293**	**0.3498**	**9.5800e-003**	**0.3594**		**1,026.9978**	**1,026.9978**	**0.0429**		**1,027.8991**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4974	2.6585	15.4538	0.0211		0.0844	0.0844		0.0844	0.0844	0.0000	1,988.2800	1,988.2800	0.5846		2,000.5559
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4974**	**2.6585**	**15.4538**	**0.0211**		**0.0844**	**0.0844**		**0.0844**	**0.0844**	**0.0000**	**1,988.2800**	**1,988.2800**	**0.5846**		**2,000.5559**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2466	0.3192	3.4021	0.0157	1.3190	0.0103	1.3293	0.3498	9.5800e-003	0.3594		1,026.9978	1,026.9978	0.0429		1,027.8991
Total	**0.2466**	**0.3192**	**3.4021**	**0.0157**	**1.3190**	**0.0103**	**1.3293**	**0.3498**	**9.5800e-003**	**0.3594**		**1,026.9978**	**1,026.9978**	**0.0429**		**1,027.8991**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase 5 Construction Emissions

Harbor UCLA Master Plan- Phase V

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	234.00	1000sqft	5.37	234,000.00	0
Parking Lot	570.00	Space	5.13	104,005.00	0
Unenclosed Parking with Elevator	1,220.00	Space	10.98	551,150.00	0
User Defined Retail	35,000.00	User Defined Unit	0.00	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating - See Input Summary

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	411,635.00	298,289.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,234,905.00	442,809.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	276.00

tblConstructionPhase	NumDays	370.00	173.00
tblConstructionPhase	NumDays	370.00	107.00
tblConstructionPhase	NumDays	370.00	455.00
tblConstructionPhase	NumDays	370.00	260.00
tblConstructionPhase	NumDays	370.00	86.00
tblConstructionPhase	NumDays	370.00	146.00
tblConstructionPhase	NumDays	35.00	173.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	PhaseEndDate	6/20/2030	4/22/2030
tblConstructionPhase	PhaseEndDate	12/1/2025	4/2/2025
tblConstructionPhase	PhaseEndDate	8/29/2025	8/30/2025
tblConstructionPhase	PhaseEndDate	5/28/2027	5/30/2027
tblConstructionPhase	PhaseEndDate	5/26/2028	5/30/2029
tblConstructionPhase	PhaseEndDate	8/20/2030	9/30/2029
tblConstructionPhase	PhaseEndDate	8/12/2030	4/22/2030
tblConstructionPhase	PhaseStartDate	5/31/2029	4/1/2029
tblConstructionPhase	PhaseStartDate	4/3/2025	8/5/2024
tblConstructionPhase	PhaseStartDate	8/31/2025	9/1/2025
tblConstructionPhase	PhaseStartDate	5/31/2027	6/1/2028
tblConstructionPhase	PhaseStartDate	4/23/2030	6/1/2029
tblConstructionPhase	PhaseStartDate	4/23/2030	1/1/2030
tblGrading	MaterialExported	0.00	10,675.00
tblGrading	MaterialImported	0.00	73,803.00
tblLandUse	LandUseSquareFeet	228,000.00	104,005.00
tblLandUse	LandUseSquareFeet	488,000.00	551,150.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	10,560.00	14,080.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	WorkerTripNumber	18.00	486.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	72.00	92.00
tblTripsAndVMT	WorkerTripNumber	361.00	465.00
tblTripsAndVMT	WorkerTripNumber	361.00	465.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	10.0216	45.7490	136.8061	0.4671	28.3239	1.7353	30.0591	7.5236	1.6148	9.1383	0.0000	35,527.1997	35,527.1997	2.3686	0.0000	35,576.9406
2025	9.5611	43.1192	132.6494	0.4671	29.4047	1.5754	30.9801	7.7889	1.4651	9.2540	0.0000	35,256.7203	35,256.7203	2.3386	0.0000	35,305.8307
2026	4.9334	13.0019	74.9633	0.2915	20.7412	0.4277	21.1689	5.5195	0.3947	5.9141	0.0000	20,376.9458	20,376.9458	0.9001	0.0000	20,395.8485
2027	4.7645	12.7719	72.6258	0.2915	20.7413	0.4287	21.1700	5.5195	0.3956	5.9151	0.0000	20,214.7672	20,214.7672	0.8829	0.0000	20,233.3078
2028	5.6486	21.3522	78.4188	0.3135	20.7288	0.7526	21.4814	5.5159	0.6969	6.2128	0.0000	22,172.3287	22,172.3287	1.5112	0.0000	22,204.0631
2029	36.9513	22.5174	80.9621	0.3295	21.7572	0.8127	22.5699	5.7887	0.7564	6.5451	0.0000	23,174.8329	23,174.8329	1.5435	0.0000	23,207.2463
2030	35.2558	18.5879	50.8123	0.1583	7.4610	0.6030	8.0640	1.9973	0.5886	2.5858	0.0000	12,398.2482	12,398.2482	0.4077	0.0000	12,406.8104

Total	**107.1362**	**177.0996**	**627.2376**	**2.3185**	**149.1581**	**6.3354**	**155.4935**	**39.6532**	**5.9121**	**45.5653**	**0.0000**	**169,121.0428**	**169,121.0428**	**9.9526**	**0.0000**	**169,330.0475**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	8.1154	25.1132	140.9743	0.4671	28.2902	0.7739	29.0641	7.5185	0.7238	8.2422	0.0000	35,527.1997	35,527.1997	2.3686	0.0000	35,576.9406
2025	7.8360	24.7008	136.9597	0.4671	29.3710	0.7704	30.1414	7.7838	0.7200	8.5038	0.0000	35,256.7203	35,256.7203	2.3386	0.0000	35,305.8307
2026	4.7006	10.2166	75.1878	0.2915	20.7412	0.3006	21.0418	5.5195	0.2787	5.7981	0.0000	20,376.9458	20,376.9458	0.9001	0.0000	20,395.8485
2027	4.5317	9.9866	72.8503	0.2915	20.7413	0.3016	21.0429	5.5195	0.2796	5.7991	0.0000	20,214.7672	20,214.7672	0.8829	0.0000	20,233.3078
2028	4.8297	12.1066	82.1547	0.3135	20.7288	0.3732	21.1020	5.5159	0.3514	5.8673	0.0000	22,172.3287	22,172.3287	1.5112	0.0000	22,204.0631
2029	35.9913	12.2551	84.7212	0.3295	21.7572	0.3858	22.1430	5.7887	0.3633	6.1520	0.0000	23,174.8329	23,174.8329	1.5435	0.0000	23,207.2463
2030	33.5884	8.5543	52.1659	0.1583	7.4610	0.2552	7.7162	1.9973	0.2408	2.2380	0.0000	12,398.2482	12,398.2482	0.4077	0.0000	12,406.8104
Total	**99.5931**	**102.9332**	**645.0139**	**2.3185**	**149.0907**	**3.1607**	**152.2513**	**39.6430**	**2.9575**	**42.6005**	**0.0000**	**169,121.0428**	**169,121.0428**	**9.9526**	**0.0000**	**169,330.0475**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.04**	**41.88**	**-2.83**	**0.00**	**0.05**	**50.11**	**2.09**	**0.03**	**49.97**	**6.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/5/2024	4/2/2025	5	173	
2	Building Construction	Building Construction	8/5/2024	4/2/2025	5	173	
3	Building Construction 2	Building Construction	4/3/2025	8/30/2025	5	107	
4	Building Construction 3	Building Construction	9/1/2025	5/30/2027	5	455	
5	Building Construction 4	Building Construction	6/1/2028	5/30/2029	5	260	
6	Architectural Coating	Architectural Coating	4/1/2029	4/22/2030	5	276	
7	Building Construction 5	Building Construction	6/1/2029	9/30/2029	5	86	
8	Building Construction 6	Building Construction	10/1/2029	4/22/2030	5	146	
9	Paving	Paving	1/1/2030	4/22/2030	5	80	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,809; Non-Residential Outdoor: 298,289 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Air Compressors	2	8.00	78	0.48
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Scrapers	0	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Building Construction 2	Cranes	0	7.00	226	0.29
Building Construction 2	Forklifts	0	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45
Building Construction 3	Cranes	0	7.00	226	0.29
Building Construction 3	Forklifts	1	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 3	Welders	0	8.00	46	0.45
Building Construction 4	Cranes	1	7.00	226	0.29
Building Construction 4	Forklifts	1	8.00	89	0.20
Building Construction 4	Generator Sets	0	8.00	84	0.74
Building Construction 4	Rubber Tired Loaders	2	8.00	199	0.36
Building Construction 4	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 4	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction 5	Air Compressors	1	8.00	78	0.48
Building Construction 5	Cranes	2	7.00	226	0.29
Building Construction 5	Forklifts	1	8.00	89	0.20
Building Construction 5	Generator Sets	0	8.00	84	0.74
Building Construction 5	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction 5	Welders	0	8.00	46	0.45
Building Construction 6	Cranes	1	7.00	226	0.29
Building Construction 6	Forklifts	1	8.00	89	0.20
Building Construction 6	Generator Sets	0	8.00	84	0.74
Building Construction 6	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Building Construction 6	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Trenchers	2	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	486.00	4.00	14,080.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	1,770.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	3	1,770.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	3	1,770.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	8	1,770.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 5	5	465.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 6	3	465.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0552	0.0000	0.0552	8.3600e-003	0.0000	8.3600e-003			0.0000			0.0000
Off-Road	1.3476	11.3151	16.3481	0.0287		0.5090	0.5090		0.4813	0.4813		2,762.3415	2,762.3415	0.6929		2,776.8928
Total	**1.3476**	**11.3151**	**16.3481**	**0.0287**	**0.0552**	**0.5090**	**0.5643**	**8.3600e-003**	**0.4813**	**0.4897**		**2,762.3415**	**2,762.3415**	**0.6929**		**2,776.8928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0984	9.1489	13.2034	0.0593	2.0826	0.3087	2.3913	0.5515	0.2840	0.8355		5,582.3953	5,582.3953	0.0391		5,583.2173
Vendor	0.0224	0.1431	0.2973	8.6000e-004	0.0250	3.6700e-003	0.0287	7.1200e-003	3.3700e-003	0.0105		80.6408	80.6408	5.4000e-004		80.6522
Worker	1.1435	1.3801	17.6796	0.0691	5.4323	0.0420	5.4743	1.4407	0.0389	1.4796		4,672.4064	4,672.4064	0.1929		4,676.4574
Total	**2.2642**	**10.6721**	**31.1803**	**0.1293**	**7.5400**	**0.3543**	**7.8943**	**1.9993**	**0.3263**	**2.3256**		**10,335.4425**	**10,335.4425**	**0.2326**		**10,340.3268**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0215	0.0000	0.0215	3.2600e-003	0.0000	3.2600e-003			0.0000			0.0000
Off-Road	0.3341	1.4479	18.7096	0.0287		0.0446	0.0446		0.0446	0.0446	0.0000	2,762.3415	2,762.3415	0.6929		2,776.8928
Total	**0.3341**	**1.4479**	**18.7096**	**0.0287**	**0.0215**	**0.0446**	**0.0661**	**3.2600e-003**	**0.0446**	**0.0478**	**0.0000**	**2,762.3415**	**2,762.3415**	**0.6929**		**2,776.8928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0984	9.1489	13.2034	0.0593	2.0826	0.3087	2.3913	0.5515	0.2840	0.8355		5,582.3953	5,582.3953	0.0391		5,583.2173
Vendor	0.0224	0.1431	0.2973	8.6000e-004	0.0250	3.6700e-003	0.0287	7.1200e-003	3.3700e-003	0.0105		80.6408	80.6408	5.4000e-004		80.6522
Worker	1.1435	1.3801	17.6796	0.0691	5.4323	0.0420	5.4743	1.4407	0.0389	1.4796		4,672.4064	4,672.4064	0.1929		4,676.4574
Total	**2.2642**	**10.6721**	**31.1803**	**0.1293**	**7.5400**	**0.3543**	**7.8943**	**1.9993**	**0.3263**	**2.3256**		**10,335.4425**	**10,335.4425**	**0.2326**		**10,340.3268**

3.2 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0552	0.0000	0.0552	8.3600e-003	0.0000	8.3600e-003			0.0000			0.0000
Off-Road	1.2475	10.1346	16.2978	0.0287		0.4223	0.4223		0.3995	0.3995		2,763.3888	2,763.3888	0.6919		2,777.9195
Total	**1.2475**	**10.1346**	**16.2978**	**0.0287**	**0.0552**	**0.4223**	**0.4775**	**8.3600e-003**	**0.3995**	**0.4078**		**2,763.3888**	**2,763.3888**	**0.6919**		**2,777.9195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0923	9.1252	13.1034	0.0593	3.1635	0.3104	3.4739	0.8168	0.2856	1.1024		5,582.5793	5,582.5793	0.0393		5,583.4051
Vendor	0.0220	0.1421	0.2923	8.6000e-004	0.0250	3.6800e-003	0.0287	7.1200e-003	3.3900e-003	0.0105		80.6429	80.6429	5.4000e-004		80.6543
Worker	1.0913	1.3129	16.8809	0.0691	5.4323	0.0421	5.4744	1.4407	0.0390	1.4797		4,613.6306	4,613.6306	0.1868		4,617.5541
Total	**2.2056**	**10.5802**	**30.2765**	**0.1293**	**8.6208**	**0.3562**	**8.9770**	**2.2646**	**0.3280**	**2.5926**		**10,276.8528**	**10,276.8528**	**0.2267**		**10,281.6135**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0215	0.0000	0.0215	3.2600e-003	0.0000	3.2600e-003			0.0000			0.0000
Off-Road	0.3341	1.4479	18.7096	0.0287		0.0446	0.0446		0.0446	0.0446	0.0000	2,763.3888	2,763.3888	0.6919		2,777.9195
Total	**0.3341**	**1.4479**	**18.7096**	**0.0287**	**0.0215**	**0.0446**	**0.0661**	**3.2600e-003**	**0.0446**	**0.0478**	**0.0000**	**2,763.3888**	**2,763.3888**	**0.6919**		**2,777.9195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0923	9.1252	13.1034	0.0593	3.1635	0.3104	3.4739	0.8168	0.2856	1.1024		5,582.5793	5,582.5793	0.0393		5,583.4051
Vendor	0.0220	0.1421	0.2923	8.6000e-004	0.0250	3.6800e-003	0.0287	7.1200e-003	3.3900e-003	0.0105		80.6429	80.6429	5.4000e-004		80.6543
Worker	1.0913	1.3129	16.8809	0.0691	5.4323	0.0421	5.4744	1.4407	0.0390	1.4797		4,613.6306	4,613.6306	0.1868		4,617.5541
Total	**2.2056**	**10.5802**	**30.2765**	**0.1293**	**8.6208**	**0.3562**	**8.9770**	**2.2646**	**0.3280**	**2.5926**		**10,276.8528**	**10,276.8528**	**0.2267**		**10,281.6135**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4018	13.3329	13.6661	0.0249		0.5808	0.5808		0.5381	0.5381		2,368.4381	2,368.4381	0.7201		2,383.5596
Total	**1.4018**	**13.3329**	**13.6661**	**0.0249**		**0.5808**	**0.5808**		**0.5381**	**0.5381**		**2,368.4381**	**2,368.4381**	**0.7201**		**2,383.5596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8436	5.4027	11.2229	0.0325	0.9442	0.1384	1.0826	0.2689	0.1273	0.3963		3,044.1888	3,044.1888	0.0205		3,044.6190
Worker	4.1645	5.0262	64.3886	0.2517	19.7844	0.1528	19.9372	5.2469	0.1418	5.3887		17,016.7889	17,016.7889	0.7026		17,031.5424
Total	**5.0080**	**10.4289**	**75.6116**	**0.2842**	**20.7287**	**0.2912**	**21.0198**	**5.5159**	**0.2691**	**5.7849**		**20,060.9777**	**20,060.9777**	**0.7230**		**20,076.1614**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5090	2.5644	15.4728	0.0249		0.0839	0.0839		0.0839	0.0839	0.0000	2,368.4380	2,368.4380	0.7201		2,383.5596
Total	**0.5090**	**2.5644**	**15.4728**	**0.0249**		**0.0839**	**0.0839**		**0.0839**	**0.0839**	**0.0000**	**2,368.4380**	**2,368.4380**	**0.7201**		**2,383.5596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8436	5.4027	11.2229	0.0325	0.9442	0.1384	1.0826	0.2689	0.1273	0.3963		3,044.1888	3,044.1888	0.0205		3,044.6190
Worker	4.1645	5.0262	64.3886	0.2517	19.7844	0.1528	19.9372	5.2469	0.1418	5.3887		17,016.7889	17,016.7889	0.7026		17,031.5424
Total	**5.0080**	**10.4289**	**75.6116**	**0.2842**	**20.7287**	**0.2912**	**21.0198**	**5.5159**	**0.2691**	**5.7849**		**20,060.9777**	**20,060.9777**	**0.7230**		**20,076.1614**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3047	12.2573	13.5622	0.0249		0.5046	0.5046		0.4675	0.4675		2,369.4823	2,369.4823	0.7190		2,384.5803
Total	**1.3047**	**12.2573**	**13.5622**	**0.0249**		**0.5046**	**0.5046**		**0.4675**	**0.4675**		**2,369.4823**	**2,369.4823**	**0.7190**		**2,384.5803**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8289	5.3657	11.0330	0.0325	0.9443	0.1391	1.0833	0.2690	0.1280	0.3969		3,044.2676	3,044.2676	0.0206		3,044.6994
Worker	3.9745	4.7814	61.4799	0.2517	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		16,802.7289	16,802.7289	0.6804		16,817.0181
Total	**4.8034**	**10.1470**	**72.5128**	**0.2842**	**20.7287**	**0.2924**	**21.0210**	**5.5159**	**0.2702**	**5.7860**		**19,846.9965**	**19,846.9965**	**0.7010**		**19,861.7175**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4929	2.5257	15.4608	0.0249		0.0773	0.0773		0.0773	0.0773	0.0000	2,369.4823	2,369.4823	0.7190		2,384.5803
Total	**0.4929**	**2.5257**	**15.4608**	**0.0249**		**0.0773**	**0.0773**		**0.0773**	**0.0773**	**0.0000**	**2,369.4823**	**2,369.4823**	**0.7190**		**2,384.5803**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8289	5.3657	11.0330	0.0325	0.9443	0.1391	1.0833	0.2690	0.1280	0.3969		3,044.2676	3,044.2676	0.0206		3,044.6994
Worker	3.9745	4.7814	61.4799	0.2517	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		16,802.7289	16,802.7289	0.6804		16,817.0181
Total	**4.8034**	**10.1470**	**72.5128**	**0.2842**	**20.7287**	**0.2924**	**21.0210**	**5.5159**	**0.2702**	**5.7860**		**19,846.9965**	**19,846.9965**	**0.7010**		**19,861.7175**

3.4 Building Construction 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3468	3.5046	5.8529	8.1900e-003		0.1420	0.1420		0.1306	0.1306		792.8966	792.8966	0.2564		798.2818
Total	**0.3468**	**3.5046**	**5.8529**	**8.1900e-003**		**0.1420**	**0.1420**		**0.1306**	**0.1306**		**792.8966**	**792.8966**	**0.2564**		**798.2818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8399	5.4368	11.1791	0.0329	0.9568	0.1409	1.0977	0.2725	0.1297	0.4022		3,084.5890	3,084.5890	0.0208		3,085.0265
Worker	3.9745	4.7814	61.4799	0.2517	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		16,802.7289	16,802.7289	0.6804		16,817.0181
Total	**4.8144**	**10.2181**	**72.6589**	**0.2846**	**20.7412**	**0.2942**	**21.0354**	**5.5194**	**0.2719**	**5.7913**		**19,887.3179**	**19,887.3179**	**0.7013**		**19,902.0446**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0997	0.4320	6.1479	8.1900e-003		0.0133	0.0133		0.0133	0.0133	0.0000	792.8966	792.8966	0.2564		798.2818
Total	**0.0997**	**0.4320**	**6.1479**	**8.1900e-003**		**0.0133**	**0.0133**		**0.0133**	**0.0133**	**0.0000**	**792.8966**	**792.8966**	**0.2564**		**798.2818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8399	5.4368	11.1791	0.0329	0.9568	0.1409	1.0977	0.2725	0.1297	0.4022		3,084.5890	3,084.5890	0.0208		3,085.0265
Worker	3.9745	4.7814	61.4799	0.2517	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		16,802.7289	16,802.7289	0.6804		16,817.0181
Total	**4.8144**	**10.2181**	**72.6589**	**0.2846**	**20.7412**	**0.2942**	**21.0354**	**5.5194**	**0.2719**	**5.7913**		**19,887.3179**	**19,887.3179**	**0.7013**		**19,902.0446**

3.5 Building Construction 3 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3181	3.1550	5.0357	6.9900e-003		0.1385	0.1385		0.1274	0.1274		676.6286	676.6286	0.2188		681.2241
Total	**0.3181**	**3.1550**	**5.0357**	**6.9900e-003**		**0.1385**	**0.1385**		**0.1274**	**0.1274**		**676.6286**	**676.6286**	**0.2188**		**681.2241**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8399	5.4368	11.1791	0.0329	0.9568	0.1409	1.0977	0.2725	0.1297	0.4022		3,084.5890	3,084.5890	0.0208		3,085.0265
Worker	3.9745	4.7814	61.4799	0.2517	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		16,802.7289	16,802.7289	0.6804		16,817.0181
Total	**4.8144**	**10.2181**	**72.6589**	**0.2846**	**20.7412**	**0.2942**	**21.0354**	**5.5194**	**0.2719**	**5.7913**		**19,887.3179**	**19,887.3179**	**0.7013**		**19,902.0446**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0853	0.3696	5.2602	6.9900e-003		0.0114	0.0114		0.0114	0.0114	0.0000	676.6286	676.6286	0.2188		681.2241
Total	**0.0853**	**0.3696**	**5.2602**	**6.9900e-003**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**676.6286**	**676.6286**	**0.2188**		**681.2241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8399	5.4368	11.1791	0.0329	0.9568	0.1409	1.0977	0.2725	0.1297	0.4022		3,084.5890	3,084.5890	0.0208		3,085.0265
Worker	3.9745	4.7814	61.4799	0.2517	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		16,802.7289	16,802.7289	0.6804		16,817.0181
Total	**4.8144**	**10.2181**	**72.6589**	**0.2846**	**20.7412**	**0.2942**	**21.0354**	**5.5194**	**0.2719**	**5.7913**		**19,887.3179**	**19,887.3179**	**0.7013**		**19,902.0446**

3.5 Building Construction 3 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3181	3.1550	5.0357	6.9900e-003		0.1385	0.1385		0.1274	0.1274		676.6286	676.6286	0.2188		681.2241
Total	**0.3181**	**3.1550**	**5.0357**	**6.9900e-003**		**0.1385**	**0.1385**		**0.1274**	**0.1274**		**676.6286**	**676.6286**	**0.2188**		**681.2241**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8137	5.2768	10.9663	0.0329	0.9568	0.1350	1.0918	0.2725	0.1242	0.3968		3,083.8947	3,083.8947	0.0202		3,084.3187
Worker	3.8016	4.5701	58.9613	0.2516	19.7844	0.1542	19.9386	5.2469	0.1431	5.3900		16,616.4225	16,616.4225	0.6611		16,630.3057
Total	**4.6153**	**9.8470**	**69.9276**	**0.2845**	**20.7412**	**0.2892**	**21.0304**	**5.5195**	**0.2673**	**5.7867**		**19,700.3172**	**19,700.3172**	**0.6813**		**19,714.6244**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0853	0.3696	5.2602	6.9900e-003		0.0114	0.0114		0.0114	0.0114	0.0000	676.6286	676.6286	0.2188		681.2241
Total	**0.0853**	**0.3696**	**5.2602**	**6.9900e-003**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**676.6286**	**676.6286**	**0.2188**		**681.2241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8137	5.2768	10.9663	0.0329	0.9568	0.1350	1.0918	0.2725	0.1242	0.3968		3,083.8947	3,083.8947	0.0202		3,084.3187
Worker	3.8016	4.5701	58.9613	0.2516	19.7844	0.1542	19.9386	5.2469	0.1431	5.3900		16,616.4225	16,616.4225	0.6611		16,630.3057
Total	**4.6153**	**9.8470**	**69.9276**	**0.2845**	**20.7412**	**0.2892**	**21.0304**	**5.5195**	**0.2673**	**5.7867**		**19,700.3172**	**19,700.3172**	**0.6813**		**19,714.6244**

3.5 Building Construction 3 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3181	3.1550	5.0357	6.9900e-003		0.1385	0.1385		0.1274	0.1274		676.6286	676.6286	0.2188		681.2241
Total	**0.3181**	**3.1550**	**5.0357**	**6.9900e-003**		**0.1385**	**0.1385**		**0.1274**	**0.1274**		**676.6286**	**676.6286**	**0.2188**		**681.2241**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8059	5.2357	10.8624	0.0329	0.9568	0.1354	1.0922	0.2726	0.1245	0.3971		3,084.0561	3,084.0561	0.0202		3,084.4810
Worker	3.6405	4.3813	56.7278	0.2516	19.7844	0.1549	19.9393	5.2469	0.1437	5.3906		16,454.0825	16,454.0825	0.6438		16,467.6027
Total	**4.4464**	**9.6170**	**67.5902**	**0.2845**	**20.7413**	**0.2902**	**21.0315**	**5.5195**	**0.2682**	**5.7877**		**19,538.1386**	**19,538.1386**	**0.6641**		**19,552.0837**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0853	0.3696	5.2602	6.9900e-003		0.0114	0.0114		0.0114	0.0114	0.0000	676.6286	676.6286	0.2188		681.2241
Total	**0.0853**	**0.3696**	**5.2602**	**6.9900e-003**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**676.6286**	**676.6286**	**0.2188**		**681.2241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8059	5.2357	10.8624	0.0329	0.9568	0.1354	1.0922	0.2726	0.1245	0.3971		3,084.0561	3,084.0561	0.0202		3,084.4810
Worker	3.6405	4.3813	56.7278	0.2516	19.7844	0.1549	19.9393	5.2469	0.1437	5.3906		16,454.0825	16,454.0825	0.6438		16,467.6027
Total	**4.4464**	**9.6170**	**67.5902**	**0.2845**	**20.7413**	**0.2902**	**21.0315**	**5.5195**	**0.2682**	**5.7877**		**19,538.1386**	**19,538.1386**	**0.6641**		**19,552.0837**

3.6 Building Construction 4 - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3695	12.0213	13.0099	0.0295		0.4644	0.4644		0.4305	0.4305		2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**1.3695**	**12.0213**	**13.0099**	**0.0295**		**0.4644**	**0.4644**		**0.4305**	**0.4305**		**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7857	5.1189	10.6231	0.0325	0.9444	0.1327	1.0771	0.2690	0.1221	0.3911		3,043.7079	3,043.7079	0.0199		3,044.1253
Worker	3.4934	4.2121	54.7858	0.2516	19.7844	0.1555	19.9399	5.2469	0.1443	5.3912		16,314.4498	16,314.4498	0.6285		16,327.6485
Total	**4.2791**	**9.3309**	**65.4089**	**0.2840**	**20.7288**	**0.2882**	**21.0170**	**5.5159**	**0.2664**	**5.7823**		**19,358.1576**	**19,358.1576**	**0.6484**		**19,371.7738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5506	2.7757	16.7458	0.0295		0.0850	0.0850		0.0850	0.0850	0.0000	2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**0.5506**	**2.7757**	**16.7458**	**0.0295**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7857	5.1189	10.6231	0.0325	0.9444	0.1327	1.0771	0.2690	0.1221	0.3911		3,043.7079	3,043.7079	0.0199		3,044.1253
Worker	3.4934	4.2121	54.7858	0.2516	19.7844	0.1555	19.9399	5.2469	0.1443	5.3912		16,314.4498	16,314.4498	0.6285		16,327.6485
Total	**4.2791**	**9.3309**	**65.4089**	**0.2840**	**20.7288**	**0.2882**	**21.0170**	**5.5159**	**0.2664**	**5.7823**		**19,358.1576**	**19,358.1576**	**0.6484**		**19,371.7738**

3.6 Building Construction 4 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3695	12.0213	13.0099	0.0295		0.4644	0.4644		0.4305	0.4305		2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**1.3695**	**12.0213**	**13.0099**	**0.0295**		**0.4644**	**0.4644**		**0.4305**	**0.4305**		**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7777	5.0946	10.5204	0.0325	0.9444	0.1329	1.0773	0.2690	0.1223	0.3913		3,043.7575	3,043.7575	0.0199		3,044.1754
Worker	3.3453	4.0458	52.8744	0.2515	19.7844	0.1558	19.9402	5.2469	0.1446	5.3915		16,193.7474	16,193.7474	0.6136		16,206.6326
Total	**4.1230**	**9.1403**	**63.3948**	**0.2840**	**20.7289**	**0.2887**	**21.0176**	**5.5159**	**0.2668**	**5.7828**		**19,237.5049**	**19,237.5049**	**0.6335**		**19,250.8079**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5506	2.7757	16.7458	0.0295		0.0850	0.0850		0.0850	0.0850	0.0000	2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**0.5506**	**2.7757**	**16.7458**	**0.0295**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7777	5.0946	10.5204	0.0325	0.9444	0.1329	1.0773	0.2690	0.1223	0.3913		3,043.7575	3,043.7575	0.0199		3,044.1754
Worker	3.3453	4.0458	52.8744	0.2515	19.7844	0.1558	19.9402	5.2469	0.1446	5.3915		16,193.7474	16,193.7474	0.6136		16,206.6326
Total	**4.1230**	**9.1403**	**63.3948**	**0.2840**	**20.7289**	**0.2887**	**21.0176**	**5.5159**	**0.2668**	**5.7828**		**19,237.5049**	**19,237.5049**	**0.6335**		**19,250.8079**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**31.2849**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1739	0.2103	2.7483	0.0131	1.0283	8.1000e-003	1.0364	0.2727	7.5100e-003	0.2802		841.7089	841.7089	0.0319		842.3786
Total	**0.1739**	**0.2103**	**2.7483**	**0.0131**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5100e-003**	**0.2802**		**841.7089**	**841.7089**	**0.0319**		**842.3786**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**31.1437**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1739	0.2103	2.7483	0.0131	1.0283	8.1000e-003	1.0364	0.2727	7.5100e-003	0.2802		841.7089	841.7089	0.0319		842.3786
Total	**0.1739**	**0.2103**	**2.7483**	**0.0131**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5100e-003**	**0.2802**		**841.7089**	**841.7089**	**0.0319**		**842.3786**

3.7 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**31.2448**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1665	0.2021	2.6601	0.0131	1.0283	8.1000e-003	1.0364	0.2727	7.5200e-003	0.2802		836.3245	836.3245	0.0312		836.9790
Total	**0.1665**	**0.2021**	**2.6601**	**0.0131**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5200e-003**	**0.2802**		**836.3245**	**836.3245**	**0.0312**		**836.9790**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**31.1437**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1665	0.2021	2.6601	0.0131	1.0283	8.1000e-003	1.0364	0.2727	7.5200e-003	0.2802		836.3245	836.3245	0.0312		836.9790
Total	**0.1665**	**0.2021**	**2.6601**	**0.0131**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5200e-003**	**0.2802**		**836.3245**	**836.3245**	**0.0312**		**836.9790**

3.8 Building Construction 5 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9659	8.9380	8.4699	0.0181		0.3904	0.3904		0.3647	0.3647		1,744.3720	1,744.3720	0.4633		1,754.1006
Total	**0.9659**	**8.9380**	**8.4699**	**0.0181**		**0.3904**	**0.3904**		**0.3647**	**0.3647**		**1,744.3720**	**1,744.3720**	**0.4633**		**1,754.1006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7880	5.1620	10.6597	0.0329	0.9569	0.1347	1.0916	0.2726	0.1239	0.3965		3,084.0721	3,084.0721	0.0202		3,084.4956
Worker	0.8789	1.0629	13.8907	0.0661	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		4,254.2896	4,254.2896	0.1612		4,257.6747
Total	**1.6669**	**6.2249**	**24.5505**	**0.0990**	**6.1545**	**0.1756**	**6.3301**	**1.6510**	**0.1619**	**1.8129**		**7,338.3617**	**7,338.3617**	**0.1814**		**7,342.1702**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2131	0.9233	10.1044	0.0181		0.0284	0.0284		0.0284	0.0284	0.0000	1,744.3720	1,744.3720	0.4633		1,754.1006
Total	**0.2131**	**0.9233**	**10.1044**	**0.0181**		**0.0284**	**0.0284**		**0.0284**	**0.0284**	**0.0000**	**1,744.3720**	**1,744.3720**	**0.4633**		**1,754.1006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7880	5.1620	10.6597	0.0329	0.9569	0.1347	1.0916	0.2726	0.1239	0.3965		3,084.0721	3,084.0721	0.0202		3,084.4956
Worker	0.8789	1.0629	13.8907	0.0661	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		4,254.2896	4,254.2896	0.1612		4,257.6747
Total	**1.6669**	**6.2249**	**24.5505**	**0.0990**	**6.1545**	**0.1756**	**6.3301**	**1.6510**	**0.1619**	**1.8129**		**7,338.3617**	**7,338.3617**	**0.1814**		**7,342.1702**

3.9 Building Construction 6 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4703	4.6987	4.5712	9.2000e-003		0.2064	0.2064		0.1899	0.1899		890.7188	890.7188	0.2881		896.7684
Total	**0.4703**	**4.6987**	**4.5712**	**9.2000e-003**		**0.2064**	**0.2064**		**0.1899**	**0.1899**		**890.7188**	**890.7188**	**0.2881**		**896.7684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7777	5.0946	10.5204	0.0325	0.9444	0.1329	1.0773	0.2690	0.1223	0.3913		3,043.7575	3,043.7575	0.0199		3,044.1754
Worker	0.8789	1.0629	13.8907	0.0661	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		4,254.2896	4,254.2896	0.1612		4,257.6747
Total	**1.6566**	**6.1574**	**24.4111**	**0.0986**	**6.1420**	**0.1739**	**6.3159**	**1.6475**	**0.1603**	**1.8077**		**7,298.0470**	**7,298.0470**	**0.1811**		**7,301.8500**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1128	0.4886	5.4360	9.2000e-003		0.0150	0.0150		0.0150	0.0150	0.0000	890.7188	890.7188	0.2881		896.7684
Total	**0.1128**	**0.4886**	**5.4360**	**9.2000e-003**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**890.7188**	**890.7188**	**0.2881**		**896.7684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7777	5.0946	10.5204	0.0325	0.9444	0.1329	1.0773	0.2690	0.1223	0.3913		3,043.7575	3,043.7575	0.0199		3,044.1754
Worker	0.8789	1.0629	13.8907	0.0661	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		4,254.2896	4,254.2896	0.1612		4,257.6747
Total	**1.6566**	**6.1574**	**24.4111**	**0.0986**	**6.1420**	**0.1739**	**6.3159**	**1.6475**	**0.1603**	**1.8077**		**7,298.0470**	**7,298.0470**	**0.1811**		**7,301.8500**

3.9 Building Construction 6 - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4661	2.1442	4.4049	0.0113		0.0475	0.0475		0.0475	0.0475		1,067.9716	1,067.9716	0.0414		1,068.8403
Total	**0.4661**	**2.1442**	**4.4049**	**0.0113**		**0.0475**	**0.0475**		**0.0475**	**0.0475**		**1,067.9716**	**1,067.9716**	**0.0414**		**1,068.8403**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7698	5.0732	10.4473	0.0325	0.9444	0.1331	1.0776	0.2690	0.1225	0.3915		3,043.7473	3,043.7473	0.0199		3,044.1657
Worker	0.8416	1.0217	13.4453	0.0661	5.1976	0.0410	5.2386	1.3784	0.0380	1.4164		4,227.0750	4,227.0750	0.1575		4,230.3829
Total	**1.6113**	**6.0949**	**23.8926**	**0.0985**	**6.1420**	**0.1741**	**6.3161**	**1.6475**	**0.1605**	**1.8079**		**7,270.8224**	**7,270.8224**	**0.1774**		**7,274.5486**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1128	0.4886	5.4360	0.0113		0.0150	0.0150		0.0150	0.0150	0.0000	1,067.9716	1,067.9716	0.0414		1,068.8403
Total	**0.1128**	**0.4886**	**5.4360**	**0.0113**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**1,067.9716**	**1,067.9716**	**0.0414**		**1,068.8403**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7698	5.0732	10.4473	0.0325	0.9444	0.1331	1.0776	0.2690	0.1225	0.3915		3,043.7473	3,043.7473	0.0199		3,044.1657
Worker	0.8416	1.0217	13.4453	0.0661	5.1976	0.0410	5.2386	1.3784	0.0380	1.4164		4,227.0750	4,227.0750	0.1575		4,230.3829
Total	**1.6113**	**6.0949**	**23.8926**	**0.0985**	**6.1420**	**0.1741**	**6.3161**	**1.6475**	**0.1605**	**1.8079**		**7,270.8224**	**7,270.8224**	**0.1774**		**7,274.5486**

3.10 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5520	9.2333	17.3052	0.0287		0.3507	0.3507		0.3507	0.3507		2,705.3292	2,705.3292	0.1376		2,708.2177
Paving	0.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7201**	**9.2333**	**17.3052**	**0.0287**		**0.3507**	**0.3507**		**0.3507**	**0.3507**		**2,705.3292**	**2,705.3292**	**0.1376**		**2,708.2177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0471	0.0571	0.7518	3.6900e-003	0.2906	2.2900e-003	0.2929	0.0771	2.1200e-003	0.0792		236.3526	236.3526	8.8100e-003		236.5375
Total	**0.0471**	**0.0571**	**0.7518**	**3.6900e-003**	**0.2906**	**2.2900e-003**	**0.2929**	**0.0771**	**2.1200e-003**	**0.0792**		**236.3526**	**236.3526**	**8.8100e-003**		**236.5375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3391	1.5828	17.5929	0.0287		0.0517	0.0517		0.0517	0.0517	0.0000	2,705.3292	2,705.3292	0.1376		2,708.2177
Paving	0.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5071**	**1.5828**	**17.5929**	**0.0287**		**0.0517**	**0.0517**		**0.0517**	**0.0517**	**0.0000**	**2,705.3292**	**2,705.3292**	**0.1376**		**2,708.2177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0471	0.0571	0.7518	3.6900e-003	0.2906	2.2900e-003	0.2929	0.0771	2.1200e-003	0.0792		236.3526	236.3526	8.8100e-003		236.5375
Total	**0.0471**	**0.0571**	**0.7518**	**3.6900e-003**	**0.2906**	**2.2900e-003**	**0.2929**	**0.0771**	**2.1200e-003**	**0.0792**		**236.3526**	**236.3526**	**8.8100e-003**		**236.5375**

Harbor UCLA Master Plan- Phase V

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	234.00	1000sqft	5.37	234,000.00	0
Parking Lot	570.00	Space	5.13	104,005.00	0
Unenclosed Parking with Elevator	1,220.00	Space	10.98	551,150.00	0
User Defined Retail	35,000.00	User Defined Unit	0.00	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating - See Input Summary

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	411,635.00	298,289.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,234,905.00	442,809.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	276.00

tblConstructionPhase	NumDays	370.00	173.00
tblConstructionPhase	NumDays	370.00	107.00
tblConstructionPhase	NumDays	370.00	455.00
tblConstructionPhase	NumDays	370.00	260.00
tblConstructionPhase	NumDays	370.00	86.00
tblConstructionPhase	NumDays	370.00	146.00
tblConstructionPhase	NumDays	35.00	173.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	PhaseEndDate	6/20/2030	4/22/2030
tblConstructionPhase	PhaseEndDate	12/1/2025	4/2/2025
tblConstructionPhase	PhaseEndDate	8/29/2025	8/30/2025
tblConstructionPhase	PhaseEndDate	5/28/2027	5/30/2027
tblConstructionPhase	PhaseEndDate	5/26/2028	5/30/2029
tblConstructionPhase	PhaseEndDate	8/20/2030	9/30/2029
tblConstructionPhase	PhaseEndDate	8/12/2030	4/22/2030
tblConstructionPhase	PhaseStartDate	5/31/2029	4/1/2029
tblConstructionPhase	PhaseStartDate	4/3/2025	8/5/2024
tblConstructionPhase	PhaseStartDate	8/31/2025	9/1/2025
tblConstructionPhase	PhaseStartDate	5/31/2027	6/1/2028
tblConstructionPhase	PhaseStartDate	4/23/2030	6/1/2029
tblConstructionPhase	PhaseStartDate	4/23/2030	1/1/2030
tblGrading	MaterialExported	0.00	10,675.00
tblGrading	MaterialImported	0.00	73,803.00
tblLandUse	LandUseSquareFeet	228,000.00	104,005.00
tblLandUse	LandUseSquareFeet	488,000.00	551,150.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	10,560.00	14,080.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	WorkerTripNumber	18.00	486.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	72.00	92.00
tblTripsAndVMT	WorkerTripNumber	361.00	465.00
tblTripsAndVMT	WorkerTripNumber	361.00	465.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	10.2227	46.7681	133.8752	0.4462	28.3239	1.7370	30.0608	7.5236	1.6163	9.1399	0.0000	34,112.8613	34,112.8613	2.3702	0.0000	34,162.6348
2025	9.7537	44.1022	129.8707	0.4461	29.4047	1.5771	30.9818	7.7889	1.4667	9.2556	0.0000	33,856.7108	33,856.7108	2.3401	0.0000	33,905.8538
2026	5.0593	13.5206	71.7491	0.2751	20.7412	0.4288	21.1700	5.5195	0.3957	5.9151	0.0000	19,293.3621	19,293.3621	0.9010	0.0000	19,312.2825
2027	4.8866	13.2689	69.5303	0.2751	20.7413	0.4298	21.1710	5.5195	0.3966	5.9161	0.0000	19,139.4034	19,139.4034	0.8837	0.0000	19,157.9618
2028	5.7666	21.8281	75.3966	0.2971	20.7288	0.7537	21.4825	5.5159	0.6979	6.2138	0.0000	21,104.1362	21,104.1362	1.5120	0.0000	21,135.8881
2029	37.0698	22.9938	77.7549	0.3122	21.7572	0.8138	22.5710	5.7887	0.7573	6.5460	0.0000	22,058.3051	22,058.3051	1.5443	0.0000	22,090.7361
2030	35.3331	18.7898	51.5548	0.1527	7.4610	0.6040	8.0650	1.9973	0.5896	2.5868	0.0000	12,032.3456	12,032.3456	0.4086	0.0000	12,040.9253

Total	**108.0918**	**181.2714**	**609.7316**	**2.2046**	**149.1581**	**6.3440**	**155.5020**	**39.6532**	**5.9200**	**45.5732**	**0.0000**	**161,597.1244**	**161,597.1244**	**9.9599**	**0.0000**	**161,806.2825**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	8.3164	26.1323	138.0434	0.4462	28.2902	0.7756	29.0658	7.5185	0.7254	8.2438	0.0000	34,112.8613	34,112.8613	2.3702	0.0000	34,162.6348
2025	8.0286	25.6838	134.1810	0.4461	29.3710	0.7721	30.1431	7.7838	0.7216	8.5053	0.0000	33,856.7108	33,856.7108	2.3401	0.0000	33,905.8538
2026	4.8265	10.7353	71.9737	0.2751	20.7412	0.3016	21.0429	5.5195	0.2796	5.7991	0.0000	19,293.3621	19,293.3621	0.9010	0.0000	19,312.2825
2027	4.6538	10.4836	69.7549	0.2751	20.7413	0.3027	21.0439	5.5195	0.2806	5.8000	0.0000	19,139.4034	19,139.4034	0.8837	0.0000	19,157.9618
2028	4.9477	12.5825	79.1325	0.2971	20.7288	0.3743	21.1031	5.5159	0.3523	5.8683	0.0000	21,104.1362	21,104.1362	1.5120	0.0000	21,135.8881
2029	36.1098	12.7314	81.5140	0.3122	21.7572	0.3868	22.1440	5.7887	0.3643	6.1529	0.0000	22,058.3051	22,058.3051	1.5443	0.0000	22,090.7361
2030	33.6658	8.7561	52.9084	0.1527	7.4610	0.2562	7.7172	1.9973	0.2417	2.2390	0.0000	12,032.3456	12,032.3456	0.4086	0.0000	12,040.9253
Total	**100.5486**	**107.1050**	**627.5079**	**2.2046**	**149.0907**	**3.1692**	**152.2599**	**39.6430**	**2.9655**	**42.6085**	**0.0000**	**161,597.1244**	**161,597.1244**	**9.9599**	**0.0000**	**161,806.2825**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.98**	**40.91**	**-2.92**	**0.00**	**0.05**	**50.04**	**2.08**	**0.03**	**49.91**	**6.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/5/2024	4/2/2025	5	173	
2	Building Construction	Building Construction	8/5/2024	4/2/2025	5	173	
3	Building Construction 2	Building Construction	4/3/2025	8/30/2025	5	107	
4	Building Construction 3	Building Construction	9/1/2025	5/30/2027	5	455	
5	Building Construction 4	Building Construction	6/1/2028	5/30/2029	5	260	

6	Architectural Coating	Architectural Coating	4/1/2029	4/22/2030	5	276	
7	Building Construction 5	Building Construction	6/1/2029	9/30/2029	5	86	
8	Building Construction 6	Building Construction	10/1/2029	4/22/2030	5	146	
9	Paving	Paving	1/1/2030	4/22/2030	5	80	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,809; Non-Residential Outdoor: 298,289 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Air Compressors	2	8.00	78	0.48
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Scrapers	0	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Building Construction 2	Cranes	0	7.00	226	0.29
Building Construction 2	Forklifts	0	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45
Building Construction 3	Cranes	0	7.00	226	0.29

Building Construction 3	Forklifts	1	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 3	Welders	0	8.00	46	0.45
Building Construction 4	Cranes	1	7.00	226	0.29
Building Construction 4	Forklifts	1	8.00	89	0.20
Building Construction 4	Generator Sets	0	8.00	84	0.74
Building Construction 4	Rubber Tired Loaders	2	8.00	199	0.36
Building Construction 4	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 4	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction 5	Air Compressors	1	8.00	78	0.48
Building Construction 5	Cranes	2	7.00	226	0.29
Building Construction 5	Forklifts	1	8.00	89	0.20
Building Construction 5	Generator Sets	0	8.00	84	0.74
Building Construction 5	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction 5	Welders	0	8.00	46	0.45
Building Construction 6	Cranes	1	7.00	226	0.29
Building Construction 6	Forklifts	1	8.00	89	0.20
Building Construction 6	Generator Sets	0	8.00	84	0.74
Building Construction 6	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction 6	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Trenchers	2	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	486.00	4.00	14,080.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	1,770.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	3	1,770.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	3	1,770.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	8	1,770.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 5	5	465.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 6	3	465.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0552	0.0000	0.0552	8.3600e-003	0.0000	8.3600e-003			0.0000			0.0000
Off-Road	1.3476	11.3151	16.3481	0.0287		0.5090	0.5090		0.4813	0.4813		2,762.3415	2,762.3415	0.6929		2,776.8928
Total	**1.3476**	**11.3151**	**16.3481**	**0.0287**	**0.0552**	**0.5090**	**0.5643**	**8.3600e-003**	**0.4813**	**0.4897**		**2,762.3415**	**2,762.3415**	**0.6929**		**2,776.8928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1438	9.4611	15.4200	0.0592	2.0826	0.3093	2.3920	0.5515	0.2846	0.8361		5,569.0046	5,569.0046	0.0398		5,569.8412
Vendor	0.0242	0.1457	0.3686	8.5000e-004	0.0250	3.6900e-003	0.0287	7.1200e-003	3.4000e-003	0.0105		79.9547	79.9547	5.6000e-004		79.9666
Worker	1.1619	1.5105	15.9759	0.0647	5.4323	0.0420	5.4743	1.4407	0.0389	1.4796		4,376.3336	4,376.3336	0.1929		4,380.3845
Total	**2.3299**	**11.1173**	**31.7644**	**0.1248**	**7.5400**	**0.3550**	**7.8950**	**1.9993**	**0.3269**	**2.3262**		**10,025.2928**	**10,025.2928**	**0.2333**		**10,030.1923**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0215	0.0000	0.0215	3.2600e-003	0.0000	3.2600e-003			0.0000			0.0000
Off-Road	0.3341	1.4479	18.7096	0.0287		0.0446	0.0446		0.0446	0.0446	0.0000	2,762.3415	2,762.3415	0.6929		2,776.8928
Total	**0.3341**	**1.4479**	**18.7096**	**0.0287**	**0.0215**	**0.0446**	**0.0661**	**3.2600e-003**	**0.0446**	**0.0478**	**0.0000**	**2,762.3415**	**2,762.3415**	**0.6929**		**2,776.8928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1438	9.4611	15.4200	0.0592	2.0826	0.3093	2.3920	0.5515	0.2846	0.8361		5,569.0046	5,569.0046	0.0398		5,569.8412
Vendor	0.0242	0.1457	0.3686	8.5000e-004	0.0250	3.6900e-003	0.0287	7.1200e-003	3.4000e-003	0.0105		79.9547	79.9547	5.6000e-004		79.9666
Worker	1.1619	1.5105	15.9759	0.0647	5.4323	0.0420	5.4743	1.4407	0.0389	1.4796		4,376.3336	4,376.3336	0.1929		4,380.3845
Total	**2.3299**	**11.1173**	**31.7644**	**0.1248**	**7.5400**	**0.3550**	**7.8950**	**1.9993**	**0.3269**	**2.3262**		**10,025.2928**	**10,025.2928**	**0.2333**		**10,030.1923**

3.2 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0552	0.0000	0.0552	8.3600e-003	0.0000	8.3600e-003			0.0000			0.0000
Off-Road	1.2475	10.1346	16.2978	0.0287		0.4223	0.4223		0.3995	0.3995		2,763.3888	2,763.3888	0.6919		2,777.9195
Total	**1.2475**	**10.1346**	**16.2978**	**0.0287**	**0.0552**	**0.4223**	**0.4775**	**8.3600e-003**	**0.3995**	**0.4078**		**2,763.3888**	**2,763.3888**	**0.6919**		**2,777.9195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1359	9.4363	15.2835	0.0592	3.1635	0.3110	3.4745	0.8168	0.2861	1.1030		5,569.1883	5,569.1883	0.0400		5,570.0287
Vendor	0.0237	0.1447	0.3620	8.5000e-004	0.0250	3.7100e-003	0.0287	7.1200e-003	3.4100e-003	0.0105		79.9567	79.9567	5.7000e-004		79.9686
Worker	1.1089	1.4361	15.2303	0.0647	5.4323	0.0421	5.4744	1.4407	0.0390	1.4797		4,320.6451	4,320.6451	0.1868		4,324.5686
Total	**2.2685**	**11.0171**	**30.8758**	**0.1248**	**8.6208**	**0.3568**	**8.9776**	**2.2646**	**0.3286**	**2.5932**		**9,969.7902**	**9,969.7902**	**0.2274**		**9,974.5660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0215	0.0000	0.0215	3.2600e-003	0.0000	3.2600e-003			0.0000			0.0000
Off-Road	0.3341	1.4479	18.7096	0.0287		0.0446	0.0446		0.0446	0.0446	0.0000	2,763.3888	2,763.3888	0.6919		2,777.9195
Total	**0.3341**	**1.4479**	**18.7096**	**0.0287**	**0.0215**	**0.0446**	**0.0661**	**3.2600e-003**	**0.0446**	**0.0478**	**0.0000**	**2,763.3888**	**2,763.3888**	**0.6919**		**2,777.9195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1359	9.4363	15.2835	0.0592	3.1635	0.3110	3.4745	0.8168	0.2861	1.1030		5,569.1883	5,569.1883	0.0400		5,570.0287
Vendor	0.0237	0.1447	0.3620	8.5000e-004	0.0250	3.7100e-003	0.0287	7.1200e-003	3.4100e-003	0.0105		79.9567	79.9567	5.7000e-004		79.9686
Worker	1.1089	1.4361	15.2303	0.0647	5.4323	0.0421	5.4744	1.4407	0.0390	1.4797		4,320.6451	4,320.6451	0.1868		4,324.5686
Total	**2.2685**	**11.0171**	**30.8758**	**0.1248**	**8.6208**	**0.3568**	**8.9776**	**2.2646**	**0.3286**	**2.5932**		**9,969.7902**	**9,969.7902**	**0.2274**		**9,974.5660**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4018	13.3329	13.6661	0.0249		0.5808	0.5808		0.5381	0.5381		2,368.4381	2,368.4381	0.7201		2,383.5596
Total	**1.4018**	**13.3329**	**13.6661**	**0.0249**		**0.5808**	**0.5808**		**0.5381**	**0.5381**		**2,368.4381**	**2,368.4381**	**0.7201**		**2,383.5596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9119	5.5017	13.9128	0.0323	0.9442	0.1394	1.0837	0.2689	0.1283	0.3972		3,018.2903	3,018.2903	0.0213		3,018.7379
Worker	4.2316	5.5010	58.1838	0.2356	19.7844	0.1528	19.9372	5.2469	0.1418	5.3887		15,938.4987	15,938.4987	0.7026		15,953.2523
Total	**5.1435**	**11.0027**	**72.0966**	**0.2679**	**20.7287**	**0.2922**	**21.0209**	**5.5159**	**0.2700**	**5.7859**		**18,956.7890**	**18,956.7890**	**0.7239**		**18,971.9902**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5090	2.5644	15.4728	0.0249		0.0839	0.0839		0.0839	0.0839	0.0000	2,368.4380	2,368.4380	0.7201		2,383.5596
Total	**0.5090**	**2.5644**	**15.4728**	**0.0249**		**0.0839**	**0.0839**		**0.0839**	**0.0839**	**0.0000**	**2,368.4380**	**2,368.4380**	**0.7201**		**2,383.5596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9119	5.5017	13.9128	0.0323	0.9442	0.1394	1.0837	0.2689	0.1283	0.3972		3,018.2903	3,018.2903	0.0213		3,018.7379
Worker	4.2316	5.5010	58.1838	0.2356	19.7844	0.1528	19.9372	5.2469	0.1418	5.3887		15,938.4987	15,938.4987	0.7026		15,953.2523
Total	**5.1435**	**11.0027**	**72.0966**	**0.2679**	**20.7287**	**0.2922**	**21.0209**	**5.5159**	**0.2700**	**5.7859**		**18,956.7890**	**18,956.7890**	**0.7239**		**18,971.9902**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3047	12.2573	13.5622	0.0249		0.5046	0.5046		0.4675	0.4675		2,369.4823	2,369.4823	0.7190		2,384.5803
Total	**1.3047**	**12.2573**	**13.5622**	**0.0249**		**0.5046**	**0.5046**		**0.4675**	**0.4675**		**2,369.4823**	**2,369.4823**	**0.7190**		**2,384.5803**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8947	5.4630	13.6666	0.0323	0.9443	0.1401	1.0844	0.2690	0.1289	0.3979		3,018.3668	3,018.3668	0.0214		3,018.8161
Worker	4.0384	5.2302	55.4682	0.2355	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		15,735.6828	15,735.6828	0.6804		15,749.9720
Total	**4.9331**	**10.6932**	**69.1348**	**0.2678**	**20.7287**	**0.2934**	**21.0221**	**5.5159**	**0.2711**	**5.7870**		**18,754.0496**	**18,754.0496**	**0.7018**		**18,768.7881**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4929	2.5257	15.4608	0.0249		0.0773	0.0773		0.0773	0.0773	0.0000	2,369.4823	2,369.4823	0.7190		2,384.5803
Total	**0.4929**	**2.5257**	**15.4608**	**0.0249**		**0.0773**	**0.0773**		**0.0773**	**0.0773**	**0.0000**	**2,369.4823**	**2,369.4823**	**0.7190**		**2,384.5803**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8947	5.4630	13.6666	0.0323	0.9443	0.1401	1.0844	0.2690	0.1289	0.3979		3,018.3668	3,018.3668	0.0214		3,018.8161
Worker	4.0384	5.2302	55.4682	0.2355	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		15,735.6828	15,735.6828	0.6804		15,749.9720
Total	**4.9331**	**10.6932**	**69.1348**	**0.2678**	**20.7287**	**0.2934**	**21.0221**	**5.5159**	**0.2711**	**5.7870**		**18,754.0496**	**18,754.0496**	**0.7018**		**18,768.7881**

3.4 Building Construction 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3468	3.5046	5.8529	8.1900e-003		0.1420	0.1420		0.1306	0.1306		792.8966	792.8966	0.2564		798.2818
Total	**0.3468**	**3.5046**	**5.8529**	**8.1900e-003**		**0.1420**	**0.1420**		**0.1306**	**0.1306**		**792.8966**	**792.8966**	**0.2564**		**798.2818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9065	5.5353	13.8477	0.0327	0.9568	0.1420	1.0987	0.2725	0.1306	0.4031		3,058.3451	3,058.3451	0.0217		3,058.8004
Worker	4.0384	5.2302	55.4682	0.2355	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		15,735.6828	15,735.6828	0.6804		15,749.9720
Total	**4.9449**	**10.7655**	**69.3158**	**0.2682**	**20.7412**	**0.2953**	**21.0364**	**5.5194**	**0.2728**	**5.7923**		**18,794.0280**	**18,794.0280**	**0.7021**		**18,808.7724**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0997	0.4320	6.1479	8.1900e-003		0.0133	0.0133		0.0133	0.0133	0.0000	792.8966	792.8966	0.2564		798.2818
Total	**0.0997**	**0.4320**	**6.1479**	**8.1900e-003**		**0.0133**	**0.0133**		**0.0133**	**0.0133**	**0.0000**	**792.8966**	**792.8966**	**0.2564**		**798.2818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9065	5.5353	13.8477	0.0327	0.9568	0.1420	1.0987	0.2725	0.1306	0.4031		3,058.3451	3,058.3451	0.0217		3,058.8004
Worker	4.0384	5.2302	55.4682	0.2355	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		15,735.6828	15,735.6828	0.6804		15,749.9720
Total	**4.9449**	**10.7655**	**69.3158**	**0.2682**	**20.7412**	**0.2953**	**21.0364**	**5.5194**	**0.2728**	**5.7923**		**18,794.0280**	**18,794.0280**	**0.7021**		**18,808.7724**

3.5 Building Construction 3 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3181	3.1550	5.0357	6.9900e-003		0.1385	0.1385		0.1274	0.1274		676.6286	676.6286	0.2188		681.2241
Total	**0.3181**	**3.1550**	**5.0357**	**6.9900e-003**		**0.1385**	**0.1385**		**0.1274**	**0.1274**		**676.6286**	**676.6286**	**0.2188**		**681.2241**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9065	5.5353	13.8477	0.0327	0.9568	0.1420	1.0987	0.2725	0.1306	0.4031		3,058.3451	3,058.3451	0.0217		3,058.8004
Worker	4.0384	5.2302	55.4682	0.2355	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		15,735.6828	15,735.6828	0.6804		15,749.9720
Total	**4.9449**	**10.7655**	**69.3158**	**0.2682**	**20.7412**	**0.2953**	**21.0364**	**5.5194**	**0.2728**	**5.7923**		**18,794.0280**	**18,794.0280**	**0.7021**		**18,808.7724**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0853	0.3696	5.2602	6.9900e-003		0.0114	0.0114		0.0114	0.0114	0.0000	676.6286	676.6286	0.2188		681.2241
Total	**0.0853**	**0.3696**	**5.2602**	**6.9900e-003**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**676.6286**	**676.6286**	**0.2188**		**681.2241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9065	5.5353	13.8477	0.0327	0.9568	0.1420	1.0987	0.2725	0.1306	0.4031		3,058.3451	3,058.3451	0.0217		3,058.8004
Worker	4.0384	5.2302	55.4682	0.2355	19.7844	0.1533	19.9377	5.2469	0.1422	5.3891		15,735.6828	15,735.6828	0.6804		15,749.9720
Total	**4.9449**	**10.7655**	**69.3158**	**0.2682**	**20.7412**	**0.2953**	**21.0364**	**5.5194**	**0.2728**	**5.7923**		**18,794.0280**	**18,794.0280**	**0.7021**		**18,808.7724**

3.5 Building Construction 3 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3181	3.1550	5.0357	6.9900e-003		0.1385	0.1385		0.1274	0.1274		676.6286	676.6286	0.2188		681.2241
Total	**0.3181**	**3.1550**	**5.0357**	**6.9900e-003**		**0.1385**	**0.1385**		**0.1274**	**0.1274**		**676.6286**	**676.6286**	**0.2188**		**681.2241**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8784	5.3689	13.5961	0.0327	0.9568	0.1361	1.0929	0.2725	0.1252	0.3977		3,057.6488	3,057.6488	0.0210		3,058.0906
Worker	3.8628	4.9967	53.1174	0.2355	19.7844	0.1542	19.9386	5.2469	0.1431	5.3900		15,559.0847	15,559.0847	0.6611		15,572.9679
Total	**4.7412**	**10.3656**	**66.7135**	**0.2681**	**20.7412**	**0.2903**	**21.0315**	**5.5195**	**0.2683**	**5.7877**		**18,616.7335**	**18,616.7335**	**0.6821**		**18,631.0584**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0853	0.3696	5.2602	6.9900e-003		0.0114	0.0114		0.0114	0.0114	0.0000	676.6286	676.6286	0.2188		681.2241
Total	**0.0853**	**0.3696**	**5.2602**	**6.9900e-003**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**676.6286**	**676.6286**	**0.2188**		**681.2241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8784	5.3689	13.5961	0.0327	0.9568	0.1361	1.0929	0.2725	0.1252	0.3977		3,057.6488	3,057.6488	0.0210		3,058.0906
Worker	3.8628	4.9967	53.1174	0.2355	19.7844	0.1542	19.9386	5.2469	0.1431	5.3900		15,559.0847	15,559.0847	0.6611		15,572.9679
Total	**4.7412**	**10.3656**	**66.7135**	**0.2681**	**20.7412**	**0.2903**	**21.0315**	**5.5195**	**0.2683**	**5.7877**		**18,616.7335**	**18,616.7335**	**0.6821**		**18,631.0584**

3.5 Building Construction 3 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3181	3.1550	5.0357	6.9900e-003		0.1385	0.1385		0.1274	0.1274		676.6286	676.6286	0.2188		681.2241
Total	**0.3181**	**3.1550**	**5.0357**	**6.9900e-003**		**0.1385**	**0.1385**		**0.1274**	**0.1274**		**676.6286**	**676.6286**	**0.2188**		**681.2241**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8693	5.3259	13.4627	0.0327	0.9568	0.1364	1.0933	0.2726	0.1255	0.3981		3,057.8083	3,057.8083	0.0211		3,058.2510
Worker	3.6992	4.7880	51.0320	0.2354	19.7844	0.1549	19.9393	5.2469	0.1437	5.3906		15,404.9665	15,404.9665	0.6438		15,418.4867
Total	**4.5685**	**10.1139**	**64.4947**	**0.2681**	**20.7413**	**0.2913**	**21.0326**	**5.5195**	**0.2692**	**5.7887**		**18,462.7748**	**18,462.7748**	**0.6649**		**18,476.7377**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0853	0.3696	5.2602	6.9900e-003		0.0114	0.0114		0.0114	0.0114	0.0000	676.6286	676.6286	0.2188		681.2241
Total	**0.0853**	**0.3696**	**5.2602**	**6.9900e-003**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**676.6286**	**676.6286**	**0.2188**		**681.2241**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8693	5.3259	13.4627	0.0327	0.9568	0.1364	1.0933	0.2726	0.1255	0.3981		3,057.8083	3,057.8083	0.0211		3,058.2510
Worker	3.6992	4.7880	51.0320	0.2354	19.7844	0.1549	19.9393	5.2469	0.1437	5.3906		15,404.9665	15,404.9665	0.6438		15,418.4867
Total	**4.5685**	**10.1139**	**64.4947**	**0.2681**	**20.7413**	**0.2913**	**21.0326**	**5.5195**	**0.2692**	**5.7887**		**18,462.7748**	**18,462.7748**	**0.6649**		**18,476.7377**

3.6 Building Construction 4 - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3695	12.0213	13.0099	0.0295		0.4644	0.4644		0.4305	0.4305		2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**1.3695**	**12.0213**	**13.0099**	**0.0295**		**0.4644**	**0.4644**		**0.4305**	**0.4305**		**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8471	5.2060	13.1673	0.0322	0.9444	0.1338	1.0782	0.2690	0.1231	0.3921		3,017.8016	3,017.8016	0.0207		3,018.2366
Worker	3.5500	4.6008	49.2195	0.2354	19.7844	0.1555	19.9399	5.2469	0.1443	5.3912		15,272.1635	15,272.1635	0.6285		15,285.3622
Total	**4.3971**	**9.8068**	**62.3868**	**0.2676**	**20.7288**	**0.2893**	**21.0181**	**5.5159**	**0.2673**	**5.7833**		**18,289.9651**	**18,289.9651**	**0.6492**		**18,303.5988**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5506	2.7757	16.7458	0.0295		0.0850	0.0850		0.0850	0.0850	0.0000	2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**0.5506**	**2.7757**	**16.7458**	**0.0295**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8471	5.2060	13.1673	0.0322	0.9444	0.1338	1.0782	0.2690	0.1231	0.3921		3,017.8016	3,017.8016	0.0207		3,018.2366
Worker	3.5500	4.6008	49.2195	0.2354	19.7844	0.1555	19.9399	5.2469	0.1443	5.3912		15,272.1635	15,272.1635	0.6285		15,285.3622
Total	**4.3971**	**9.8068**	**62.3868**	**0.2676**	**20.7288**	**0.2893**	**21.0181**	**5.5159**	**0.2673**	**5.7833**		**18,289.9651**	**18,289.9651**	**0.6492**		**18,303.5988**

3.6 Building Construction 4 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3695	12.0213	13.0099	0.0295		0.4644	0.4644		0.4305	0.4305		2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**1.3695**	**12.0213**	**13.0099**	**0.0295**		**0.4644**	**0.4644**		**0.4305**	**0.4305**		**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8378	5.1807	13.0342	0.0322	0.9444	0.1340	1.0784	0.2690	0.1232	0.3923		3,017.8498	3,017.8498	0.0207		3,018.2853
Worker	3.4008	4.4168	47.4361	0.2353	19.7844	0.1558	19.9402	5.2469	0.1446	5.3915		15,157.0140	15,157.0140	0.6136		15,169.8991
Total	**4.2387**	**9.5974**	**60.4703**	**0.2676**	**20.7289**	**0.2898**	**21.0186**	**5.5159**	**0.2678**	**5.7837**		**18,174.8638**	**18,174.8638**	**0.6343**		**18,188.1844**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5506	2.7757	16.7458	0.0295		0.0850	0.0850		0.0850	0.0850	0.0000	2,814.1711	2,814.1711	0.8628		2,832.2893
Total	**0.5506**	**2.7757**	**16.7458**	**0.0295**		**0.0850**	**0.0850**		**0.0850**	**0.0850**	**0.0000**	**2,814.1711**	**2,814.1711**	**0.8628**		**2,832.2893**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8378	5.1807	13.0342	0.0322	0.9444	0.1340	1.0784	0.2690	0.1232	0.3923		3,017.8498	3,017.8498	0.0207		3,018.2853
Worker	3.4008	4.4168	47.4361	0.2353	19.7844	0.1558	19.9402	5.2469	0.1446	5.3915		15,157.0140	15,157.0140	0.6136		15,169.8991
Total	**4.2387**	**9.5974**	**60.4703**	**0.2676**	**20.7289**	**0.2898**	**21.0186**	**5.5159**	**0.2678**	**5.7837**		**18,174.8638**	**18,174.8638**	**0.6343**		**18,188.1844**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**31.2849**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1768	0.2296	2.4656	0.0122	1.0283	8.1000e-003	1.0364	0.2727	7.5100e-003	0.2802		787.8222	787.8222	0.0319		788.4919
Total	**0.1768**	**0.2296**	**2.4656**	**0.0122**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5100e-003**	**0.2802**		**787.8222**	**787.8222**	**0.0319**		**788.4919**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**31.1437**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1768	0.2296	2.4656	0.0122	1.0283	8.1000e-003	1.0364	0.2727	7.5100e-003	0.2802		787.8222	787.8222	0.0319		788.4919
Total	**0.1768**	**0.2296**	**2.4656**	**0.0122**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5100e-003**	**0.2802**		**787.8222**	**787.8222**	**0.0319**		**788.4919**

3.7 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203		281.4481	281.4481	0.0114		281.6873
Total	**31.2448**	**0.8563**	**1.7977**	**2.9700e-003**		**0.0203**	**0.0203**		**0.0203**	**0.0203**		**281.4481**	**281.4481**	**0.0114**		**281.6873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1694	0.2206	2.3833	0.0122	1.0283	8.1000e-003	1.0364	0.2727	7.5200e-003	0.2802		782.6720	782.6720	0.0312		783.3264
Total	**0.1694**	**0.2206**	**2.3833**	**0.0122**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5200e-003**	**0.2802**		**782.6720**	**782.6720**	**0.0312**		**783.3264**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0114		281.6873
Total	**31.1437**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0114**		**281.6873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1694	0.2206	2.3833	0.0122	1.0283	8.1000e-003	1.0364	0.2727	7.5200e-003	0.2802		782.6720	782.6720	0.0312		783.3264
Total	**0.1694**	**0.2206**	**2.3833**	**0.0122**	**1.0283**	**8.1000e-003**	**1.0364**	**0.2727**	**7.5200e-003**	**0.2802**		**782.6720**	**782.6720**	**0.0312**		**783.3264**

3.8 Building Construction 5 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9659	8.9380	8.4699	0.0181		0.3904	0.3904		0.3647	0.3647		1,744.3720	1,744.3720	0.4633		1,754.1006
Total	**0.9659**	**8.9380**	**8.4699**	**0.0181**		**0.3904**	**0.3904**		**0.3647**	**0.3647**		**1,744.3720**	**1,744.3720**	**0.4633**		**1,754.1006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8489	5.2493	13.2068	0.0327	0.9569	0.1357	1.0927	0.2726	0.1249	0.3975		3,057.8214	3,057.8214	0.0210		3,058.2626
Worker	0.8934	1.1603	12.4620	0.0618	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		3,981.9274	3,981.9274	0.1612		3,985.3125
Total	**1.7424**	**6.4096**	**25.6688**	**0.0945**	**6.1545**	**0.1767**	**6.3312**	**1.6510**	**0.1629**	**1.8139**		**7,039.7488**	**7,039.7488**	**0.1822**		**7,043.5751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2131	0.9233	10.1044	0.0181		0.0284	0.0284		0.0284	0.0284	0.0000	1,744.3720	1,744.3720	0.4633		1,754.1006
Total	**0.2131**	**0.9233**	**10.1044**	**0.0181**		**0.0284**	**0.0284**		**0.0284**	**0.0284**	**0.0000**	**1,744.3720**	**1,744.3720**	**0.4633**		**1,754.1006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8489	5.2493	13.2068	0.0327	0.9569	0.1357	1.0927	0.2726	0.1249	0.3975		3,057.8214	3,057.8214	0.0210		3,058.2626
Worker	0.8934	1.1603	12.4620	0.0618	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		3,981.9274	3,981.9274	0.1612		3,985.3125
Total	**1.7424**	**6.4096**	**25.6688**	**0.0945**	**6.1545**	**0.1767**	**6.3312**	**1.6510**	**0.1629**	**1.8139**		**7,039.7488**	**7,039.7488**	**0.1822**		**7,043.5751**

3.9 Building Construction 6 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4703	4.6987	4.5712	9.2000e-003		0.2064	0.2064		0.1899	0.1899		890.7188	890.7188	0.2881		896.7684
Total	**0.4703**	**4.6987**	**4.5712**	**9.2000e-003**		**0.2064**	**0.2064**		**0.1899**	**0.1899**		**890.7188**	**890.7188**	**0.2881**		**896.7684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8378	5.1807	13.0342	0.0322	0.9444	0.1340	1.0784	0.2690	0.1232	0.3923		3,017.8498	3,017.8498	0.0207		3,018.2853
Worker	0.8934	1.1603	12.4620	0.0618	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		3,981.9274	3,981.9274	0.1612		3,985.3125
Total	**1.7313**	**6.3410**	**25.4962**	**0.0941**	**6.1420**	**0.1749**	**6.3169**	**1.6475**	**0.1612**	**1.8087**		**6,999.7772**	**6,999.7772**	**0.1819**		**7,003.5978**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1128	0.4886	5.4360	9.2000e-003		0.0150	0.0150		0.0150	0.0150	0.0000	890.7188	890.7188	0.2881		896.7684
Total	**0.1128**	**0.4886**	**5.4360**	**9.2000e-003**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**890.7188**	**890.7188**	**0.2881**		**896.7684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8378	5.1807	13.0342	0.0322	0.9444	0.1340	1.0784	0.2690	0.1232	0.3923		3,017.8498	3,017.8498	0.0207		3,018.2853
Worker	0.8934	1.1603	12.4620	0.0618	5.1976	0.0409	5.2385	1.3784	0.0380	1.4164		3,981.9274	3,981.9274	0.1612		3,985.3125
Total	**1.7313**	**6.3410**	**25.4962**	**0.0941**	**6.1420**	**0.1749**	**6.3169**	**1.6475**	**0.1612**	**1.8087**		**6,999.7772**	**6,999.7772**	**0.1819**		**7,003.5978**

3.9 Building Construction 6 - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4661	2.1442	4.4049	0.0113		0.0475	0.0475		0.0475	0.0475		1,067.9716	1,067.9716	0.0414		1,068.8403
Total	**0.4661**	**2.1442**	**4.4049**	**0.0113**		**0.0475**	**0.0475**		**0.0475**	**0.0475**		**1,067.9716**	**1,067.9716**	**0.0414**		**1,068.8403**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8289	5.1584	12.9441	0.0322	0.9444	0.1342	1.0786	0.2690	0.1234	0.3925		3,017.8385	3,017.8385	0.0208		3,018.2745
Worker	0.8561	1.1148	12.0461	0.0618	5.1976	0.0410	5.2386	1.3784	0.0380	1.4164		3,955.8964	3,955.8964	0.1575		3,959.2042
Total	**1.6850**	**6.2731**	**24.9902**	**0.0940**	**6.1420**	**0.1751**	**6.3172**	**1.6475**	**0.1614**	**1.8089**		**6,973.7349**	**6,973.7349**	**0.1783**		**6,977.4787**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1128	0.4886	5.4360	0.0113		0.0150	0.0150		0.0150	0.0150	0.0000	1,067.9716	1,067.9716	0.0414		1,068.8403
Total	**0.1128**	**0.4886**	**5.4360**	**0.0113**		**0.0150**	**0.0150**		**0.0150**	**0.0150**	**0.0000**	**1,067.9716**	**1,067.9716**	**0.0414**		**1,068.8403**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8289	5.1584	12.9441	0.0322	0.9444	0.1342	1.0786	0.2690	0.1234	0.3925		3,017.8385	3,017.8385	0.0208		3,018.2745
Worker	0.8561	1.1148	12.0461	0.0618	5.1976	0.0410	5.2386	1.3784	0.0380	1.4164		3,955.8964	3,955.8964	0.1575		3,959.2042
Total	**1.6850**	**6.2731**	**24.9902**	**0.0940**	**6.1420**	**0.1751**	**6.3172**	**1.6475**	**0.1614**	**1.8089**		**6,973.7349**	**6,973.7349**	**0.1783**		**6,977.4787**

3.10 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5520	9.2333	17.3052	0.0287		0.3507	0.3507		0.3507	0.3507		2,705.3292	2,705.3292	0.1376		2,708.2177
Paving	0.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7201**	**9.2333**	**17.3052**	**0.0287**		**0.3507**	**0.3507**		**0.3507**	**0.3507**		**2,705.3292**	**2,705.3292**	**0.1376**		**2,708.2177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0479	0.0623	0.6736	3.4600e-003	0.2906	2.2900e-003	0.2929	0.0771	2.1200e-003	0.0792		221.1899	221.1899	8.8100e-003		221.3749
Total	**0.0479**	**0.0623**	**0.6736**	**3.4600e-003**	**0.2906**	**2.2900e-003**	**0.2929**	**0.0771**	**2.1200e-003**	**0.0792**		**221.1899**	**221.1899**	**8.8100e-003**		**221.3749**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3391	1.5828	17.5929	0.0287		0.0517	0.0517		0.0517	0.0517	0.0000	2,705.3292	2,705.3292	0.1376		2,708.2177
Paving	0.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5071**	**1.5828**	**17.5929**	**0.0287**		**0.0517**	**0.0517**		**0.0517**	**0.0517**	**0.0000**	**2,705.3292**	**2,705.3292**	**0.1376**		**2,708.2177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0479	0.0623	0.6736	3.4600e-003	0.2906	2.2900e-003	0.2929	0.0771	2.1200e-003	0.0792		221.1899	221.1899	8.8100e-003		221.3749
Total	**0.0479**	**0.0623**	**0.6736**	**3.4600e-003**	**0.2906**	**2.2900e-003**	**0.2929**	**0.0771**	**2.1200e-003**	**0.0792**		**221.1899**	**221.1899**	**8.8100e-003**		**221.3749**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase 6 Construction Emissions

Harbor UCLA Master Plan- Phase 6

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	250.00	1000sqft	5.74	250,000.00	0
Medical Office Building	97.00	1000sqft	2.23	97,000.00	0
Other Asphalt Surfaces	75.00	1000sqft	1.72	75,000.00	0
Other Asphalt Surfaces	13.50	1000sqft	0.31	13,500.00	0
Unenclosed Parking with Elevator	1,000.00	Space	9.00	400,000.00	0
City Park	22.00	Acre	22.00	958,320.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client PRovided Info

Demolition -

Grading -

Architectural Coating - See Input Summary

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	792,743.00	169,333.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,378,228.00	231,998.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	55.00	93.00
tblConstructionPhase	NumDays	740.00	374.00
tblConstructionPhase	NumDays	50.00	85.00
tblConstructionPhase	NumDays	75.00	675.00
tblConstructionPhase	NumDays	55.00	93.00
tblConstructionPhase	PhaseEndDate	9/16/2024	5/8/2024
tblConstructionPhase	PhaseEndDate	3/23/2026	5/8/2024
tblConstructionPhase	PhaseEndDate	9/16/2024	5/8/2024
tblConstructionPhase	PhaseStartDate	5/9/2024	1/1/2024
tblConstructionPhase	PhaseStartDate	10/16/2024	12/2/2022
tblConstructionPhase	PhaseStartDate	5/9/2024	1/1/2024
tblGrading	MaterialExported	0.00	31,953.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripNumber	1,453.00	10,229.00
tblTripsAndVMT	HaulingTripNumber	3,159.00	5,325.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	28.00	466.00
tblTripsAndVMT	WorkerTripNumber	15.00	72.00

tblTripsAndVMT	WorkerTripNumber	652.00	2,688.00
tblTripsAndVMT	WorkerTripNumber	13.00	540.00
tblTripsAndVMT	WorkerTripNumber	130.00	52.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.2774	62.9537	81.6593	0.2167	13.5370	2.4710	16.0081	3.1383	2.3014	5.4397	0.0000	18,987.9946	18,987.9946	1.8794	0.0000	19,027.4621
2022	11.9473	56.9392	161.5838	0.4996	33.3905	2.2284	35.2949	8.8007	2.0745	10.5770	0.0000	37,489.7991	37,489.7991	2.4261	0.0000	37,540.7467
2023	11.1902	43.4083	154.1567	0.4992	33.3228	1.7048	35.0276	8.7841	1.5897	10.3738	0.0000	37,047.0368	37,047.0368	2.3700	0.0000	37,096.8066
2024	63.2563	53.1047	183.5217	0.6049	40.0094	2.1876	42.1970	10.5560	2.0365	12.5925	0.0000	44,389.8681	44,389.8681	3.0989	0.0000	44,454.9455
Total	**93.6711**	**216.4058**	**580.9215**	**1.8204**	**120.2597**	**8.5918**	**128.5275**	**31.2791**	**8.0020**	**38.9830**	**0.0000**	**137,914.6986**	**137,914.6986**	**9.7744**	**0.0000**	**138,119.9609**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.5043	31.1783	78.4810	0.2167	11.2809	0.9333	12.2143	2.7967	0.8931	3.6898	0.0000	18,987.9946	18,987.9946	1.8794	0.0000	19,027.4621
2022	9.7265	28.7876	164.3720	0.4996	33.0670	0.8832	33.7099	8.7657	0.8433	9.3696	0.0000	37,489.7991	37,489.7991	2.4261	0.0000	37,540.7467
2023	9.1923	22.2725	157.1222	0.4992	32.9994	0.6307	33.6300	8.7491	0.5920	9.3411	0.0000	37,047.0368	37,047.0368	2.3700	0.0000	37,096.8066
2024	60.5077	24.4250	187.4018	0.6049	39.6859	0.7073	40.3932	10.5211	0.6648	11.1859	0.0000	44,389.8681	44,389.8681	3.0989	0.0000	44,454.9455
Total	**83.9309**	**106.6634**	**587.3770**	**1.8204**	**117.0332**	**3.1545**	**119.9474**	**30.8327**	**2.9932**	**33.5864**	**0.0000**	**137,914.6985**	**137,914.6985**	**9.7744**	**0.0000**	**138,119.9609**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.40**	**50.71**	**-1.11**	**0.00**	**2.68**	**63.28**	**6.68**	**1.43**	**62.59**	**13.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/17/2021	3/15/2022	5	85	
2	Grading	Grading	3/16/2022	10/15/2024	5	675	
3	Building Construction	Building Construction	12/2/2022	5/8/2024	5	374	
4	Paving	Paving	1/1/2024	5/8/2024	5	93	
5	Architectural Coating	Architectural Coating	1/1/2024	5/8/2024	5	93	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 337.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 231,998; Non-Residential Outdoor: 169,333 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40

Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Scrapers	0	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	466.00	4.00	10,229.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	72.00	2.00	5,325.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	2,688.00	260.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	540.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6985	0.0000	3.6985	0.5600	0.0000	0.5600			0.0000			0.0000
Off-Road	4.1438	40.4558	40.2995	0.0616		1.9641	1.9641		1.8347	1.8347		5,943.2630	5,943.2630	1.6076		5,977.0235
Total	**4.1438**	**40.4558**	**40.2995**	**0.0616**	**3.6985**	**1.9641**	**5.6626**	**0.5600**	**1.8347**	**2.3946**		**5,943.2630**	**5,943.2630**	**1.6076**		**5,977.0235**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8246	20.7181	21.0033	0.0882	4.6047	0.4633	5.0681	1.1898	0.4263	1.6161		8,298.1143	8,298.1143	0.0646		8,299.4705
Vendor	0.0250	0.1987	0.3234	8.6000e-004	0.0250	3.7500e-003	0.0288	7.1200e-003	3.4500e-003	0.0106		80.8838	80.8838	5.8000e-004		80.8960
Worker	1.2840	1.5812	20.0332	0.0659	5.2088	0.0399	5.2487	1.3814	0.0370	1.4184		4,665.7335	4,665.7335	0.2066		4,670.0721
Total	**3.1336**	**22.4979**	**41.3599**	**0.1550**	**9.8385**	**0.5070**	**10.3455**	**2.5783**	**0.4667**	**3.0451**		**13,044.7317**	**13,044.7317**	**0.2718**		**13,050.4386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4424	0.0000	1.4424	0.2184	0.0000	0.2184			0.0000			0.0000
Off-Road	1.3707	8.6804	37.1211	0.0616		0.4264	0.4264		0.4264	0.4264	0.0000	5,943.2630	5,943.2630	1.6076		5,977.0235
Total	**1.3707**	**8.6804**	**37.1211**	**0.0616**	**1.4424**	**0.4264**	**1.8688**	**0.2184**	**0.4264**	**0.6448**	**0.0000**	**5,943.2630**	**5,943.2630**	**1.6076**		**5,977.0235**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8246	20.7181	21.0033	0.0882	4.6047	0.4633	5.0681	1.1898	0.4263	1.6161		8,298.1143	8,298.1143	0.0646		8,299.4705
Vendor	0.0250	0.1987	0.3234	8.6000e-004	0.0250	3.7500e-003	0.0288	7.1200e-003	3.4500e-003	0.0106		80.8838	80.8838	5.8000e-004		80.8960
Worker	1.2840	1.5812	20.0332	0.0659	5.2088	0.0399	5.2487	1.3814	0.0370	1.4184		4,665.7335	4,665.7335	0.2066		4,670.0721
Total	**3.1336**	**22.4979**	**41.3599**	**0.1550**	**9.8385**	**0.5070**	**10.3455**	**2.5783**	**0.4667**	**3.0451**		**13,044.7317**	**13,044.7317**	**0.2718**		**13,050.4386**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6985	0.0000	3.6985	0.5600	0.0000	0.5600			0.0000			0.0000
Off-Road	3.8261	36.3585	39.5704	0.0617		1.7257	1.7257		1.6117	1.6117		5,945.3308	5,945.3308	1.6041		5,979.0177
Total	**3.8261**	**36.3585**	**39.5704**	**0.0617**	**3.6985**	**1.7257**	**5.4242**	**0.5600**	**1.6117**	**2.1717**		**5,945.3308**	**5,945.3308**	**1.6041**		**5,979.0177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8287	18.9168	20.8549	0.0882	3.1075	0.4592	3.5666	0.8223	0.4225	1.2448		8,291.2699	8,291.2699	0.0660		8,292.6554
Vendor	0.0245	0.1803	0.3159	8.6000e-004	0.0250	3.7100e-003	0.0287	7.1200e-003	3.4100e-003	0.0105		80.8109	80.8109	5.9000e-004		80.8234
Worker	1.2161	1.4836	18.8654	0.0659	5.2088	0.0398	5.2486	1.3814	0.0370	1.4183		4,588.8141	4,588.8141	0.1978		4,592.9686
Total	**3.0692**	**20.5807**	**40.0362**	**0.1549**	**8.3413**	**0.5027**	**8.8440**	**2.2109**	**0.4628**	**2.6737**		**12,960.8949**	**12,960.8949**	**0.2644**		**12,966.4473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4424	0.0000	1.4424	0.2184	0.0000	0.2184			0.0000			0.0000
Off-Road	1.3165	8.2069	37.1024	0.0617		0.3805	0.3805		0.3805	0.3805	0.0000	5,945.3308	5,945.3308	1.6041		5,979.0177
Total	**1.3165**	**8.2069**	**37.1024**	**0.0617**	**1.4424**	**0.3805**	**1.8229**	**0.2184**	**0.3805**	**0.5989**	**0.0000**	**5,945.3308**	**5,945.3308**	**1.6041**		**5,979.0177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8287	18.9168	20.8549	0.0882	3.1075	0.4592	3.5666	0.8223	0.4225	1.2448		8,291.2699	8,291.2699	0.0660		8,292.6554
Vendor	0.0245	0.1803	0.3159	8.6000e-004	0.0250	3.7100e-003	0.0287	7.1200e-003	3.4100e-003	0.0105		80.8109	80.8109	5.9000e-004		80.8234
Worker	1.2161	1.4836	18.8654	0.0659	5.2088	0.0398	5.2486	1.3814	0.0370	1.4183		4,588.8141	4,588.8141	0.1978		4,592.9686
Total	**3.0692**	**20.5807**	**40.0362**	**0.1549**	**8.3413**	**0.5027**	**8.8440**	**2.2109**	**0.4628**	**2.6737**		**12,960.8949**	**12,960.8949**	**0.2644**		**12,966.4473**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.6065	15.0603	15.0278	0.0256		0.7673	0.7673		0.7146	0.7146		2,474.8538	2,474.8538	0.7035		2,489.6269
Total	**1.6065**	**15.0603**	**15.0278**	**0.0256**	**0.5303**	**0.7673**	**1.2975**	**0.0573**	**0.7146**	**0.7719**		**2,474.8538**	**2,474.8538**	**0.7035**		**2,489.6269**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1199	1.2401	1.3671	5.7800e-003	0.3717	0.0301	0.4018	0.0951	0.0277	0.1228		543.5289	543.5289	4.3300e-003		543.6197
Vendor	0.0122	0.0902	0.1580	4.3000e-004	0.0125	1.8600e-003	0.0144	3.5600e-003	1.7100e-003	5.2700e-003		40.4055	40.4055	3.0000e-004		40.4117
Worker	0.1879	0.2292	2.9148	0.0102	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		709.0013	709.0013	0.0306		709.6432
Total	**0.3200**	**1.5595**	**4.4399**	**0.0164**	**1.1890**	**0.0381**	**1.2271**	**0.3121**	**0.0351**	**0.3472**		**1,292.9357**	**1,292.9357**	**0.0352**		**1,293.6746**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.3049	1.3211	16.9046	0.0256		0.0407	0.0407		0.0407	0.0407	0.0000	2,474.8538	2,474.8538	0.7035		2,489.6269
Total	**0.3049**	**1.3211**	**16.9046**	**0.0256**	**0.2068**	**0.0407**	**0.2475**	**0.0223**	**0.0407**	**0.0630**	**0.0000**	**2,474.8538**	**2,474.8538**	**0.7035**		**2,489.6269**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1199	1.2401	1.3671	5.7800e-003	0.3717	0.0301	0.4018	0.0951	0.0277	0.1228		543.5289	543.5289	4.3300e-003		543.6197
Vendor	0.0122	0.0902	0.1580	4.3000e-004	0.0125	1.8600e-003	0.0144	3.5600e-003	1.7100e-003	5.2700e-003		40.4055	40.4055	3.0000e-004		40.4117
Worker	0.1879	0.2292	2.9148	0.0102	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		709.0013	709.0013	0.0306		709.6432
Total	**0.3200**	**1.5595**	**4.4399**	**0.0164**	**1.1890**	**0.0381**	**1.2271**	**0.3121**	**0.0351**	**0.3472**		**1,292.9357**	**1,292.9357**	**0.0352**		**1,293.6746**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4653	13.4107	14.9298	0.0257		0.6548	0.6548		0.6100	0.6100		2,475.6351	2,475.6351	0.7018		2,490.3719
Total	**1.4653**	**13.4107**	**14.9298**	**0.0257**	**0.5303**	**0.6548**	**1.1850**	**0.0573**	**0.6100**	**0.6672**		**2,475.6351**	**2,475.6351**	**0.7018**		**2,490.3719**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1061	0.8866	1.2890	5.7400e-003	0.3040	0.0299	0.3339	0.0785	0.0275	0.1061		539.7094	539.7094	3.7300e-003		539.7878
Vendor	0.0113	0.0719	0.1515	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.2119	40.2119	2.7000e-004		40.2176
Worker	0.1780	0.2158	2.7502	0.0102	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		698.1687	698.1687	0.0294		698.7855
Total	**0.2954**	**1.1744**	**4.1907**	**0.0164**	**1.1213**	**0.0379**	**1.1592**	**0.2955**	**0.0349**	**0.3305**		**1,278.0901**	**1,278.0901**	**0.0334**		**1,278.7908**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.3049	1.3211	16.9046	0.0257		0.0407	0.0407		0.0407	0.0407	0.0000	2,475.6351	2,475.6351	0.7018		2,490.3719
Total	**0.3049**	**1.3211**	**16.9046**	**0.0257**	**0.2068**	**0.0407**	**0.2475**	**0.0223**	**0.0407**	**0.0630**	**0.0000**	**2,475.6351**	**2,475.6351**	**0.7018**		**2,490.3719**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1061	0.8866	1.2890	5.7400e-003	0.3040	0.0299	0.3339	0.0785	0.0275	0.1061		539.7094	539.7094	3.7300e-003		539.7878
Vendor	0.0113	0.0719	0.1515	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.2119	40.2119	2.7000e-004		40.2176
Worker	0.1780	0.2158	2.7502	0.0102	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		698.1687	698.1687	0.0294		698.7855
Total	**0.2954**	**1.1744**	**4.1907**	**0.0164**	**1.1213**	**0.0379**	**1.1592**	**0.2955**	**0.0349**	**0.3305**		**1,278.0901**	**1,278.0901**	**0.0334**		**1,278.7908**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.3796	12.2808	14.9056	0.0257		0.5794	0.5794		0.5395	0.5395		2,476.2021	2,476.2021	0.7006		2,490.9151
Total	**1.3796**	**12.2808**	**14.9056**	**0.0257**	**0.5303**	**0.5794**	**1.1096**	**0.0573**	**0.5395**	**0.5968**		**2,476.2021**	**2,476.2021**	**0.7006**		**2,490.9151**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1065	0.8868	1.2798	5.7500e-003	0.3733	0.0299	0.4033	0.0956	0.0275	0.1231		541.1029	541.1029	3.7900e-003		541.1826
Vendor	0.0112	0.0716	0.1487	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.3204	40.3204	2.7000e-004		40.3261
Worker	0.1694	0.2045	2.6192	0.0102	0.8048	6.2200e-003	0.8110	0.2134	5.7700e-003	0.2192		692.2084	692.2084	0.0286		692.8085
Total	**0.2870**	**1.1628**	**4.0477**	**0.0164**	**1.1906**	**0.0380**	**1.2286**	**0.3125**	**0.0350**	**0.3475**		**1,273.6317**	**1,273.6317**	**0.0326**		**1,274.3172**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.3049	1.3211	16.9046	0.0257		0.0407	0.0407		0.0407	0.0407	0.0000	2,476.2021	2,476.2021	0.7006		2,490.9151
Total	**0.3049**	**1.3211**	**16.9046**	**0.0257**	**0.2068**	**0.0407**	**0.2475**	**0.0223**	**0.0407**	**0.0630**	**0.0000**	**2,476.2021**	**2,476.2021**	**0.7006**		**2,490.9151**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1065	0.8868	1.2798	5.7500e-003	0.3733	0.0299	0.4033	0.0956	0.0275	0.1231		541.1029	541.1029	3.7900e-003		541.1826
Vendor	0.0112	0.0716	0.1487	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.3204	40.3204	2.7000e-004		40.3261
Worker	0.1694	0.2045	2.6192	0.0102	0.8048	6.2200e-003	0.8110	0.2134	5.7700e-003	0.2192		692.2084	692.2084	0.0286		692.8085
Total	**0.2870**	**1.1628**	**4.0477**	**0.0164**	**1.1906**	**0.0380**	**1.2286**	**0.3125**	**0.0350**	**0.3475**		**1,273.6317**	**1,273.6317**	**0.0326**		**1,274.3172**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4147	12.3763	12.7623	0.0212		0.6280	0.6280		0.5916	0.5916		1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**1.4147**	**12.3763**	**12.7623**	**0.0212**		**0.6280**	**0.6280**		**0.5916**	**0.5916**		**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5915	11.7204	20.5334	0.0561	1.6258	0.2412	1.8670	0.4631	0.2219	0.6850		5,252.7095	5,252.7095	0.0387		5,253.5215
Worker	7.0146	8.5576	108.8204	0.3803	30.0455	0.2298	30.2753	7.9682	0.2131	8.1813		26,469.3826	26,469.3826	1.1411		26,493.3465
Total	**8.6061**	**20.2780**	**129.3538**	**0.4364**	**31.6713**	**0.4710**	**32.1422**	**8.4313**	**0.4350**	**8.8663**		**31,722.0921**	**31,722.0921**	**1.1798**		**31,746.8680**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4956	2.4112	13.6737	0.0212		0.0931	0.0931		0.0931	0.0931	0.0000	1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**0.4956**	**2.4112**	**13.6737**	**0.0212**		**0.0931**	**0.0931**		**0.0931**	**0.0931**	**0.0000**	**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5915	11.7204	20.5334	0.0561	1.6258	0.2412	1.8670	0.4631	0.2219	0.6850		5,252.7095	5,252.7095	0.0387		5,253.5215
Worker	7.0146	8.5576	108.8204	0.3803	30.0455	0.2298	30.2753	7.9682	0.2131	8.1813		26,469.3826	26,469.3826	1.1411		26,493.3465
Total	**8.6061**	**20.2780**	**129.3538**	**0.4364**	**31.6713**	**0.4710**	**32.1422**	**8.4313**	**0.4350**	**8.8663**		**31,722.0921**	**31,722.0921**	**1.1798**		**31,746.8680**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3107	11.4150	12.6651	0.0212		0.5443	0.5443		0.5127	0.5127		2,000.7941	2,000.7941	0.5037		2,011.3720
Total	**1.3107**	**11.4150**	**12.6651**	**0.0212**		**0.5443**	**0.5443**		**0.5127**	**0.5127**		**2,000.7941**	**2,000.7941**	**0.5037**		**2,011.3720**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4738	9.3506	19.6986	0.0558	1.6258	0.2382	1.8639	0.4631	0.2191	0.6822		5,227.5512	5,227.5512	0.0348		5,228.2812
Worker	6.6450	8.0576	102.6726	0.3802	30.0455	0.2296	30.2751	7.9682	0.2130	8.1812		26,064.9663	26,064.9663	1.0964		26,087.9908
Total	**8.1188**	**17.4082**	**122.3712**	**0.4360**	**31.6713**	**0.4678**	**32.1391**	**8.4313**	**0.4321**	**8.8634**		**31,292.5175**	**31,292.5175**	**1.1312**		**31,316.2719**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4733	2.3689	13.6558	0.0212		0.0843	0.0843		0.0843	0.0843	0.0000	2,000.7941	2,000.7941	0.5037		2,011.3720
Total	**0.4733**	**2.3689**	**13.6558**	**0.0212**		**0.0843**	**0.0843**		**0.0843**	**0.0843**	**0.0000**	**2,000.7941**	**2,000.7941**	**0.5037**		**2,011.3720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4738	9.3506	19.6986	0.0558	1.6258	0.2382	1.8639	0.4631	0.2191	0.6822		5,227.5512	5,227.5512	0.0348		5,228.2812
Worker	6.6450	8.0576	102.6726	0.3802	30.0455	0.2296	30.2751	7.9682	0.2130	8.1812		26,064.9663	26,064.9663	1.0964		26,087.9908
Total	**8.1188**	**17.4082**	**122.3712**	**0.4360**	**31.6713**	**0.4678**	**32.1391**	**8.4313**	**0.4321**	**8.8634**		**31,292.5175**	**31,292.5175**	**1.1312**		**31,316.2719**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2329	10.6909	12.6042	0.0212		0.4790	0.4790		0.4510	0.4510		2,001.2833	2,001.2833	0.5011		2,011.8062
Total	**1.2329**	**10.6909**	**12.6042**	**0.0212**		**0.4790**	**0.4790**		**0.4510**	**0.4510**		**2,001.2833**	**2,001.2833**	**0.5011**		**2,011.8062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4525	9.3026	19.3242	0.0559	1.6258	0.2383	1.8641	0.4631	0.2192	0.6823		5,241.6496	5,241.6496	0.0353		5,242.3903
Worker	6.3244	7.6330	97.7834	0.3823	30.0455	0.2321	30.2776	7.9682	0.2153	8.1835		25,842.4455	25,842.4455	1.0669		25,864.8509
Total	**7.7768**	**16.9356**	**117.1077**	**0.4382**	**31.6713**	**0.4703**	**32.1416**	**8.4313**	**0.4345**	**8.8658**		**31,084.0951**	**31,084.0951**	**1.1022**		**31,107.2411**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4547	2.3291	13.6416	0.0212		0.0766	0.0766		0.0766	0.0766	0.0000	2,001.2833	2,001.2833	0.5011		2,011.8062
Total	**0.4547**	**2.3291**	**13.6416**	**0.0212**		**0.0766**	**0.0766**		**0.0766**	**0.0766**	**0.0000**	**2,001.2833**	**2,001.2833**	**0.5011**		**2,011.8062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4525	9.3026	19.3242	0.0559	1.6258	0.2383	1.8641	0.4631	0.2192	0.6823		5,241.6496	5,241.6496	0.0353		5,242.3903
Worker	6.3244	7.6330	97.7834	0.3823	30.0455	0.2321	30.2776	7.9682	0.2153	8.1835		25,842.4455	25,842.4455	1.0669		25,864.8509
Total	**7.7768**	**16.9356**	**117.1077**	**0.4382**	**31.6713**	**0.4703**	**32.1416**	**8.4313**	**0.4345**	**8.8658**		**31,084.0951**	**31,084.0951**	**1.1022**		**31,107.2411**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9446	9.1347	11.5108	0.0163		0.5089	0.5089		0.4682	0.4682		1,581.7169	1,581.7169	0.5116		1,592.4597
Paving	0.0572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0017**	**9.1347**	**11.5108**	**0.0163**		**0.5089**	**0.5089**		**0.4682**	**0.4682**		**1,581.7169**	**1,581.7169**	**0.5116**		**1,592.4597**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2705	1.5334	19.6440	0.0768	6.0359	0.0466	6.0825	1.6008	0.0433	1.6440		5,191.5627	5,191.5627	0.2143		5,196.0638
Total	**1.2705**	**1.5334**	**19.6440**	**0.0768**	**6.0359**	**0.0466**	**6.0825**	**1.6008**	**0.0433**	**1.6440**		**5,191.5627**	**5,191.5627**	**0.2143**		**5,196.0638**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2000	0.8666	12.3322	0.0163		0.0267	0.0267		0.0267	0.0267	0.0000	1,581.7169	1,581.7169	0.5116		1,592.4597
Paving	0.0572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2572**	**0.8666**	**12.3322**	**0.0163**		**0.0267**	**0.0267**		**0.0267**	**0.0267**	**0.0000**	**1,581.7169**	**1,581.7169**	**0.5116**		**1,592.4597**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2705	1.5334	19.6440	0.0768	6.0359	0.0466	6.0825	1.6008	0.0433	1.6440		5,191.5627	5,191.5627	0.2143		5,196.0638
Total	**1.2705**	**1.5334**	**19.6440**	**0.0768**	**6.0359**	**0.0466**	**6.0825**	**1.6008**	**0.0433**	**1.6440**		**5,191.5627**	**5,191.5627**	**0.2143**		**5,196.0638**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	50.0046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	**50.1853**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.7809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1224	0.1477	1.8916	7.3900e-003	0.5812	4.4900e-003	0.5857	0.1542	4.1600e-003	0.1583		499.9283	499.9283	0.0206		500.3617
Total	**0.1224**	**0.1477**	**1.8916**	**7.3900e-003**	**0.5812**	**4.4900e-003**	**0.5857**	**0.1542**	**4.1600e-003**	**0.1583**		**499.9283**	**499.9283**	**0.0206**		**500.3617**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	50.0046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.7809
Total	**50.0343**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.7809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1224	0.1477	1.8916	7.3900e-003	0.5812	4.4900e-003	0.5857	0.1542	4.1600e-003	0.1583		499.9283	499.9283	0.0206		500.3617
Total	**0.1224**	**0.1477**	**1.8916**	**7.3900e-003**	**0.5812**	**4.4900e-003**	**0.5857**	**0.1542**	**4.1600e-003**	**0.1583**		**499.9283**	**499.9283**	**0.0206**		**500.3617**

Harbor UCLA Master Plan- Phase 6

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	250.00	1000sqft	5.74	250,000.00	0
Medical Office Building	97.00	1000sqft	2.23	97,000.00	0
Other Asphalt Surfaces	75.00	1000sqft	1.72	75,000.00	0
Other Asphalt Surfaces	13.50	1000sqft	0.31	13,500.00	0
Unenclosed Parking with Elevator	1,000.00	Space	9.00	400,000.00	0
City Park	22.00	Acre	22.00	958,320.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client PRovided Info

Demolition -

Grading -

Architectural Coating - See Input Summary

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	792,743.00	169,333.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,378,228.00	231,998.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	55.00	93.00
tblConstructionPhase	NumDays	740.00	374.00
tblConstructionPhase	NumDays	50.00	85.00
tblConstructionPhase	NumDays	75.00	675.00
tblConstructionPhase	NumDays	55.00	93.00
tblConstructionPhase	PhaseEndDate	9/16/2024	5/8/2024
tblConstructionPhase	PhaseEndDate	3/23/2026	5/8/2024
tblConstructionPhase	PhaseEndDate	9/16/2024	5/8/2024
tblConstructionPhase	PhaseStartDate	5/9/2024	1/1/2024
tblConstructionPhase	PhaseStartDate	10/16/2024	12/2/2022
tblConstructionPhase	PhaseStartDate	5/9/2024	1/1/2024
tblGrading	MaterialExported	0.00	31,953.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripNumber	1,453.00	10,229.00
tblTripsAndVMT	HaulingTripNumber	3,159.00	5,325.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	28.00	466.00
tblTripsAndVMT	WorkerTripNumber	15.00	72.00

tblTripsAndVMT	WorkerTripNumber	652.00	2,688.00
tblTripsAndVMT	WorkerTripNumber	13.00	540.00
tblTripsAndVMT	WorkerTripNumber	130.00	52.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.3761	63.8493	83.3593	0.2123	13.5370	2.4720	16.0090	3.1383	2.3022	5.4406	0.0000	18,674.2698	18,674.2698	1.8804	0.0000	18,713.7585
2022	12.1966	57.7610	156.3334	0.4743	33.3905	2.2294	35.2968	8.8007	2.0753	10.5788	0.0000	35,731.9449	35,731.9449	2.4276	0.0000	35,782.9242
2023	11.4295	44.4009	149.1998	0.4739	33.3228	1.7067	35.0295	8.7841	1.5914	10.3755	0.0000	35,311.6145	35,311.6145	2.3715	0.0000	35,361.4160
2024	63.5063	54.2060	176.6532	0.5740	40.0094	2.1895	42.1989	10.5560	2.0383	12.5942	0.0000	42,301.5835	42,301.5835	3.1004	0.0000	42,366.6927
Total	**94.5085**	**220.2171**	**565.5456**	**1.7345**	**120.2597**	**8.5975**	**128.5342**	**31.2791**	**8.0073**	**38.9891**	**0.0000**	**132,019.4127**	**132,019.4127**	**9.7799**	**0.0000**	**132,224.7914**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.6030	32.0739	80.1810	0.2123	11.2809	0.9343	12.2152	2.7967	0.8940	3.6907	0.0000	18,674.2698	18,674.2698	1.8804	0.0000	18,713.7585
2022	9.9758	29.6094	159.1217	0.4743	33.0670	0.8842	33.7118	8.7657	0.8442	9.3714	0.0000	35,731.9449	35,731.9449	2.4276	0.0000	35,782.9242
2023	9.4317	23.2650	152.1653	0.4739	32.9994	0.6326	33.6319	8.7491	0.5938	9.3429	0.0000	35,311.6145	35,311.6145	2.3715	0.0000	35,361.4160
2024	60.7577	25.5263	180.5332	0.5740	39.6859	0.7092	40.3951	10.5211	0.6665	11.1876	0.0000	42,301.5835	42,301.5835	3.1004	0.0000	42,366.6927
Total	**84.7683**	**110.4746**	**572.0011**	**1.7345**	**117.0332**	**3.1602**	**119.9540**	**30.8327**	**2.9984**	**33.5926**	**0.0000**	**132,019.4127**	**132,019.4127**	**9.7799**	**0.0000**	**132,224.7914**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.31**	**49.83**	**-1.14**	**0.00**	**2.68**	**63.24**	**6.68**	**1.43**	**62.55**	**13.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/17/2021	3/15/2022	5	85	
2	Grading	Grading	3/16/2022	10/15/2024	5	675	
3	Building Construction	Building Construction	12/2/2022	5/8/2024	5	374	
4	Paving	Paving	1/1/2024	5/8/2024	5	93	
5	Architectural Coating	Architectural Coating	1/1/2024	5/8/2024	5	93	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 337.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 231,998; Non-Residential Outdoor: 169,333 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40

Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Scrapers	0	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	466.00	4.00	10,229.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	72.00	2.00	5,325.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	2,688.00	260.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	540.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6985	0.0000	3.6985	0.5600	0.0000	0.5600			0.0000			0.0000
Off-Road	4.1438	40.4558	40.2995	0.0616		1.9641	1.9641		1.8347	1.8347		5,943.2630	5,943.2630	1.6076		5,977.0235
Total	**4.1438**	**40.4558**	**40.2995**	**0.0616**	**3.6985**	**1.9641**	**5.6626**	**0.5600**	**1.8347**	**2.3946**		**5,943.2630**	**5,943.2630**	**1.6076**		**5,977.0235**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9006	21.4567	24.4518	0.0881	4.6047	0.4643	5.0690	1.1898	0.4271	1.6170		8,278.3008	8,278.3008	0.0656		8,279.6777
Vendor	0.0271	0.2032	0.3999	8.6000e-004	0.0250	3.7800e-003	0.0288	7.1200e-003	3.4800e-003	0.0106		80.1975	80.1975	6.0000e-004		80.2102
Worker	1.3046	1.7337	18.2082	0.0618	5.2088	0.0399	5.2487	1.3814	0.0370	1.4184		4,372.5086	4,372.5086	0.2066		4,376.8472
Total	**3.2323**	**23.3935**	**43.0598**	**0.1507**	**9.8385**	**0.5079**	**10.3464**	**2.5783**	**0.4676**	**3.0459**		**12,731.0069**	**12,731.0069**	**0.2728**		**12,736.7350**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4424	0.0000	1.4424	0.2184	0.0000	0.2184			0.0000			0.0000
Off-Road	1.3707	8.6804	37.1211	0.0616		0.4264	0.4264		0.4264	0.4264	0.0000	5,943.2630	5,943.2630	1.6076		5,977.0235
Total	**1.3707**	**8.6804**	**37.1211**	**0.0616**	**1.4424**	**0.4264**	**1.8688**	**0.2184**	**0.4264**	**0.6448**	**0.0000**	**5,943.2630**	**5,943.2630**	**1.6076**		**5,977.0235**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9006	21.4567	24.4518	0.0881	4.6047	0.4643	5.0690	1.1898	0.4271	1.6170		8,278.3008	8,278.3008	0.0656		8,279.6777
Vendor	0.0271	0.2032	0.3999	8.6000e-004	0.0250	3.7800e-003	0.0288	7.1200e-003	3.4800e-003	0.0106		80.1975	80.1975	6.0000e-004		80.2102
Worker	1.3046	1.7337	18.2082	0.0618	5.2088	0.0399	5.2487	1.3814	0.0370	1.4184		4,372.5086	4,372.5086	0.2066		4,376.8472
Total	**3.2323**	**23.3935**	**43.0598**	**0.1507**	**9.8385**	**0.5079**	**10.3464**	**2.5783**	**0.4676**	**3.0459**		**12,731.0069**	**12,731.0069**	**0.2728**		**12,736.7350**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6985	0.0000	3.6985	0.5600	0.0000	0.5600			0.0000			0.0000
Off-Road	3.8261	36.3585	39.5704	0.0617		1.7257	1.7257		1.6117	1.6117		5,945.3308	5,945.3308	1.6041		5,979.0177
Total	**3.8261**	**36.3585**	**39.5704**	**0.0617**	**3.6985**	**1.7257**	**5.4242**	**0.5600**	**1.6117**	**2.1717**		**5,945.3308**	**5,945.3308**	**1.6041**		**5,979.0177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9011	19.5923	24.2384	0.0880	3.1075	0.4601	3.5676	0.8223	0.4233	1.2456		8,271.4715	8,271.4715	0.0670		8,272.8786
Vendor	0.0265	0.1844	0.3905	8.6000e-004	0.0250	3.7400e-003	0.0288	7.1200e-003	3.4400e-003	0.0106		80.1251	80.1251	6.2000e-004		80.1380
Worker	1.2356	1.6258	17.1162	0.0617	5.2088	0.0398	5.2486	1.3814	0.0370	1.4183		4,299.8210	4,299.8210	0.1978		4,303.9755
Total	**3.1632**	**21.4025**	**41.7451**	**0.1506**	**8.3413**	**0.5037**	**8.8449**	**2.2109**	**0.4637**	**2.6745**		**12,651.4176**	**12,651.4176**	**0.2655**		**12,656.9921**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4424	0.0000	1.4424	0.2184	0.0000	0.2184			0.0000			0.0000
Off-Road	1.3165	8.2069	37.1024	0.0617		0.3805	0.3805		0.3805	0.3805	0.0000	5,945.3308	5,945.3308	1.6041		5,979.0177
Total	**1.3165**	**8.2069**	**37.1024**	**0.0617**	**1.4424**	**0.3805**	**1.8229**	**0.2184**	**0.3805**	**0.5989**	**0.0000**	**5,945.3308**	**5,945.3308**	**1.6041**		**5,979.0177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9011	19.5923	24.2384	0.0880	3.1075	0.4601	3.5676	0.8223	0.4233	1.2456		8,271.4715	8,271.4715	0.0670		8,272.8786
Vendor	0.0265	0.1844	0.3905	8.6000e-004	0.0250	3.7400e-003	0.0288	7.1200e-003	3.4400e-003	0.0106		80.1251	80.1251	6.2000e-004		80.1380
Worker	1.2356	1.6258	17.1162	0.0617	5.2088	0.0398	5.2486	1.3814	0.0370	1.4183		4,299.8210	4,299.8210	0.1978		4,303.9755
Total	**3.1632**	**21.4025**	**41.7451**	**0.1506**	**8.3413**	**0.5037**	**8.8449**	**2.2109**	**0.4637**	**2.6745**		**12,651.4176**	**12,651.4176**	**0.2655**		**12,656.9921**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.6065	15.0603	15.0278	0.0256		0.7673	0.7673		0.7146	0.7146		2,474.8538	2,474.8538	0.7035		2,489.6269
Total	**1.6065**	**15.0603**	**15.0278**	**0.0256**	**0.5303**	**0.7673**	**1.2975**	**0.0573**	**0.7146**	**0.7719**		**2,474.8538**	**2,474.8538**	**0.7035**		**2,489.6269**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1246	1.2844	1.5889	5.7700e-003	0.3717	0.0302	0.4019	0.0951	0.0278	0.1229		542.2310	542.2310	4.3900e-003		542.3233
Vendor	0.0132	0.0922	0.1953	4.3000e-004	0.0125	1.8700e-003	0.0144	3.5600e-003	1.7200e-003	5.2800e-003		40.0625	40.0625	3.1000e-004		40.0690
Worker	0.1909	0.2512	2.6446	9.5400e-003	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		664.3500	664.3500	0.0306		664.9919
Total	**0.3288**	**1.6278**	**4.4288**	**0.0157**	**1.1890**	**0.0382**	**1.2272**	**0.3121**	**0.0352**	**0.3473**		**1,246.6436**	**1,246.6436**	**0.0353**		**1,247.3842**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.3049	1.3211	16.9046	0.0256		0.0407	0.0407		0.0407	0.0407	0.0000	2,474.8538	2,474.8538	0.7035		2,489.6269
Total	**0.3049**	**1.3211**	**16.9046**	**0.0256**	**0.2068**	**0.0407**	**0.2475**	**0.0223**	**0.0407**	**0.0630**	**0.0000**	**2,474.8538**	**2,474.8538**	**0.7035**		**2,489.6269**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1246	1.2844	1.5889	5.7700e-003	0.3717	0.0302	0.4019	0.0951	0.0278	0.1229		542.2310	542.2310	4.3900e-003		542.3233
Vendor	0.0132	0.0922	0.1953	4.3000e-004	0.0125	1.8700e-003	0.0144	3.5600e-003	1.7200e-003	5.2800e-003		40.0625	40.0625	3.1000e-004		40.0690
Worker	0.1909	0.2512	2.6446	9.5400e-003	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		664.3500	664.3500	0.0306		664.9919
Total	**0.3288**	**1.6278**	**4.4288**	**0.0157**	**1.1890**	**0.0382**	**1.2272**	**0.3121**	**0.0352**	**0.3473**		**1,246.6436**	**1,246.6436**	**0.0353**		**1,247.3842**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4653	13.4107	14.9298	0.0257		0.6548	0.6548		0.6100	0.6100		2,475.6351	2,475.6351	0.7018		2,490.3719
Total	**1.4653**	**13.4107**	**14.9298**	**0.0257**	**0.5303**	**0.6548**	**1.1850**	**0.0573**	**0.6100**	**0.6672**		**2,475.6351**	**2,475.6351**	**0.7018**		**2,490.3719**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1106	0.9169	1.5075	5.7300e-003	0.3040	0.0300	0.3340	0.0785	0.0276	0.1061		538.4115	538.4115	3.8000e-003		538.4912
Vendor	0.0123	0.0733	0.1880	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.8689	39.8689	2.8000e-004		39.8748
Worker	0.1809	0.2364	2.4905	9.5300e-003	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		654.1029	654.1029	0.0294		654.7196
Total	**0.3038**	**1.2265**	**4.1860**	**0.0157**	**1.1213**	**0.0380**	**1.1593**	**0.2955**	**0.0350**	**0.3305**		**1,232.3833**	**1,232.3833**	**0.0335**		**1,233.0856**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.3049	1.3211	16.9046	0.0257		0.0407	0.0407		0.0407	0.0407	0.0000	2,475.6351	2,475.6351	0.7018		2,490.3719
Total	**0.3049**	**1.3211**	**16.9046**	**0.0257**	**0.2068**	**0.0407**	**0.2475**	**0.0223**	**0.0407**	**0.0630**	**0.0000**	**2,475.6351**	**2,475.6351**	**0.7018**		**2,490.3719**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1106	0.9169	1.5075	5.7300e-003	0.3040	0.0300	0.3340	0.0785	0.0276	0.1061		538.4115	538.4115	3.8000e-003		538.4912
Vendor	0.0123	0.0733	0.1880	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.8689	39.8689	2.8000e-004		39.8748
Worker	0.1809	0.2364	2.4905	9.5300e-003	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		654.1029	654.1029	0.0294		654.7196
Total	**0.3038**	**1.2265**	**4.1860**	**0.0157**	**1.1213**	**0.0380**	**1.1593**	**0.2955**	**0.0350**	**0.3305**		**1,232.3833**	**1,232.3833**	**0.0335**		**1,233.0856**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.3796	12.2808	14.9056	0.0257		0.5794	0.5794		0.5395	0.5395		2,476.2021	2,476.2021	0.7006		2,490.9151
Total	**1.3796**	**12.2808**	**14.9056**	**0.0257**	**0.5303**	**0.5794**	**1.1096**	**0.0573**	**0.5395**	**0.5968**		**2,476.2021**	**2,476.2021**	**0.7006**		**2,490.9151**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1109	0.9171	1.4947	5.7400e-003	0.3733	0.0300	0.4033	0.0956	0.0276	0.1231		539.8050	539.8050	3.8600e-003		539.8860
Vendor	0.0121	0.0729	0.1843	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.9774	39.9774	2.8000e-004		39.9833
Worker	0.1721	0.2238	2.3668	9.5800e-003	0.8048	6.2200e-003	0.8110	0.2134	5.7700e-003	0.2192		648.3457	648.3457	0.0286		648.9459
Total	**0.2951**	**1.2137**	**4.0457**	**0.0158**	**1.1906**	**0.0381**	**1.2287**	**0.3125**	**0.0351**	**0.3476**		**1,228.1280**	**1,228.1280**	**0.0327**		**1,228.8152**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.3049	1.3211	16.9046	0.0257		0.0407	0.0407		0.0407	0.0407	0.0000	2,476.2021	2,476.2021	0.7006		2,490.9151
Total	**0.3049**	**1.3211**	**16.9046**	**0.0257**	**0.2068**	**0.0407**	**0.2475**	**0.0223**	**0.0407**	**0.0630**	**0.0000**	**2,476.2021**	**2,476.2021**	**0.7006**		**2,490.9151**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1109	0.9171	1.4947	5.7400e-003	0.3733	0.0300	0.4033	0.0956	0.0276	0.1231		539.8050	539.8050	3.8600e-003		539.8860
Vendor	0.0121	0.0729	0.1843	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.9774	39.9774	2.8000e-004		39.9833
Worker	0.1721	0.2238	2.3668	9.5800e-003	0.8048	6.2200e-003	0.8110	0.2134	5.7700e-003	0.2192		648.3457	648.3457	0.0286		648.9459
Total	**0.2951**	**1.2137**	**4.0457**	**0.0158**	**1.1906**	**0.0381**	**1.2287**	**0.3125**	**0.0351**	**0.3476**		**1,228.1280**	**1,228.1280**	**0.0327**		**1,228.8152**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4147	12.3763	12.7623	0.0212		0.6280	0.6280		0.5916	0.5916		1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**1.4147**	**12.3763**	**12.7623**	**0.0212**		**0.6280**	**0.6280**		**0.5916**	**0.5916**		**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7192	11.9880	25.3842	0.0557	1.6258	0.2431	1.8688	0.4631	0.2236	0.6867		5,208.1291	5,208.1291	0.0401		5,208.9711
Worker	7.1274	9.3779	98.7305	0.3561	30.0455	0.2298	30.2753	7.9682	0.2131	8.1813		24,802.4009	24,802.4009	1.1411		24,826.3649
Total	**8.8466**	**21.3658**	**124.1146**	**0.4118**	**31.6713**	**0.4728**	**32.1441**	**8.4313**	**0.4367**	**8.8680**		**30,010.5300**	**30,010.5300**	**1.1812**		**30,035.3359**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4956	2.4112	13.6737	0.0212		0.0931	0.0931		0.0931	0.0931	0.0000	1,999.9175	1,999.9175	0.5076		2,010.5771
Total	**0.4956**	**2.4112**	**13.6737**	**0.0212**		**0.0931**	**0.0931**		**0.0931**	**0.0931**	**0.0000**	**1,999.9175**	**1,999.9175**	**0.5076**		**2,010.5771**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.7192	11.9880	25.3842	0.0557	1.6258	0.2431	1.8688	0.4631	0.2236	0.6867		5,208.1291	5,208.1291	0.0401		5,208.9711
Worker	7.1274	9.3779	98.7305	0.3561	30.0455	0.2298	30.2753	7.9682	0.2131	8.1813		24,802.4009	24,802.4009	1.1411		24,826.3649
Total	**8.8466**	**21.3658**	**124.1146**	**0.4118**	**31.6713**	**0.4728**	**32.1441**	**8.4313**	**0.4367**	**8.8680**		**30,010.5300**	**30,010.5300**	**1.1812**		**30,035.3359**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3107	11.4150	12.6651	0.0212		0.5443	0.5443		0.5127	0.5127		2,000.7941	2,000.7941	0.5037		2,011.3720
Total	**1.3107**	**11.4150**	**12.6651**	**0.0212**		**0.5443**	**0.5443**		**0.5127**	**0.5127**		**2,000.7941**	**2,000.7941**	**0.5037**		**2,011.3720**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5965	9.5240	24.4415	0.0554	1.6258	0.2400	1.8658	0.4631	0.2208	0.6839		5,182.9623	5,182.9623	0.0362		5,183.7223
Worker	6.7532	8.8246	92.9774	0.3560	30.0455	0.2296	30.2751	7.9682	0.2130	8.1812		24,419.8397	24,419.8397	1.0964		24,442.8642
Total	**8.3497**	**18.3486**	**117.4189**	**0.4114**	**31.6713**	**0.4696**	**32.1409**	**8.4313**	**0.4338**	**8.8651**		**29,602.8020**	**29,602.8020**	**1.1326**		**29,626.5865**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4733	2.3689	13.6558	0.0212		0.0843	0.0843		0.0843	0.0843	0.0000	2,000.7941	2,000.7941	0.5037		2,011.3720
Total	**0.4733**	**2.3689**	**13.6558**	**0.0212**		**0.0843**	**0.0843**		**0.0843**	**0.0843**	**0.0000**	**2,000.7941**	**2,000.7941**	**0.5037**		**2,011.3720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5965	9.5240	24.4415	0.0554	1.6258	0.2400	1.8658	0.4631	0.2208	0.6839		5,182.9623	5,182.9623	0.0362		5,183.7223
Worker	6.7532	8.8246	92.9774	0.3560	30.0455	0.2296	30.2751	7.9682	0.2130	8.1812		24,419.8397	24,419.8397	1.0964		24,442.8642
Total	**8.3497**	**18.3486**	**117.4189**	**0.4114**	**31.6713**	**0.4696**	**32.1409**	**8.4313**	**0.4338**	**8.8651**		**29,602.8020**	**29,602.8020**	**1.1326**		**29,626.5865**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2329	10.6909	12.6042	0.0212		0.4790	0.4790		0.4510	0.4510		2,001.2833	2,001.2833	0.5011		2,011.8062
Total	**1.2329**	**10.6909**	**12.6042**	**0.0212**		**0.4790**	**0.4790**		**0.4510**	**0.4510**		**2,001.2833**	**2,001.2833**	**0.5011**		**2,011.8062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5702	9.4732	23.9559	0.0555	1.6258	0.2401	1.8659	0.4631	0.2209	0.6840		5,197.0561	5,197.0561	0.0367		5,197.8268
Worker	6.4262	8.3541	88.3605	0.3578	30.0455	0.2321	30.2776	7.9682	0.2153	8.1835		24,204.9065	24,204.9065	1.0669		24,227.3119
Total	**7.9964**	**17.8273**	**112.3164**	**0.4133**	**31.6713**	**0.4721**	**32.1434**	**8.4313**	**0.4362**	**8.8674**		**29,401.9626**	**29,401.9626**	**1.1036**		**29,425.1387**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4547	2.3291	13.6416	0.0212		0.0766	0.0766		0.0766	0.0766	0.0000	2,001.2833	2,001.2833	0.5011		2,011.8062
Total	**0.4547**	**2.3291**	**13.6416**	**0.0212**		**0.0766**	**0.0766**		**0.0766**	**0.0766**	**0.0000**	**2,001.2833**	**2,001.2833**	**0.5011**		**2,011.8062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5702	9.4732	23.9559	0.0555	1.6258	0.2401	1.8659	0.4631	0.2209	0.6840		5,197.0561	5,197.0561	0.0367		5,197.8268
Worker	6.4262	8.3541	88.3605	0.3578	30.0455	0.2321	30.2776	7.9682	0.2153	8.1835		24,204.9065	24,204.9065	1.0669		24,227.3119
Total	**7.9964**	**17.8273**	**112.3164**	**0.4133**	**31.6713**	**0.4721**	**32.1434**	**8.4313**	**0.4362**	**8.8674**		**29,401.9626**	**29,401.9626**	**1.1036**		**29,425.1387**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9446	9.1347	11.5108	0.0163		0.5089	0.5089		0.4682	0.4682		1,581.7169	1,581.7169	0.5116		1,592.4597
Paving	0.0572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0017**	**9.1347**	**11.5108**	**0.0163**		**0.5089**	**0.5089**		**0.4682**	**0.4682**		**1,581.7169**	**1,581.7169**	**0.5116**		**1,592.4597**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2910	1.6783	17.7510	0.0719	6.0359	0.0466	6.0825	1.6008	0.0433	1.6440		4,862.5928	4,862.5928	0.2143		4,867.0939
Total	**1.2910**	**1.6783**	**17.7510**	**0.0719**	**6.0359**	**0.0466**	**6.0825**	**1.6008**	**0.0433**	**1.6440**		**4,862.5928**	**4,862.5928**	**0.2143**		**4,867.0939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2000	0.8666	12.3322	0.0163		0.0267	0.0267		0.0267	0.0267	0.0000	1,581.7169	1,581.7169	0.5116		1,592.4597
Paving	0.0572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2572**	**0.8666**	**12.3322**	**0.0163**		**0.0267**	**0.0267**		**0.0267**	**0.0267**	**0.0000**	**1,581.7169**	**1,581.7169**	**0.5116**		**1,592.4597**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.2910	1.6783	17.7510	0.0719	6.0359	0.0466	6.0825	1.6008	0.0433	1.6440		4,862.5928	4,862.5928	0.2143		4,867.0939
Total	**1.2910**	**1.6783**	**17.7510**	**0.0719**	**6.0359**	**0.0466**	**6.0825**	**1.6008**	**0.0433**	**1.6440**		**4,862.5928**	**4,862.5928**	**0.2143**		**4,867.0939**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	50.0046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	**50.1853**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.7809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1243	0.1616	1.7094	6.9200e-003	0.5812	4.4900e-003	0.5857	0.1542	4.1600e-003	0.1583		468.2497	468.2497	0.0206		468.6831
Total	**0.1243**	**0.1616**	**1.7094**	**6.9200e-003**	**0.5812**	**4.4900e-003**	**0.5857**	**0.1542**	**4.1600e-003**	**0.1583**		**468.2497**	**468.2497**	**0.0206**		**468.6831**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	50.0046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.7809
Total	**50.0343**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.7809**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1243	0.1616	1.7094	6.9200e-003	0.5812	4.4900e-003	0.5857	0.1542	4.1600e-003	0.1583		468.2497	468.2497	0.0206		468.6831
Total	**0.1243**	**0.1616**	**1.7094**	**6.9200e-003**	**0.5812**	**4.4900e-003**	**0.5857**	**0.1542**	**4.1600e-003**	**0.1583**		**468.2497**	**468.2497**	**0.0206**		**468.6831**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase C Construction Emissions

Harbor UCLA Master Plan- Phase C

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	29.20	1000sqft	0.67	29,200.00	0
General Light Industry	6.20	1000sqft	0.14	6,200.00	0
General Light Industry	54.72	1000sqft	1.26	54,720.00	0
Unrefrigerated Warehouse-No Rail	58.00	1000sqft	1.33	58,000.00	0
Parking Lot	24.00	Space	0.22	6,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	PhaseEndDate	8/17/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	9/9/2021	3/30/2021
tblConstructionPhase	PhaseEndDate	5/17/2023	2/19/2020
tblConstructionPhase	PhaseEndDate	7/24/2023	3/28/2023
tblConstructionPhase	PhaseStartDate	2/20/2020	10/1/2022
tblConstructionPhase	PhaseStartDate	3/31/2021	8/23/2019
tblConstructionPhase	PhaseStartDate	2/20/2020	10/1/2019
tblConstructionPhase	PhaseStartDate	3/13/2019	10/1/2018
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2020
tblConstructionPhase	PhaseStartDate	3/29/2023	12/1/2022
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tblGrading	MaterialImported	0.00	10,851.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblTripsAndVMT	VendorTripNumber	25.00	27.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	80.00
tblTripsAndVMT	WorkerTripNumber	35.00	174.00
tblTripsAndVMT	WorkerTripNumber	62.00	233.00
tblTripsAndVMT	WorkerTripNumber	62.00	260.00
tblTripsAndVMT	WorkerTripNumber	10.00	28.00
tblTripsAndVMT	WorkerTripNumber	12.00	44.00
tblTripsAndVMT	WorkerTripNumber	13.00	48.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	10.3737	94.9140	82.2932	0.1486	11.1167	5.1747	16.2914	4.5398	4.8287	9.3685	0.0000	13,951.8853	13,951.8853	2.7954	0.0000	14,010.5893
2019	13.0536	105.1194	114.8765	0.2272	14.7348	5.6294	20.3641	5.5412	5.2684	10.8096	0.0000	19,929.4717	19,929.4717	3.2390	0.0000	19,997.4914
2020	12.8707	103.2948	118.4407	0.2400	15.0465	5.4613	20.5078	5.6239	5.1029	10.7268	0.0000	20,557.1772	20,557.1772	3.4762	0.0000	20,630.1766
2021	8.2740	67.7751	79.0500	0.1643	12.9932	3.3860	16.3792	5.0557	3.1611	8.2168	0.0000	14,162.6290	14,162.6290	2.5371	0.0000	14,215.9083
2022	31.2848	30.7081	45.7705	0.1006	4.1034	1.6164	5.7198	1.0915	1.5077	2.5992	0.0000	8,314.9680	8,314.9680	1.3333	0.0000	8,342.9673
2023	30.9845	27.9872	44.7069	0.1006	4.1034	1.4214	5.5247	1.0915	1.3255	2.4171	0.0000	8,261.0763	8,261.0763	1.3219	0.0000	8,288.8367
Total	**106.8413**	**429.7985**	**485.1378**	**0.9813**	**62.0979**	**22.6890**	**84.7870**	**22.9437**	**21.1943**	**44.1380**	**0.0000**	**85,177.2075**	**85,177.2075**	**14.7030**	**0.0000**	**85,485.9695**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.7652	12.3102	81.0528	0.1486	7.0255	0.3638	7.3894	2.4714	0.3560	2.8274	0.0000	13,951.8853	13,951.8853	2.7954	0.0000	14,010.5893
2019	5.0608	19.1660	113.6399	0.2272	10.7337	0.6380	11.3717	3.4864	0.6257	4.1121	0.0000	19,929.4717	19,929.4717	3.2390	0.0000	19,997.4914
2020	5.0249	18.9302	119.0118	0.2400	11.0455	0.6205	11.6660	3.5691	0.6085	4.1776	0.0000	20,557.1772	20,557.1772	3.4762	0.0000	20,630.1766
2021	3.1320	11.9707	79.9344	0.1643	8.9922	0.3840	9.3762	3.0009	0.3761	3.3770	0.0000	14,162.6290	14,162.6290	2.5371	0.0000	14,215.9083
2022	28.9329	5.9829	47.6169	0.1006	4.1034	0.1862	4.2895	1.0915	0.1820	1.2735	0.0000	8,314.9680	8,314.9680	1.3333	0.0000	8,342.9673
2023	28.8500	5.6290	46.7073	0.1006	4.1034	0.1771	4.2804	1.0915	0.1729	1.2645	0.0000	8,261.0763	8,261.0763	1.3219	0.0000	8,288.8367
Total	**73.7657**	**73.9890**	**487.9630**	**0.9813**	**46.0036**	**2.3697**	**48.3733**	**14.7109**	**2.3212**	**17.0321**	**0.0000**	**85,177.2075**	**85,177.2075**	**14.7030**	**0.0000**	**85,485.9694**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**30.96**	**82.79**	**-0.58**	**0.00**	**25.92**	**89.56**	**42.95**	**35.88**	**89.05**	**61.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/30/2018	3/12/2019	5	139	
2	Grading	Grading	10/1/2018	3/30/2021	5	652	
3	SCE SY	Building Construction	8/23/2019	2/19/2020	5	129	
4	Building Construction	Building Construction	10/1/2019	3/28/2023	5	911	
5	Paving 2	Paving	1/1/2020	2/19/2020	5	36	
6	Architectural Coating	Architectural Coating	10/1/2022	3/28/2023	5	127	
7	Paving	Paving	12/1/2022	3/28/2023	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 326

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 222,450; Non-Residential Outdoor: 74,150 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Graders	1	8.00	174	0.41
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48

Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Cranes	1	8.00	226	0.29
Grading	Excavators	1	8.00	162	0.38
Grading	Forklifts	1	8.00	89	0.20
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
SCE SY	Cement and Mortar Mixers	1	8.00	9	0.56
SCE SY	Cranes	0	7.00	226	0.29
SCE SY	Forklifts	0	8.00	89	0.20
SCE SY	Generator Sets	1	8.00	84	0.74
SCE SY	Graders	1	8.00	174	0.41
SCE SY	Tractors/Loaders/Backhoes	3	7.00	97	0.37
SCE SY	Welders	1	8.00	46	0.45
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Graders	1	8.00	174	0.41
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 2	Cement and Mortar Mixers	1	6.00	9	0.56
Paving 2	Pavers	0	8.00	125	0.42
Paving 2	Paving Equipment	1	6.00	130	0.36
Paving 2	Rollers	1	6.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving 2	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	6.00	130	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	80.00	4.00	1,002.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	14	174.00	4.00	6,480.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SCE SY	7	233.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	260.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	48.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1478	0.0000	0.1478	0.0224	0.0000	0.0224			0.0000			0.0000
Off-Road	3.1337	31.1382	22.7983	0.0363		1.8103	1.8103		1.6869	1.6869		3,618.7891	3,618.7891	0.9880		3,639.5362
Total	**3.1337**	**31.1382**	**22.7983**	**0.0363**	**0.1478**	**1.8103**	**1.9581**	**0.0224**	**1.6869**	**1.7092**		**3,618.7891**	**3,618.7891**	**0.9880**		**3,639.5362**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1149	1.6996	1.3136	5.3100e-003	0.1809	0.0282	0.2091	0.0480	0.0260	0.0739		518.8158	518.8158	3.8200e-003		518.8960
Vendor	0.0287	0.2905	0.3575	8.7000e-004	0.0250	4.7400e-003	0.0298	7.1200e-003	4.3600e-003	0.0115		84.4270	84.4270	6.0000e-004		84.4396
Worker	0.2699	0.3412	4.2670	0.0113	0.8942	7.0000e-003	0.9012	0.2372	6.4800e-003	0.2436		881.1901	881.1901	0.0418		882.0676
Total	**0.4136**	**2.3313**	**5.9382**	**0.0175**	**1.1001**	**0.0400**	**1.1400**	**0.2922**	**0.0368**	**0.3291**		**1,484.4328**	**1,484.4328**	**0.0462**		**1,485.4032**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0576	0.0000	0.0576	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.4309	1.8674	24.6793	0.0363		0.0575	0.0575		0.0575	0.0575	0.0000	3,618.7891	3,618.7891	0.9880		3,639.5362
Total	**0.4309**	**1.8674**	**24.6793**	**0.0363**	**0.0576**	**0.0575**	**0.1151**	**8.7300e-003**	**0.0575**	**0.0662**	**0.0000**	**3,618.7891**	**3,618.7891**	**0.9880**		**3,639.5362**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1149	1.6996	1.3136	5.3100e-003	0.1809	0.0282	0.2091	0.0480	0.0260	0.0739		518.8158	518.8158	3.8200e-003		518.8960
Vendor	0.0287	0.2905	0.3575	8.7000e-004	0.0250	4.7400e-003	0.0298	7.1200e-003	4.3600e-003	0.0115		84.4270	84.4270	6.0000e-004		84.4396
Worker	0.2699	0.3412	4.2670	0.0113	0.8942	7.0000e-003	0.9012	0.2372	6.4800e-003	0.2436		881.1901	881.1901	0.0418		882.0676
Total	**0.4136**	**2.3313**	**5.9382**	**0.0175**	**1.1001**	**0.0400**	**1.1400**	**0.2922**	**0.0368**	**0.3291**		**1,484.4328**	**1,484.4328**	**0.0462**		**1,485.4032**

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1478	0.0000	0.1478	0.0224	0.0000	0.0224			0.0000			0.0000
Off-Road	2.8175	27.9854	22.5043	0.0363		1.5682	1.5682		1.4611	1.4611		3,568.8344	3,568.8344	0.9833		3,589.4846
Total	**2.8175**	**27.9854**	**22.5043**	**0.0363**	**0.1478**	**1.5682**	**1.7160**	**0.0224**	**1.4611**	**1.4835**		**3,568.8344**	**3,568.8344**	**0.9833**		**3,589.4846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1119	1.5890	1.2886	5.2900e-003	0.2901	0.0282	0.3183	0.0748	0.0260	0.1008		508.7044	508.7044	3.7900e-003		508.7840
Vendor	0.0272	0.2680	0.3441	8.7000e-004	0.0250	4.5000e-003	0.0295	7.1200e-003	4.1400e-003	0.0113		82.7818	82.7818	5.9000e-004		82.7942
Worker	0.2484	0.3130	3.9216	0.0113	0.8942	6.8800e-003	0.9011	0.2372	6.3800e-003	0.2435		847.7810	847.7810	0.0391		848.6025
Total	**0.3875**	**2.1700**	**5.5543**	**0.0175**	**1.2093**	**0.0396**	**1.2489**	**0.3190**	**0.0365**	**0.3555**		**1,439.2672**	**1,439.2672**	**0.0435**		**1,440.1807**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0576	0.0000	0.0576	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.4309	1.8674	24.6793	0.0363		0.0575	0.0575		0.0575	0.0575	0.0000	3,568.8344	3,568.8344	0.9833		3,589.4846
Total	**0.4309**	**1.8674**	**24.6793**	**0.0363**	**0.0576**	**0.0575**	**0.1151**	**8.7300e-003**	**0.0575**	**0.0662**	**0.0000**	**3,568.8344**	**3,568.8344**	**0.9833**		**3,589.4846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1119	1.5890	1.2886	5.2900e-003	0.2901	0.0282	0.3183	0.0748	0.0260	0.1008		508.7044	508.7044	3.7900e-003		508.7840
Vendor	0.0272	0.2680	0.3441	8.7000e-004	0.0250	4.5000e-003	0.0295	7.1200e-003	4.1400e-003	0.0113		82.7818	82.7818	5.9000e-004		82.7942
Worker	0.2484	0.3130	3.9216	0.0113	0.8942	6.8800e-003	0.9011	0.2372	6.3800e-003	0.2435		847.7810	847.7810	0.0391		848.6025
Total	**0.3875**	**2.1700**	**5.5543**	**0.0175**	**1.2093**	**0.0396**	**1.2489**	**0.3190**	**0.0365**	**0.3555**		**1,439.2672**	**1,439.2672**	**0.0435**		**1,440.1807**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	6.0522	58.0685	42.1073	0.0620		3.2655	3.2655		3.0507	3.0507		6,132.3490	6,132.3490	1.6645		6,167.3036
Total	**6.0522**	**58.0685**	**42.1073**	**0.0620**	**6.5591**	**3.2655**	**9.8245**	**3.3685**	**3.0507**	**6.4192**		**6,132.3490**	**6,132.3490**	**1.6645**		**6,167.3036**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1584	2.3433	1.8111	7.3200e-003	1.3399	0.0389	1.3788	0.3338	0.0358	0.3696		715.2991	715.2991	5.2600e-003		715.4096
Vendor	0.0287	0.2905	0.3575	8.7000e-004	0.0250	4.7400e-003	0.0298	7.1200e-003	4.3600e-003	0.0115		84.4270	84.4270	6.0000e-004		84.4396
Worker	0.5871	0.7422	9.2808	0.0246	1.9449	0.0152	1.9601	0.5158	0.0141	0.5299		1,916.5884	1,916.5884	0.0909		1,918.4971
Total	**0.7742**	**3.3760**	**11.4494**	**0.0328**	**3.3098**	**0.0589**	**3.3687**	**0.8567**	**0.0543**	**0.9110**		**2,716.3144**	**2,716.3144**	**0.0968**		**2,718.3463**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.1464	4.7355	38.9859	0.0620		0.2075	0.2075		0.2075	0.2075	0.0000	6,132.3490	6,132.3490	1.6645		6,167.3036
Total	**1.1464**	**4.7355**	**38.9859**	**0.0620**	**2.5580**	**0.2075**	**2.7655**	**1.3137**	**0.2075**	**1.5212**	**0.0000**	**6,132.3490**	**6,132.3490**	**1.6645**		**6,167.3036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1584	2.3433	1.8111	7.3200e-003	1.3399	0.0389	1.3788	0.3338	0.0358	0.3696		715.2991	715.2991	5.2600e-003		715.4096
Vendor	0.0287	0.2905	0.3575	8.7000e-004	0.0250	4.7400e-003	0.0298	7.1200e-003	4.3600e-003	0.0115		84.4270	84.4270	6.0000e-004		84.4396
Worker	0.5871	0.7422	9.2808	0.0246	1.9449	0.0152	1.9601	0.5158	0.0141	0.5299		1,916.5884	1,916.5884	0.0909		1,918.4971
Total	**0.7742**	**3.3760**	**11.4494**	**0.0328**	**3.3098**	**0.0589**	**3.3687**	**0.8567**	**0.0543**	**0.9110**		**2,716.3144**	**2,716.3144**	**0.0968**		**2,718.3463**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	5.4730	52.7512	41.0396	0.0620		2.8642	2.8642		2.6751	2.6751		6,051.4704	6,051.4704	1.6508		6,086.1378
Total	**5.4730**	**52.7512**	**41.0396**	**0.0620**	**6.5591**	**2.8642**	**9.4233**	**3.3685**	**2.6751**	**6.0436**		**6,051.4704**	**6,051.4704**	**1.6508**		**6,086.1378**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1542	2.1908	1.7766	7.3000e-003	0.3701	0.0389	0.4090	0.0958	0.0358	0.1316		701.3583	701.3583	5.2300e-003		701.4682
Vendor	0.0272	0.2680	0.3441	8.7000e-004	0.0250	4.5000e-003	0.0295	7.1200e-003	4.1400e-003	0.0113		82.7818	82.7818	5.9000e-004		82.7942
Worker	0.5404	0.6808	8.5295	0.0246	1.9449	0.0150	1.9599	0.5158	0.0139	0.5297		1,843.9237	1,843.9237	0.0851		1,845.7104
Total	**0.7218**	**3.1395**	**10.6502**	**0.0327**	**2.3400**	**0.0584**	**2.3984**	**0.6187**	**0.0538**	**0.6725**		**2,628.0639**	**2,628.0639**	**0.0909**		**2,629.9728**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.0898	4.6778	38.9341	0.0620		0.1936	0.1936		0.1936	0.1936	0.0000	6,051.4704	6,051.4704	1.6508		6,086.1378
Total	**1.0898**	**4.6778**	**38.9341**	**0.0620**	**2.5580**	**0.1936**	**2.7517**	**1.3137**	**0.1936**	**1.5073**	**0.0000**	**6,051.4704**	**6,051.4704**	**1.6508**		**6,086.1378**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1542	2.1908	1.7766	7.3000e-003	0.3701	0.0389	0.4090	0.0958	0.0358	0.1316		701.3583	701.3583	5.2300e-003		701.4682
Vendor	0.0272	0.2680	0.3441	8.7000e-004	0.0250	4.5000e-003	0.0295	7.1200e-003	4.1400e-003	0.0113		82.7818	82.7818	5.9000e-004		82.7942
Worker	0.5404	0.6808	8.5295	0.0246	1.9449	0.0150	1.9599	0.5158	0.0139	0.5297		1,843.9237	1,843.9237	0.0851		1,845.7104
Total	**0.7218**	**3.1395**	**10.6502**	**0.0327**	**2.3400**	**0.0584**	**2.3984**	**0.6187**	**0.0538**	**0.6725**		**2,628.0639**	**2,628.0639**	**0.0909**		**2,629.9728**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	5.0116	48.1159	39.9895	0.0620		2.5303	2.5303		2.3625	2.3625		5,944.5397	5,944.5397	1.6397		5,978.9734
Total	**5.0116**	**48.1159**	**39.9895**	**0.0620**	**6.5591**	**2.5303**	**9.0894**	**3.3685**	**2.3625**	**5.7310**		**5,944.5397**	**5,944.5397**	**1.6397**		**5,978.9734**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1513	1.9535	1.7504	7.2900e-003	0.3688	0.0386	0.4074	0.0955	0.0355	0.1310		685.5647	685.5647	5.2300e-003		685.6746
Vendor	0.0258	0.2339	0.3325	8.6000e-004	0.0250	4.1200e-003	0.0291	7.1200e-003	3.7900e-003	0.0109		80.9181	80.9181	5.8000e-004		80.9303
Worker	0.5065	0.6312	7.9509	0.0246	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,769.2975	1,769.2975	0.0806		1,770.9898
Total	**0.6837**	**2.8186**	**10.0337**	**0.0327**	**2.3387**	**0.0576**	**2.3963**	**0.6184**	**0.0531**	**0.6715**		**2,535.7804**	**2,535.7804**	**0.0864**		**2,537.5946**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.0468	4.6249	38.8939	0.0620		0.1809	0.1809		0.1809	0.1809	0.0000	5,944.5397	5,944.5397	1.6397		5,978.9734
Total	**1.0468**	**4.6249**	**38.8939**	**0.0620**	**2.5580**	**0.1809**	**2.7389**	**1.3137**	**0.1809**	**1.4946**	**0.0000**	**5,944.5397**	**5,944.5397**	**1.6397**		**5,978.9734**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1513	1.9535	1.7504	7.2900e-003	0.3688	0.0386	0.4074	0.0955	0.0355	0.1310		685.5647	685.5647	5.2300e-003		685.6746
Vendor	0.0258	0.2339	0.3325	8.6000e-004	0.0250	4.1200e-003	0.0291	7.1200e-003	3.7900e-003	0.0109		80.9181	80.9181	5.8000e-004		80.9303
Worker	0.5065	0.6312	7.9509	0.0246	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,769.2975	1,769.2975	0.0806		1,770.9898
Total	**0.6837**	**2.8186**	**10.0337**	**0.0327**	**2.3387**	**0.0576**	**2.3963**	**0.6184**	**0.0531**	**0.6715**		**2,535.7804**	**2,535.7804**	**0.0864**		**2,537.5946**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	4.5416	43.2104	38.8948	0.0620		2.1984	2.1984		2.0524	2.0524		5,944.5177	5,944.5177	1.6296		5,978.7395
Total	**4.5416**	**43.2104**	**38.8948**	**0.0620**	**6.5591**	**2.1984**	**8.7575**	**3.3685**	**2.0524**	**5.4209**		**5,944.5177**	**5,944.5177**	**1.6296**		**5,978.7395**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1507	1.7111	1.7346	7.2900e-003	1.4017	0.0383	1.4400	0.3490	0.0352	0.3842		685.3187	685.3187	5.3300e-003		685.4307
Vendor	0.0250	0.1987	0.3234	8.6000e-004	0.0250	3.7500e-003	0.0288	7.1200e-003	3.4500e-003	0.0106		80.8838	80.8838	5.8000e-004		80.8960
Worker	0.4795	0.5904	7.4802	0.0246	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,742.1409	1,742.1409	0.0771		1,743.7608
Total	**0.6551**	**2.5001**	**9.5382**	**0.0328**	**3.3716**	**0.0569**	**3.4286**	**0.8719**	**0.0525**	**0.9244**		**2,508.3433**	**2,508.3433**	**0.0831**		**2,510.0875**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.0073	4.5625	38.8457	0.0620		0.1681	0.1681		0.1681	0.1681	0.0000	5,944.5177	5,944.5177	1.6296		5,978.7395
Total	**1.0073**	**4.5625**	**38.8457**	**0.0620**	**2.5580**	**0.1681**	**2.7261**	**1.3137**	**0.1681**	**1.4818**	**0.0000**	**5,944.5177**	**5,944.5177**	**1.6296**		**5,978.7395**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1507	1.7111	1.7346	7.2900e-003	1.4017	0.0383	1.4400	0.3490	0.0352	0.3842		685.3187	685.3187	5.3300e-003		685.4307
Vendor	0.0250	0.1987	0.3234	8.6000e-004	0.0250	3.7500e-003	0.0288	7.1200e-003	3.4500e-003	0.0106		80.8838	80.8838	5.8000e-004		80.8960
Worker	0.4795	0.5904	7.4802	0.0246	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,742.1409	1,742.1409	0.0771		1,743.7608
Total	**0.6551**	**2.5001**	**9.5382**	**0.0328**	**3.3716**	**0.0569**	**3.4286**	**0.8719**	**0.0525**	**0.9244**		**2,508.3433**	**2,508.3433**	**0.0831**		**2,510.0875**

3.4 SCE SY - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2651	19.4723	16.4830	0.0242		1.1729	1.1729		1.1063	1.1063		2,303.6494	2,303.6494	0.5295		2,314.7689
Total	**2.2651**	**19.4723**	**16.4830**	**0.0242**		**1.1729**	**1.1729**		**1.1063**	**1.1063**		**2,303.6494**	**2,303.6494**	**0.5295**		**2,314.7689**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1837	1.8088	2.3225	5.8400e-003	0.1688	0.0304	0.1992	0.0481	0.0280	0.0760		558.7773	558.7773	3.9800e-003		558.8610
Worker	0.7236	0.9116	11.4217	0.0329	2.6044	0.0200	2.6244	0.6907	0.0186	0.7093		2,469.1622	2,469.1622	0.1139		2,471.5547
Total	**0.9073**	**2.7203**	**13.7442**	**0.0388**	**2.7732**	**0.0504**	**2.8236**	**0.7388**	**0.0465**	**0.7853**		**3,027.9395**	**3,027.9395**	**0.1179**		**3,030.4157**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6849	3.0367	16.9753	0.0242		0.1462	0.1462		0.1462	0.1462	0.0000	2,303.6494	2,303.6494	0.5295		2,314.7689
Total	**0.6849**	**3.0367**	**16.9753**	**0.0242**		**0.1462**	**0.1462**		**0.1462**	**0.1462**	**0.0000**	**2,303.6494**	**2,303.6494**	**0.5295**		**2,314.7689**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1837	1.8088	2.3225	5.8400e-003	0.1688	0.0304	0.1992	0.0481	0.0280	0.0760		558.7773	558.7773	3.9800e-003		558.8610
Worker	0.7236	0.9116	11.4217	0.0329	2.6044	0.0200	2.6244	0.6907	0.0186	0.7093		2,469.1622	2,469.1622	0.1139		2,471.5547
Total	**0.9073**	**2.7203**	**13.7442**	**0.0388**	**2.7732**	**0.0504**	**2.8236**	**0.7388**	**0.0465**	**0.7853**		**3,027.9395**	**3,027.9395**	**0.1179**		**3,030.4157**

3.4 SCE SY - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0629	17.9027	16.3213	0.0242		1.0351	1.0351		0.9761	0.9761		2,272.0268	2,272.0268	0.5209		2,282.9651
Total	**2.0629**	**17.9027**	**16.3213**	**0.0242**		**1.0351**	**1.0351**		**0.9761**	**0.9761**		**2,272.0268**	**2,272.0268**	**0.5209**		**2,282.9651**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1744	1.5791	2.2440	5.8300e-003	0.1688	0.0278	0.1966	0.0481	0.0256	0.0737		546.1973	546.1973	3.9000e-003		546.2792
Worker	0.6783	0.8452	10.6468	0.0329	2.6044	0.0199	2.6243	0.6907	0.0185	0.7092		2,369.2318	2,369.2318	0.1079		2,371.4978
Total	**0.8527**	**2.4243**	**12.8909**	**0.0387**	**2.7732**	**0.0477**	**2.8209**	**0.7388**	**0.0440**	**0.7828**		**2,915.4291**	**2,915.4291**	**0.1118**		**2,917.7770**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6418	2.9837	16.9352	0.0242		0.1333	0.1333		0.1333	0.1333	0.0000	2,272.0268	2,272.0268	0.5209		2,282.9651
Total	**0.6418**	**2.9837**	**16.9352**	**0.0242**		**0.1333**	**0.1333**		**0.1333**	**0.1333**	**0.0000**	**2,272.0268**	**2,272.0268**	**0.5209**		**2,282.9651**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1744	1.5791	2.2440	5.8300e-003	0.1688	0.0278	0.1966	0.0481	0.0256	0.0737		546.1973	546.1973	3.9000e-003		546.2792
Worker	0.6783	0.8452	10.6468	0.0329	2.6044	0.0199	2.6243	0.6907	0.0185	0.7092		2,369.2318	2,369.2318	0.1079		2,371.4978
Total	**0.8527**	**2.4243**	**12.8909**	**0.0387**	**2.7732**	**0.0477**	**2.8209**	**0.7388**	**0.0440**	**0.7828**		**2,915.4291**	**2,915.4291**	**0.1118**		**2,917.7770**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7090	24.3441	18.0639	0.0273		1.4330	1.4330		1.3401	1.3401		2,645.6739	2,645.6739	0.7191		2,660.7743
Total	**2.7090**	**24.3441**	**18.0639**	**0.0273**		**1.4330**	**1.4330**		**1.3401**	**1.3401**		**2,645.6739**	**2,645.6739**	**0.7191**		**2,660.7743**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1701	1.6748	2.1505	5.4100e-003	0.1563	0.0281	0.1844	0.0445	0.0259	0.0704		517.3864	517.3864	3.6900e-003		517.4639
Worker	0.8074	1.0172	12.7452	0.0367	2.9062	0.0224	2.9285	0.7707	0.0207	0.7915		2,755.2883	2,755.2883	0.1271		2,757.9581
Total	**0.9775**	**2.6920**	**14.8957**	**0.0421**	**3.0625**	**0.0505**	**3.1130**	**0.8153**	**0.0466**	**0.8619**		**3,272.6747**	**3,272.6747**	**0.1308**		**3,275.4219**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6795	2.8997	18.4405	0.0273		0.1389	0.1389		0.1389	0.1389	0.0000	2,645.6739	2,645.6739	0.7191		2,660.7743
Total	**0.6795**	**2.8997**	**18.4405**	**0.0273**		**0.1389**	**0.1389**		**0.1389**	**0.1389**	**0.0000**	**2,645.6739**	**2,645.6739**	**0.7191**		**2,660.7743**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1701	1.6748	2.1505	5.4100e-003	0.1563	0.0281	0.1844	0.0445	0.0259	0.0704		517.3864	517.3864	3.6900e-003		517.4639
Worker	0.8074	1.0172	12.7452	0.0367	2.9062	0.0224	2.9285	0.7707	0.0207	0.7915		2,755.2883	2,755.2883	0.1271		2,757.9581
Total	**0.9775**	**2.6920**	**14.8957**	**0.0421**	**3.0625**	**0.0505**	**3.1130**	**0.8153**	**0.0466**	**0.8619**		**3,272.6747**	**3,272.6747**	**0.1308**		**3,275.4219**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4601	22.2140	17.7403	0.0273		1.2594	1.2594		1.1774	1.1774		2,600.1286	2,600.1286	0.7122		2,615.0845
Total	**2.4601**	**22.2140**	**17.7403**	**0.0273**		**1.2594**	**1.2594**		**1.1774**	**1.1774**		**2,600.1286**	**2,600.1286**	**0.7122**		**2,615.0845**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1615	1.4621	2.0778	5.4000e-003	0.1563	0.0258	0.1821	0.0445	0.0237	0.0682		505.7383	505.7383	3.6100e-003		505.8141
Worker	0.7569	0.9432	11.8806	0.0367	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,643.7779	2,643.7779	0.1204		2,646.3066
Total	**0.9184**	**2.4053**	**13.9584**	**0.0421**	**3.0625**	**0.0480**	**3.1105**	**0.8153**	**0.0443**	**0.8595**		**3,149.5162**	**3,149.5162**	**0.1240**		**3,152.1207**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6364	2.8468	18.4003	0.0273		0.1261	0.1261		0.1261	0.1261	0.0000	2,600.1286	2,600.1286	0.7122		2,615.0845
Total	**0.6364**	**2.8468**	**18.4003**	**0.0273**		**0.1261**	**0.1261**		**0.1261**	**0.1261**	**0.0000**	**2,600.1286**	**2,600.1286**	**0.7122**		**2,615.0845**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1615	1.4621	2.0778	5.4000e-003	0.1563	0.0258	0.1821	0.0445	0.0237	0.0682		505.7383	505.7383	3.6100e-003		505.8141
Worker	0.7569	0.9432	11.8806	0.0367	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,643.7779	2,643.7779	0.1204		2,646.3066
Total	**0.9184**	**2.4053**	**13.9584**	**0.0421**	**3.0625**	**0.0480**	**3.1105**	**0.8153**	**0.0443**	**0.8595**		**3,149.5162**	**3,149.5162**	**0.1240**		**3,152.1207**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2047	19.9408	17.4186	0.0274		1.0849	1.0849		1.0141	1.0141		2,601.0453	2,601.0453	0.7055		2,615.8614
Total	**2.2047**	**19.9408**	**17.4186**	**0.0274**		**1.0849**	**1.0849**		**1.0141**	**1.0141**		**2,601.0453**	**2,601.0453**	**0.7055**		**2,615.8614**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1562	1.2416	2.0211	5.4000e-003	0.1563	0.0235	0.1798	0.0445	0.0216	0.0661		505.5238	505.5238	3.6400e-003		505.6002
Worker	0.7164	0.8822	11.1773	0.0368	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,603.1990	2,603.1990	0.1153		2,605.6196
Total	**0.8726**	**2.1238**	**13.1984**	**0.0422**	**3.0625**	**0.0457**	**3.1082**	**0.8153**	**0.0422**	**0.8575**		**3,108.7228**	**3,108.7228**	**0.1189**		**3,111.2199**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5970	2.7843	18.3521	0.0274		0.1134	0.1134		0.1134	0.1134	0.0000	2,601.0453	2,601.0453	0.7055		2,615.8614
Total	**0.5970**	**2.7843**	**18.3521**	**0.0274**		**0.1134**	**0.1134**		**0.1134**	**0.1134**	**0.0000**	**2,601.0453**	**2,601.0453**	**0.7055**		**2,615.8614**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1562	1.2416	2.0211	5.4000e-003	0.1563	0.0235	0.1798	0.0445	0.0216	0.0661		505.5238	505.5238	3.6400e-003		505.6002
Worker	0.7164	0.8822	11.1773	0.0368	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,603.1990	2,603.1990	0.1153		2,605.6196
Total	**0.8726**	**2.1238**	**13.1984**	**0.0422**	**3.0625**	**0.0457**	**3.1082**	**0.8153**	**0.0422**	**0.8575**		**3,108.7228**	**3,108.7228**	**0.1189**		**3,111.2199**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9687	17.5663	17.1570	0.0274		0.9165	0.9165		0.8570	0.8570		2,602.0604	2,602.0604	0.7024		2,616.8097
Total	**1.9687**	**17.5663**	**17.1570**	**0.0274**		**0.9165**	**0.9165**		**0.8570**	**0.8570**		**2,602.0604**	**2,602.0604**	**0.7024**		**2,616.8097**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1530	1.1270	1.9744	5.3900e-003	0.1563	0.0232	0.1795	0.0445	0.0213	0.0659		505.0682	505.0682	3.7200e-003		505.1463
Worker	0.6785	0.8277	10.5258	0.0368	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,560.2825	2,560.2825	0.1104		2,562.6005
Total	**0.8315**	**1.9547**	**12.5002**	**0.0422**	**3.0625**	**0.0454**	**3.1079**	**0.8153**	**0.0420**	**0.8572**		**3,065.3508**	**3,065.3508**	**0.1141**		**3,067.7468**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5711	2.7383	18.3291	0.0274		0.1031	0.1031		0.1031	0.1031	0.0000	2,602.0604	2,602.0604	0.7024		2,616.8097
Total	**0.5711**	**2.7383**	**18.3291**	**0.0274**		**0.1031**	**0.1031**		**0.1031**	**0.1031**	**0.0000**	**2,602.0604**	**2,602.0604**	**0.7024**		**2,616.8097**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1530	1.1270	1.9744	5.3900e-003	0.1563	0.0232	0.1795	0.0445	0.0213	0.0659		505.0682	505.0682	3.7200e-003		505.1463
Worker	0.6785	0.8277	10.5258	0.0368	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,560.2825	2,560.2825	0.1104		2,562.6005
Total	**0.8315**	**1.9547**	**12.5002**	**0.0422**	**3.0625**	**0.0454**	**3.1079**	**0.8153**	**0.0420**	**0.8572**		**3,065.3508**	**3,065.3508**	**0.1141**		**3,067.7468**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8012	15.8790	17.0061	0.0274		0.7900	0.7900		0.7388	0.7388		2,602.8067	2,602.8067	0.6984		2,617.4735
Total	**1.8012**	**15.8790**	**17.0061**	**0.0274**		**0.7900**	**0.7900**		**0.7388**	**0.7388**		**2,602.8067**	**2,602.8067**	**0.6984**		**2,617.4735**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1417	0.8991	1.8941	5.3700e-003	0.1563	0.0229	0.1792	0.0445	0.0211	0.0656		502.6492	502.6492	3.3400e-003		502.7193
Worker	0.6428	0.7794	9.9311	0.0368	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,521.1649	2,521.1649	0.1061		2,523.3920
Total	**0.7845**	**1.6785**	**11.8252**	**0.0422**	**3.0625**	**0.0451**	**3.1076**	**0.8153**	**0.0417**	**0.8569**		**3,023.8140**	**3,023.8140**	**0.1094**		**3,026.1113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5488	2.6960	18.3112	0.0274		0.0944	0.0944		0.0944	0.0944	0.0000	2,602.8067	2,602.8067	0.6984		2,617.4735
Total	**0.5488**	**2.6960**	**18.3112**	**0.0274**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**2,602.8067**	**2,602.8067**	**0.6984**		**2,617.4735**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1417	0.8991	1.8941	5.3700e-003	0.1563	0.0229	0.1792	0.0445	0.0211	0.0656		502.6492	502.6492	3.3400e-003		502.7193
Worker	0.6428	0.7794	9.9311	0.0368	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,521.1649	2,521.1649	0.1061		2,523.3920
Total	**0.7845**	**1.6785**	**11.8252**	**0.0422**	**3.0625**	**0.0451**	**3.1076**	**0.8153**	**0.0417**	**0.8569**		**3,023.8140**	**3,023.8140**	**0.1094**		**3,026.1113**

3.6 Paving 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7839	7.3126	6.2273	8.9700e-003		0.4809	0.4809		0.4433	0.4433		855.0418	855.0418	0.2682		860.6744
Paving	0.0160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7999**	**7.3126**	**6.2273**	**8.9700e-003**		**0.4809**	**0.4809**		**0.4433**	**0.4433**		**855.0418**	**855.0418**	**0.2682**		**860.6744**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0815	0.1016	1.2795	3.9500e-003	0.3130	2.3900e-003	0.3154	0.0830	2.2200e-003	0.0852		284.7146	284.7146	0.0130		284.9869
Total	**0.0815**	**0.1016**	**1.2795**	**3.9500e-003**	**0.3130**	**2.3900e-003**	**0.3154**	**0.0830**	**2.2200e-003**	**0.0852**		**284.7146**	**284.7146**	**0.0130**		**284.9869**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1477	0.7251	6.6200	8.9700e-003		0.0246	0.0246		0.0246	0.0246	0.0000	855.0418	855.0418	0.2682		860.6744
Paving	0.0160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1637**	**0.7251**	**6.6200**	**8.9700e-003**		**0.0246**	**0.0246**		**0.0246**	**0.0246**	**0.0000**	**855.0418**	**855.0418**	**0.2682**		**860.6744**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0815	0.1016	1.2795	3.9500e-003	0.3130	2.3900e-003	0.3154	0.0830	2.2200e-003	0.0852		284.7146	284.7146	0.0130		284.9869
Total	**0.0815**	**0.1016**	**1.2795**	**3.9500e-003**	**0.3130**	**2.3900e-003**	**0.3154**	**0.0830**	**2.2200e-003**	**0.0852**		**284.7146**	**284.7146**	**0.0130**		**284.9869**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329
Total	**27.2664**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.8329**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1148	0.1401	1.7813	6.2300e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		433.2786	433.2786	0.0187		433.6709
Total	**0.1148**	**0.1401**	**1.7813**	**6.2300e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**433.2786**	**433.2786**	**0.0187**		**433.6709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.8329
Total	**27.0915**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.8329**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1148	0.1401	1.7813	6.2300e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		433.2786	433.2786	0.0187		433.6709
Total	**0.1148**	**0.1401**	**1.7813**	**6.2300e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**433.2786**	**433.2786**	**0.0187**		**433.6709**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8017
Total	**27.2535**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1088	0.1319	1.6807	6.2200e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		426.6587	426.6587	0.0180		427.0356
Total	**0.1088**	**0.1319**	**1.6807**	**6.2200e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**426.6587**	**426.6587**	**0.0180**		**427.0356**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8017
Total	**27.0915**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1088	0.1319	1.6807	6.2200e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		426.6587	426.6587	0.0180		427.0356
Total	**0.1088**	**0.1319**	**1.6807**	**6.2200e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**426.6587**	**426.6587**	**0.0180**		**427.0356**

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9590	9.3955	10.4173	0.0147		0.5631	0.5631		0.5180	0.5180		1,419.7572	1,419.7572	0.4592		1,429.4000
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9658**	**9.3955**	**10.4173**	**0.0147**		**0.5631**	**0.5631**		**0.5180**	**0.5180**		**1,419.7572**	**1,419.7572**	**0.4592**		**1,429.4000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0122	0.0902	0.1580	4.3000e-004	0.0125	1.8600e-003	0.0144	3.5600e-003	1.7100e-003	5.2700e-003		40.4055	40.4055	3.0000e-004		40.4117
Worker	0.1253	0.1528	1.9432	6.7900e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8100e-003	0.1461		472.6676	472.6676	0.0204		473.0955
Total	**0.1375**	**0.2430**	**2.1012**	**7.2200e-003**	**0.5490**	**5.9600e-003**	**0.5550**	**0.1459**	**5.5200e-003**	**0.1514**		**513.0730**	**513.0730**	**0.0207**		**513.5072**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1796	0.7781	11.0728	0.0147		0.0239	0.0239		0.0239	0.0239	0.0000	1,419.7572	1,419.7572	0.4592		1,429.4000
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1864**	**0.7781**	**11.0728**	**0.0147**		**0.0239**	**0.0239**		**0.0239**	**0.0239**	**0.0000**	**1,419.7572**	**1,419.7572**	**0.4592**		**1,429.4000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0122	0.0902	0.1580	4.3000e-004	0.0125	1.8600e-003	0.0144	3.5600e-003	1.7100e-003	5.2700e-003		40.4055	40.4055	3.0000e-004		40.4117
Worker	0.1253	0.1528	1.9432	6.7900e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8100e-003	0.1461		472.6676	472.6676	0.0204		473.0955
Total	**0.1375**	**0.2430**	**2.1012**	**7.2200e-003**	**0.5490**	**5.9600e-003**	**0.5550**	**0.1459**	**5.5200e-003**	**0.1514**		**513.0730**	**513.0730**	**0.0207**		**513.5072**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8997	8.7790	10.3989	0.0147		0.5057	0.5057		0.4652	0.4652		1,420.6911	1,420.6911	0.4595		1,430.3401
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9065**	**8.7790**	**10.3989**	**0.0147**		**0.5057**	**0.5057**		**0.4652**	**0.4652**		**1,420.6911**	**1,420.6911**	**0.4595**		**1,430.3401**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0113	0.0719	0.1515	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.2119	40.2119	2.7000e-004		40.2176
Worker	0.1187	0.1439	1.8334	6.7900e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		465.4458	465.4458	0.0196		465.8570
Total	**0.1300**	**0.2158**	**1.9850**	**7.2200e-003**	**0.5490**	**5.9300e-003**	**0.5550**	**0.1459**	**5.4900e-003**	**0.1513**		**505.6578**	**505.6578**	**0.0199**		**506.0745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1796	0.7781	11.0728	0.0147		0.0239	0.0239		0.0239	0.0239	0.0000	1,420.6911	1,420.6911	0.4595		1,430.3401
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1864**	**0.7781**	**11.0728**	**0.0147**		**0.0239**	**0.0239**		**0.0239**	**0.0239**	**0.0000**	**1,420.6911**	**1,420.6911**	**0.4595**		**1,430.3401**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0113	0.0719	0.1515	4.3000e-004	0.0125	1.8300e-003	0.0143	3.5600e-003	1.6900e-003	5.2500e-003		40.2119	40.2119	2.7000e-004		40.2176
Worker	0.1187	0.1439	1.8334	6.7900e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		465.4458	465.4458	0.0196		465.8570
Total	**0.1300**	**0.2158**	**1.9850**	**7.2200e-003**	**0.5490**	**5.9300e-003**	**0.5550**	**0.1459**	**5.4900e-003**	**0.1513**		**505.6578**	**505.6578**	**0.0199**		**506.0745**

Harbor UCLA Master Plan- Phase C

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	29.20	1000sqft	0.67	29,200.00	0
General Light Industry	6.20	1000sqft	0.14	6,200.00	0
General Light Industry	54.72	1000sqft	1.26	54,720.00	0
Unrefrigerated Warehouse-No Rail	58.00	1000sqft	1.33	58,000.00	0
Parking Lot	24.00	Space	0.22	6,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	17.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	127.00
tblConstructionPhase	NumDays	230.00	129.00
tblConstructionPhase	NumDays	230.00	911.00
tblConstructionPhase	NumDays	20.00	139.00
tblConstructionPhase	NumDays	8.00	652.00
tblConstructionPhase	NumDays	18.00	36.00
tblConstructionPhase	NumDays	18.00	84.00
tblConstructionPhase	PhaseEndDate	8/14/2020	3/28/2023
tblConstructionPhase	PhaseEndDate	9/27/2021	2/19/2020
tblConstructionPhase	PhaseEndDate	8/17/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	9/9/2021	3/30/2021
tblConstructionPhase	PhaseEndDate	5/17/2023	2/19/2020
tblConstructionPhase	PhaseEndDate	7/24/2023	3/28/2023
tblConstructionPhase	PhaseStartDate	2/20/2020	10/1/2022
tblConstructionPhase	PhaseStartDate	3/31/2021	8/23/2019
tblConstructionPhase	PhaseStartDate	2/20/2020	10/1/2019
tblConstructionPhase	PhaseStartDate	3/13/2019	10/1/2018
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2020
tblConstructionPhase	PhaseStartDate	3/29/2023	12/1/2022
tblGrading	MaterialExported	0.00	28,027.00
tblGrading	MaterialImported	0.00	10,851.00
tblLandUse	LandUseSquareFeet	9,600.00	6,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblProjectCharacteristics	OperationalYear	2014	2022
tblTripsAndVMT	HaulingTripNumber	95.00	1,002.00
tblTripsAndVMT	HaulingTripNumber	4,860.00	6,480.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	25.00	27.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	80.00
tblTripsAndVMT	WorkerTripNumber	35.00	174.00
tblTripsAndVMT	WorkerTripNumber	62.00	233.00
tblTripsAndVMT	WorkerTripNumber	62.00	260.00
tblTripsAndVMT	WorkerTripNumber	10.00	28.00
tblTripsAndVMT	WorkerTripNumber	12.00	44.00
tblTripsAndVMT	WorkerTripNumber	13.00	48.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	10.4070	95.1799	81.7903	0.1463	11.1167	5.1749	16.2916	4.5398	4.8289	9.3687	0.0000	13,773.0249	13,773.0249	2.7956	0.0000	13,831.7324
2019	13.1281	105.5412	113.3864	0.2211	14.7348	5.6300	20.3648	5.5412	5.2690	10.8102	0.0000	19,476.0468	19,476.0468	3.2394	0.0000	19,544.0739
2020	12.9413	103.6841	116.9683	0.2337	15.0465	5.4618	20.5084	5.6239	5.1034	10.7273	0.0000	20,102.9441	20,102.9441	3.4765	0.0000	20,175.9511
2021	8.3145	68.0109	78.1898	0.1604	12.9932	3.3862	16.3795	5.0557	3.1614	8.2171	0.0000	13,882.9276	13,882.9276	2.5373	0.0000	13,936.2118
2022	31.3128	30.8433	44.9530	0.0974	4.1034	1.6166	5.7200	1.0915	1.5079	2.5994	0.0000	8,092.0433	8,092.0433	1.3335	0.0000	8,120.0457
2023	31.0114	28.1056	43.9298	0.0974	4.1034	1.4215	5.5249	1.0915	1.3257	2.4172	0.0000	8,041.0127	8,041.0127	1.3221	0.0000	8,068.7761
Total	**107.1150**	**431.3650**	**479.2176**	**0.9562**	**62.0979**	**22.6912**	**84.7891**	**22.9437**	**21.1962**	**44.1399**	**0.0000**	**83,367.9994**	**83,367.9994**	**14.7044**	**0.0000**	**83,676.7910**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.7985	12.5761	80.5499	0.1463	7.0255	0.3641	7.3896	2.4714	0.3563	2.8276	0.0000	13,773.0249	13,773.0249	2.7956	0.0000	13,831.7323
2019	5.1352	19.5878	112.1497	0.2211	10.7337	0.6387	11.3724	3.4864	0.6263	4.1127	0.0000	19,476.0468	19,476.0468	3.2394	0.0000	19,544.0739
2020	5.0954	19.3195	117.5394	0.2337	11.0455	0.6211	11.6666	3.5691	0.6090	4.1781	0.0000	20,102.9441	20,102.9441	3.4765	0.0000	20,175.9511
2021	3.1725	12.2066	79.0742	0.1604	8.9922	0.3843	9.3765	3.0009	0.3764	3.3772	0.0000	13,882.9276	13,882.9276	2.5373	0.0000	13,936.2118
2022	28.9609	6.1182	46.7994	0.0974	4.1034	0.1864	4.2897	1.0915	0.1822	1.2737	0.0000	8,092.0433	8,092.0433	1.3335	0.0000	8,120.0457
2023	28.8769	5.7475	45.9302	0.0974	4.1034	0.1773	4.2806	1.0915	0.1731	1.2646	0.0000	8,041.0127	8,041.0127	1.3221	0.0000	8,068.7761

Total	**74.0394**	**75.5555**	**482.0429**	**0.9562**	**46.0036**	**2.3718**	**48.3754**	**14.7109**	**2.3232**	**17.0341**	**0.0000**	**83,367.9993**	**83,367.9993**	**14.7044**	**0.0000**	**83,676.7909**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**30.88**	**82.48**	**-0.59**	**0.00**	**25.92**	**89.55**	**42.95**	**35.88**	**89.04**	**61.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/30/2018	3/12/2019	5	139	
2	Grading	Grading	10/1/2018	3/30/2021	5	652	
3	SCE SY	Building Construction	8/23/2019	2/19/2020	5	129	
4	Building Construction	Building Construction	10/1/2019	3/28/2023	5	911	
5	Paving 2	Paving	1/1/2020	2/19/2020	5	36	
6	Architectural Coating	Architectural Coating	10/1/2022	3/28/2023	5	127	
7	Paving	Paving	12/1/2022	3/28/2023	5	84	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 326

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 222,450; Non-Residential Outdoor: 74,150 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Graders	1	8.00	174	0.41
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36

Demolition	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Cranes	1	8.00	226	0.29
Grading	Excavators	1	8.00	162	0.38
Grading	Forklifts	1	8.00	89	0.20
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Grading	Welders	1	8.00	46	0.45
SCE SY	Cement and Mortar Mixers	1	8.00	9	0.56
SCE SY	Cranes	0	7.00	226	0.29
SCE SY	Forklifts	0	8.00	89	0.20
SCE SY	Generator Sets	1	8.00	84	0.74
SCE SY	Graders	1	8.00	174	0.41
SCE SY	Tractors/Loaders/Backhoes	3	7.00	97	0.37
SCE SY	Welders	1	8.00	46	0.45
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Graders	1	8.00	174	0.41
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 2	Cement and Mortar Mixers	1	6.00	9	0.56
Paving 2	Pavers	0	8.00	125	0.42
Paving 2	Paving Equipment	1	6.00	130	0.36
Paving 2	Rollers	1	6.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Paving 2	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	6.00	130	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	80.00	4.00	1,002.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	14	174.00	4.00	6,480.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
SCE SY	7	233.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	260.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	44.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	48.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1478	0.0000	0.1478	0.0224	0.0000	0.0224			0.0000			0.0000
Off-Road	3.1337	31.1382	22.7983	0.0363		1.8103	1.8103		1.6869	1.6869		3,618.7891	3,618.7891	0.9880		3,639.5362
Total	**3.1337**	**31.1382**	**22.7983**	**0.0363**	**0.1478**	**1.8103**	**1.9581**	**0.0224**	**1.6869**	**1.7092**		**3,618.7891**	**3,618.7891**	**0.9880**		**3,639.5362**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1204	1.7609	1.5206	5.3000e-003	0.1809	0.0283	0.2091	0.0480	0.0260	0.0740		517.5820	517.5820	3.8700e-003		517.6633
Vendor	0.0313	0.2975	0.4363	8.6000e-004	0.0250	4.7900e-003	0.0298	7.1200e-003	4.4100e-003	0.0115		83.7162	83.7162	6.2000e-004		83.7293
Worker	0.2747	0.3746	3.9040	0.0106	0.8942	7.0000e-003	0.9012	0.2372	6.4800e-003	0.2436		826.2281	826.2281	0.0418		827.1057
Total	**0.4264**	**2.4331**	**5.8608**	**0.0168**	**1.1001**	**0.0401**	**1.1402**	**0.2922**	**0.0369**	**0.3292**		**1,427.5264**	**1,427.5264**	**0.0463**		**1,428.4983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0576	0.0000	0.0576	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.4309	1.8674	24.6793	0.0363		0.0575	0.0575		0.0575	0.0575	0.0000	3,618.7891	3,618.7891	0.9880		3,639.5362
Total	**0.4309**	**1.8674**	**24.6793**	**0.0363**	**0.0576**	**0.0575**	**0.1151**	**8.7300e-003**	**0.0575**	**0.0662**	**0.0000**	**3,618.7891**	**3,618.7891**	**0.9880**		**3,639.5362**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1204	1.7609	1.5206	5.3000e-003	0.1809	0.0283	0.2091	0.0480	0.0260	0.0740		517.5820	517.5820	3.8700e-003		517.6633
Vendor	0.0313	0.2975	0.4363	8.6000e-004	0.0250	4.7900e-003	0.0298	7.1200e-003	4.4100e-003	0.0115		83.7162	83.7162	6.2000e-004		83.7293
Worker	0.2747	0.3746	3.9040	0.0106	0.8942	7.0000e-003	0.9012	0.2372	6.4800e-003	0.2436		826.2281	826.2281	0.0418		827.1057
Total	**0.4264**	**2.4331**	**5.8608**	**0.0168**	**1.1001**	**0.0401**	**1.1402**	**0.2922**	**0.0369**	**0.3292**		**1,427.5264**	**1,427.5264**	**0.0463**		**1,428.4983**

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1478	0.0000	0.1478	0.0224	0.0000	0.0224			0.0000			0.0000
Off-Road	2.8175	27.9854	22.5043	0.0363		1.5682	1.5682		1.4611	1.4611		3,568.8344	3,568.8344	0.9833		3,589.4846
Total	**2.8175**	**27.9854**	**22.5043**	**0.0363**	**0.1478**	**1.5682**	**1.7160**	**0.0224**	**1.4611**	**1.4835**		**3,568.8344**	**3,568.8344**	**0.9833**		**3,589.4846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1170	1.6461	1.4954	5.2800e-003	0.2901	0.0283	0.3184	0.0748	0.0260	0.1008		507.4906	507.4906	3.8500e-003		507.5714
Vendor	0.0296	0.2743	0.4219	8.6000e-004	0.0250	4.5400e-003	0.0296	7.1200e-003	4.1800e-003	0.0113		82.0817	82.0817	6.1000e-004		82.0945
Worker	0.2526	0.3435	3.5780	0.0106	0.8942	6.8800e-003	0.9011	0.2372	6.3800e-003	0.2435		794.7735	794.7735	0.0391		795.5950
Total	**0.3991**	**2.2639**	**5.4953**	**0.0167**	**1.2093**	**0.0397**	**1.2490**	**0.3190**	**0.0366**	**0.3556**		**1,384.3458**	**1,384.3458**	**0.0436**		**1,385.2609**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0576	0.0000	0.0576	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.4309	1.8674	24.6793	0.0363		0.0575	0.0575		0.0575	0.0575	0.0000	3,568.8344	3,568.8344	0.9833		3,589.4846
Total	**0.4309**	**1.8674**	**24.6793**	**0.0363**	**0.0576**	**0.0575**	**0.1151**	**8.7300e-003**	**0.0575**	**0.0662**	**0.0000**	**3,568.8344**	**3,568.8344**	**0.9833**		**3,589.4846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1170	1.6461	1.4954	5.2800e-003	0.2901	0.0283	0.3184	0.0748	0.0260	0.1008		507.4906	507.4906	3.8500e-003		507.5714
Vendor	0.0296	0.2743	0.4219	8.6000e-004	0.0250	4.5400e-003	0.0296	7.1200e-003	4.1800e-003	0.0113		82.0817	82.0817	6.1000e-004		82.0945
Worker	0.2526	0.3435	3.5780	0.0106	0.8942	6.8800e-003	0.9011	0.2372	6.3800e-003	0.2435		794.7735	794.7735	0.0391		795.5950
Total	**0.3991**	**2.2639**	**5.4953**	**0.0167**	**1.2093**	**0.0397**	**1.2490**	**0.3190**	**0.0366**	**0.3556**		**1,384.3458**	**1,384.3458**	**0.0436**		**1,385.2609**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	6.0522	58.0685	42.1073	0.0620		3.2655	3.2655		3.0507	3.0507		6,132.3490	6,132.3490	1.6645		6,167.3036
Total	**6.0522**	**58.0685**	**42.1073**	**0.0620**	**6.5591**	**3.2655**	**9.8245**	**3.3685**	**3.0507**	**6.4192**		**6,132.3490**	**6,132.3490**	**1.6645**		**6,167.3036**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1660	2.4278	2.0964	7.3100e-003	1.3399	0.0390	1.3789	0.3338	0.0359	0.3697		713.5981	713.5981	5.3400e-003		713.7102
Vendor	0.0313	0.2975	0.4363	8.6000e-004	0.0250	4.7900e-003	0.0298	7.1200e-003	4.4100e-003	0.0115		83.7162	83.7162	6.2000e-004		83.7293
Worker	0.5974	0.8148	8.4912	0.0231	1.9449	0.0152	1.9601	0.5158	0.0141	0.5299		1,797.0462	1,797.0462	0.0909		1,798.9549
Total	**0.7947**	**3.5401**	**11.0239**	**0.0312**	**3.3098**	**0.0590**	**3.3688**	**0.8567**	**0.0544**	**0.9111**		**2,594.3605**	**2,594.3605**	**0.0969**		**2,596.3943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.1464	4.7355	38.9859	0.0620		0.2075	0.2075		0.2075	0.2075	0.0000	6,132.3490	6,132.3490	1.6645		6,167.3036
Total	**1.1464**	**4.7355**	**38.9859**	**0.0620**	**2.5580**	**0.2075**	**2.7655**	**1.3137**	**0.2075**	**1.5212**	**0.0000**	**6,132.3490**	**6,132.3490**	**1.6645**		**6,167.3036**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1660	2.4278	2.0964	7.3100e-003	1.3399	0.0390	1.3789	0.3338	0.0359	0.3697		713.5981	713.5981	5.3400e-003		713.7102
Vendor	0.0313	0.2975	0.4363	8.6000e-004	0.0250	4.7900e-003	0.0298	7.1200e-003	4.4100e-003	0.0115		83.7162	83.7162	6.2000e-004		83.7293
Worker	0.5974	0.8148	8.4912	0.0231	1.9449	0.0152	1.9601	0.5158	0.0141	0.5299		1,797.0462	1,797.0462	0.0909		1,798.9549
Total	**0.7947**	**3.5401**	**11.0239**	**0.0312**	**3.3098**	**0.0590**	**3.3688**	**0.8567**	**0.0544**	**0.9111**		**2,594.3605**	**2,594.3605**	**0.0969**		**2,596.3943**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	5.4730	52.7512	41.0396	0.0620		2.8642	2.8642		2.6751	2.6751		6,051.4704	6,051.4704	1.6508		6,086.1378
Total	**5.4730**	**52.7512**	**41.0396**	**0.0620**	**6.5591**	**2.8642**	**9.4233**	**3.3685**	**2.6751**	**6.0436**		**6,051.4704**	**6,051.4704**	**1.6508**		**6,086.1378**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1613	2.2696	2.0618	7.2800e-003	0.3701	0.0390	0.4091	0.0958	0.0359	0.1316		699.6849	699.6849	5.3100e-003		699.7963
Vendor	0.0296	0.2743	0.4219	8.6000e-004	0.0250	4.5400e-003	0.0296	7.1200e-003	4.1800e-003	0.0113		82.0817	82.0817	6.1000e-004		82.0945
Worker	0.5493	0.7472	7.7820	0.0230	1.9449	0.0150	1.9599	0.5158	0.0139	0.5297		1,728.6324	1,728.6324	0.0851		1,730.4191
Total	**0.7402**	**3.2910**	**10.2657**	**0.0312**	**2.3400**	**0.0585**	**2.3985**	**0.6187**	**0.0539**	**0.6726**		**2,510.3989**	**2,510.3989**	**0.0910**		**2,512.3099**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.0898	4.6778	38.9341	0.0620		0.1936	0.1936		0.1936	0.1936	0.0000	6,051.4704	6,051.4704	1.6508		6,086.1378
Total	**1.0898**	**4.6778**	**38.9341**	**0.0620**	**2.5580**	**0.1936**	**2.7517**	**1.3137**	**0.1936**	**1.5073**	**0.0000**	**6,051.4704**	**6,051.4704**	**1.6508**		**6,086.1378**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1613	2.2696	2.0618	7.2800e-003	0.3701	0.0390	0.4091	0.0958	0.0359	0.1316		699.6849	699.6849	5.3100e-003		699.7963
Vendor	0.0296	0.2743	0.4219	8.6000e-004	0.0250	4.5400e-003	0.0296	7.1200e-003	4.1800e-003	0.0113		82.0817	82.0817	6.1000e-004		82.0945
Worker	0.5493	0.7472	7.7820	0.0230	1.9449	0.0150	1.9599	0.5158	0.0139	0.5297		1,728.6324	1,728.6324	0.0851		1,730.4191
Total	**0.7402**	**3.2910**	**10.2657**	**0.0312**	**2.3400**	**0.0585**	**2.3985**	**0.6187**	**0.0539**	**0.6726**		**2,510.3989**	**2,510.3989**	**0.0910**		**2,512.3099**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	5.0116	48.1159	39.9895	0.0620		2.5303	2.5303		2.3625	2.3625		5,944.5397	5,944.5397	1.6397		5,978.9734
Total	**5.0116**	**48.1159**	**39.9895**	**0.0620**	**6.5591**	**2.5303**	**9.0894**	**3.3685**	**2.3625**	**5.7310**		**5,944.5397**	**5,944.5397**	**1.6397**		**5,978.9734**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1580	2.0233	2.0361	7.2800e-003	0.3688	0.0387	0.4075	0.0955	0.0356	0.1310		683.9275	683.9275	5.3100e-003		684.0391
Vendor	0.0280	0.2393	0.4097	8.6000e-004	0.0250	4.1500e-003	0.0292	7.1200e-003	3.8200e-003	0.0110		80.2319	80.2319	6.0000e-004		80.2445
Worker	0.5148	0.6924	7.2400	0.0230	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,658.3910	1,658.3910	0.0806		1,660.0833
Total	**0.7008**	**2.9550**	**9.6858**	**0.0312**	**2.3387**	**0.0577**	**2.3964**	**0.6184**	**0.0532**	**0.6716**		**2,422.5504**	**2,422.5504**	**0.0865**		**2,424.3668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.0468	4.6249	38.8939	0.0620		0.1809	0.1809		0.1809	0.1809	0.0000	5,944.5397	5,944.5397	1.6397		5,978.9734
Total	**1.0468**	**4.6249**	**38.8939**	**0.0620**	**2.5580**	**0.1809**	**2.7389**	**1.3137**	**0.1809**	**1.4946**	**0.0000**	**5,944.5397**	**5,944.5397**	**1.6397**		**5,978.9734**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1580	2.0233	2.0361	7.2800e-003	0.3688	0.0387	0.4075	0.0955	0.0356	0.1310		683.9275	683.9275	5.3100e-003		684.0391
Vendor	0.0280	0.2393	0.4097	8.6000e-004	0.0250	4.1500e-003	0.0292	7.1200e-003	3.8200e-003	0.0110		80.2319	80.2319	6.0000e-004		80.2445
Worker	0.5148	0.6924	7.2400	0.0230	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,658.3910	1,658.3910	0.0806		1,660.0833
Total	**0.7008**	**2.9550**	**9.6858**	**0.0312**	**2.3387**	**0.0577**	**2.3964**	**0.6184**	**0.0532**	**0.6716**		**2,422.5504**	**2,422.5504**	**0.0865**		**2,424.3668**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5591	0.0000	6.5591	3.3685	0.0000	3.3685			0.0000			0.0000
Off-Road	4.5416	43.2104	38.8948	0.0620		2.1984	2.1984		2.0524	2.0524		5,944.5177	5,944.5177	1.6296		5,978.7395
Total	**4.5416**	**43.2104**	**38.8948**	**0.0620**	**6.5591**	**2.1984**	**8.7575**	**3.3685**	**2.0524**	**5.4209**		**5,944.5177**	**5,944.5177**	**1.6296**		**5,978.7395**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1570	1.7721	2.0194	7.2700e-003	1.4017	0.0383	1.4401	0.3490	0.0353	0.3843		683.6823	683.6823	5.4100e-003		683.7961
Vendor	0.0271	0.2032	0.3999	8.6000e-004	0.0250	3.7800e-003	0.0288	7.1200e-003	3.4800e-003	0.0106		80.1975	80.1975	6.0000e-004		80.2102
Worker	0.4871	0.6473	6.7988	0.0231	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,632.6534	1,632.6534	0.0771		1,634.2734
Total	**0.6712**	**2.6226**	**9.2180**	**0.0312**	**3.3716**	**0.0570**	**3.4287**	**0.8719**	**0.0526**	**0.9245**		**2,396.5333**	**2,396.5333**	**0.0832**		**2,398.2796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5580	0.0000	2.5580	1.3137	0.0000	1.3137			0.0000			0.0000
Off-Road	1.0073	4.5625	38.8457	0.0620		0.1681	0.1681		0.1681	0.1681	0.0000	5,944.5177	5,944.5177	1.6296		5,978.7395
Total	**1.0073**	**4.5625**	**38.8457**	**0.0620**	**2.5580**	**0.1681**	**2.7261**	**1.3137**	**0.1681**	**1.4818**	**0.0000**	**5,944.5177**	**5,944.5177**	**1.6296**		**5,978.7395**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1570	1.7721	2.0194	7.2700e-003	1.4017	0.0383	1.4401	0.3490	0.0353	0.3843		683.6823	683.6823	5.4100e-003		683.7961
Vendor	0.0271	0.2032	0.3999	8.6000e-004	0.0250	3.7800e-003	0.0288	7.1200e-003	3.4800e-003	0.0106		80.1975	80.1975	6.0000e-004		80.2102
Worker	0.4871	0.6473	6.7988	0.0231	1.9449	0.0149	1.9598	0.5158	0.0138	0.5296		1,632.6534	1,632.6534	0.0771		1,634.2734
Total	**0.6712**	**2.6226**	**9.2180**	**0.0312**	**3.3716**	**0.0570**	**3.4287**	**0.8719**	**0.0526**	**0.9245**		**2,396.5333**	**2,396.5333**	**0.0832**		**2,398.2796**

3.4 SCE SY - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2651	19.4723	16.4830	0.0242		1.1729	1.1729		1.1063	1.1063		2,303.6494	2,303.6494	0.5295		2,314.7689
Total	**2.2651**	**19.4723**	**16.4830**	**0.0242**		**1.1729**	**1.1729**		**1.1063**	**1.1063**		**2,303.6494**	**2,303.6494**	**0.5295**		**2,314.7689**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1996	1.8514	2.8480	5.8000e-003	0.1688	0.0307	0.1995	0.0481	0.0282	0.0763		554.0517	554.0517	4.1200e-003		554.1382
Worker	0.7356	1.0005	10.4208	0.0308	2.6044	0.0200	2.6244	0.6907	0.0186	0.7093		2,314.7778	2,314.7778	0.1139		2,317.1704
Total	**0.9352**	**2.8519**	**13.2688**	**0.0366**	**2.7732**	**0.0507**	**2.8239**	**0.7388**	**0.0468**	**0.7856**		**2,868.8295**	**2,868.8295**	**0.1181**		**2,871.3085**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6849	3.0367	16.9753	0.0242		0.1462	0.1462		0.1462	0.1462	0.0000	2,303.6494	2,303.6494	0.5295		2,314.7689
Total	**0.6849**	**3.0367**	**16.9753**	**0.0242**		**0.1462**	**0.1462**		**0.1462**	**0.1462**	**0.0000**	**2,303.6494**	**2,303.6494**	**0.5295**		**2,314.7689**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1996	1.8514	2.8480	5.8000e-003	0.1688	0.0307	0.1995	0.0481	0.0282	0.0763		554.0517	554.0517	4.1200e-003		554.1382
Worker	0.7356	1.0005	10.4208	0.0308	2.6044	0.0200	2.6244	0.6907	0.0186	0.7093		2,314.7778	2,314.7778	0.1139		2,317.1704
Total	**0.9352**	**2.8519**	**13.2688**	**0.0366**	**2.7732**	**0.0507**	**2.8239**	**0.7388**	**0.0468**	**0.7856**		**2,868.8295**	**2,868.8295**	**0.1181**		**2,871.3085**

3.4 SCE SY - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0629	17.9027	16.3213	0.0242		1.0351	1.0351		0.9761	0.9761		2,272.0268	2,272.0268	0.5209		2,282.9651
Total	**2.0629**	**17.9027**	**16.3213**	**0.0242**		**1.0351**	**1.0351**		**0.9761**	**0.9761**		**2,272.0268**	**2,272.0268**	**0.5209**		**2,282.9651**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1892	1.6152	2.7654	5.7900e-003	0.1688	0.0280	0.1969	0.0481	0.0258	0.0739		541.5653	541.5653	4.0400e-003		541.6500
Worker	0.6894	0.9272	9.6949	0.0308	2.6044	0.0199	2.6243	0.6907	0.0185	0.7092		2,220.7190	2,220.7190	0.1079		2,222.9851
Total	**0.8786**	**2.5424**	**12.4603**	**0.0366**	**2.7732**	**0.0480**	**2.8212**	**0.7388**	**0.0443**	**0.7830**		**2,762.2843**	**2,762.2843**	**0.1120**		**2,764.6351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6418	2.9837	16.9352	0.0242		0.1333	0.1333		0.1333	0.1333	0.0000	2,272.0268	2,272.0268	0.5209		2,282.9651
Total	**0.6418**	**2.9837**	**16.9352**	**0.0242**		**0.1333**	**0.1333**		**0.1333**	**0.1333**	**0.0000**	**2,272.0268**	**2,272.0268**	**0.5209**		**2,282.9651**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1892	1.6152	2.7654	5.7900e-003	0.1688	0.0280	0.1969	0.0481	0.0258	0.0739		541.5653	541.5653	4.0400e-003		541.6500
Worker	0.6894	0.9272	9.6949	0.0308	2.6044	0.0199	2.6243	0.6907	0.0185	0.7092		2,220.7190	2,220.7190	0.1079		2,222.9851
Total	**0.8786**	**2.5424**	**12.4603**	**0.0366**	**2.7732**	**0.0480**	**2.8212**	**0.7388**	**0.0443**	**0.7830**		**2,762.2843**	**2,762.2843**	**0.1120**		**2,764.6351**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7090	24.3441	18.0639	0.0273		1.4330	1.4330		1.3401	1.3401		2,645.6739	2,645.6739	0.7191		2,660.7743
Total	**2.7090**	**24.3441**	**18.0639**	**0.0273**		**1.4330**	**1.4330**		**1.3401**	**1.3401**		**2,645.6739**	**2,645.6739**	**0.7191**		**2,660.7743**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1848	1.7143	2.6371	5.3700e-003	0.1563	0.0284	0.1847	0.0445	0.0261	0.0706		513.0108	513.0108	3.8100e-003		513.0909
Worker	0.8209	1.1165	11.6283	0.0344	2.9062	0.0224	2.9285	0.7707	0.0207	0.7915		2,583.0139	2,583.0139	0.1271		2,585.6837
Total	**1.0056**	**2.8307**	**14.2654**	**0.0398**	**3.0625**	**0.0507**	**3.1132**	**0.8153**	**0.0468**	**0.8621**		**3,096.0247**	**3,096.0247**	**0.1309**		**3,098.7745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6795	2.8997	18.4405	0.0273		0.1389	0.1389		0.1389	0.1389	0.0000	2,645.6739	2,645.6739	0.7191		2,660.7743
Total	**0.6795**	**2.8997**	**18.4405**	**0.0273**		**0.1389**	**0.1389**		**0.1389**	**0.1389**	**0.0000**	**2,645.6739**	**2,645.6739**	**0.7191**		**2,660.7743**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1848	1.7143	2.6371	5.3700e-003	0.1563	0.0284	0.1847	0.0445	0.0261	0.0706		513.0108	513.0108	3.8100e-003		513.0909
Worker	0.8209	1.1165	11.6283	0.0344	2.9062	0.0224	2.9285	0.7707	0.0207	0.7915		2,583.0139	2,583.0139	0.1271		2,585.6837
Total	**1.0056**	**2.8307**	**14.2654**	**0.0398**	**3.0625**	**0.0507**	**3.1132**	**0.8153**	**0.0468**	**0.8621**		**3,096.0247**	**3,096.0247**	**0.1309**		**3,098.7745**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4601	22.2140	17.7403	0.0273		1.2594	1.2594		1.1774	1.1774		2,600.1286	2,600.1286	0.7122		2,615.0845
Total	**2.4601**	**22.2140**	**17.7403**	**0.0273**		**1.2594**	**1.2594**		**1.1774**	**1.1774**		**2,600.1286**	**2,600.1286**	**0.7122**		**2,615.0845**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1752	1.4956	2.5605	5.3600e-003	0.1563	0.0260	0.1823	0.0445	0.0239	0.0684		501.4493	501.4493	3.7400e-003		501.5278
Worker	0.7693	1.0346	10.8184	0.0344	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,478.0556	2,478.0556	0.1204		2,480.5842
Total	**0.9445**	**2.5302**	**13.3789**	**0.0397**	**3.0625**	**0.0482**	**3.1107**	**0.8153**	**0.0445**	**0.8597**		**2,979.5049**	**2,979.5049**	**0.1242**		**2,982.1120**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6364	2.8468	18.4003	0.0273		0.1261	0.1261		0.1261	0.1261	0.0000	2,600.1286	2,600.1286	0.7122		2,615.0845
Total	**0.6364**	**2.8468**	**18.4003**	**0.0273**		**0.1261**	**0.1261**		**0.1261**	**0.1261**	**0.0000**	**2,600.1286**	**2,600.1286**	**0.7122**		**2,615.0845**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1752	1.4956	2.5605	5.3600e-003	0.1563	0.0260	0.1823	0.0445	0.0239	0.0684		501.4493	501.4493	3.7400e-003		501.5278
Worker	0.7693	1.0346	10.8184	0.0344	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,478.0556	2,478.0556	0.1204		2,480.5842
Total	**0.9445**	**2.5302**	**13.3789**	**0.0397**	**3.0625**	**0.0482**	**3.1107**	**0.8153**	**0.0445**	**0.8597**		**2,979.5049**	**2,979.5049**	**0.1242**		**2,982.1120**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2047	19.9408	17.4186	0.0274		1.0849	1.0849		1.0141	1.0141		2,601.0453	2,601.0453	0.7055		2,615.8614
Total	**2.2047**	**19.9408**	**17.4186**	**0.0274**		**1.0849**	**1.0849**		**1.0141**	**1.0141**		**2,601.0453**	**2,601.0453**	**0.7055**		**2,615.8614**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1691	1.2699	2.4993	5.3600e-003	0.1563	0.0236	0.1800	0.0445	0.0217	0.0663		501.2344	501.2344	3.7700e-003		501.3136
Worker	0.7279	0.9673	10.1591	0.0345	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,439.5971	2,439.5971	0.1153		2,442.0177
Total	**0.8970**	**2.2372**	**12.6583**	**0.0398**	**3.0625**	**0.0459**	**3.1084**	**0.8153**	**0.0424**	**0.8576**		**2,940.8314**	**2,940.8314**	**0.1190**		**2,943.3313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5970	2.7843	18.3521	0.0274		0.1134	0.1134		0.1134	0.1134	0.0000	2,601.0453	2,601.0453	0.7055		2,615.8614
Total	**0.5970**	**2.7843**	**18.3521**	**0.0274**		**0.1134**	**0.1134**		**0.1134**	**0.1134**	**0.0000**	**2,601.0453**	**2,601.0453**	**0.7055**		**2,615.8614**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1691	1.2699	2.4993	5.3600e-003	0.1563	0.0236	0.1800	0.0445	0.0217	0.0663		501.2344	501.2344	3.7700e-003		501.3136
Worker	0.7279	0.9673	10.1591	0.0345	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,439.5971	2,439.5971	0.1153		2,442.0177
Total	**0.8970**	**2.2372**	**12.6583**	**0.0398**	**3.0625**	**0.0459**	**3.1084**	**0.8153**	**0.0424**	**0.8576**		**2,940.8314**	**2,940.8314**	**0.1190**		**2,943.3313**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9687	17.5663	17.1570	0.0274		0.9165	0.9165		0.8570	0.8570		2,602.0604	2,602.0604	0.7024		2,616.8097
Total	**1.9687**	**17.5663**	**17.1570**	**0.0274**		**0.9165**	**0.9165**		**0.8570**	**0.8570**		**2,602.0604**	**2,602.0604**	**0.7024**		**2,616.8097**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1653	1.1527	2.4408	5.3500e-003	0.1563	0.0234	0.1797	0.0445	0.0215	0.0660		500.7816	500.7816	3.8600e-003		500.8626
Worker	0.6894	0.9071	9.5498	0.0344	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,399.0418	2,399.0418	0.1104		2,401.3597
Total	**0.8547**	**2.0598**	**11.9906**	**0.0398**	**3.0625**	**0.0456**	**3.1081**	**0.8153**	**0.0421**	**0.8574**		**2,899.8234**	**2,899.8234**	**0.1142**		**2,902.2223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5711	2.7383	18.3291	0.0274		0.1031	0.1031		0.1031	0.1031	0.0000	2,602.0604	2,602.0604	0.7024		2,616.8097
Total	**0.5711**	**2.7383**	**18.3291**	**0.0274**		**0.1031**	**0.1031**		**0.1031**	**0.1031**	**0.0000**	**2,602.0604**	**2,602.0604**	**0.7024**		**2,616.8097**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1653	1.1527	2.4408	5.3500e-003	0.1563	0.0234	0.1797	0.0445	0.0215	0.0660		500.7816	500.7816	3.8600e-003		500.8626
Worker	0.6894	0.9071	9.5498	0.0344	2.9062	0.0222	2.9284	0.7707	0.0206	0.7914		2,399.0418	2,399.0418	0.1104		2,401.3597
Total	**0.8547**	**2.0598**	**11.9906**	**0.0398**	**3.0625**	**0.0456**	**3.1081**	**0.8153**	**0.0421**	**0.8574**		**2,899.8234**	**2,899.8234**	**0.1142**		**2,902.2223**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8012	15.8790	17.0061	0.0274		0.7900	0.7900		0.7388	0.7388		2,602.8067	2,602.8067	0.6984		2,617.4735
Total	**1.8012**	**15.8790**	**17.0061**	**0.0274**		**0.7900**	**0.7900**		**0.7388**	**0.7388**		**2,602.8067**	**2,602.8067**	**0.6984**		**2,617.4735**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1535	0.9158	2.3501	5.3300e-003	0.1563	0.0231	0.1794	0.0445	0.0212	0.0658		498.3618	498.3618	3.4800e-003		498.4348
Worker	0.6532	0.8536	8.9934	0.0344	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,362.0381	2,362.0381	0.1061		2,364.2651
Total	**0.8067**	**1.7693**	**11.3435**	**0.0398**	**3.0625**	**0.0453**	**3.1078**	**0.8153**	**0.0418**	**0.8571**		**2,860.3998**	**2,860.3998**	**0.1095**		**2,862.7000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5488	2.6960	18.3112	0.0274		0.0944	0.0944		0.0944	0.0944	0.0000	2,602.8067	2,602.8067	0.6984		2,617.4735
Total	**0.5488**	**2.6960**	**18.3112**	**0.0274**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**2,602.8067**	**2,602.8067**	**0.6984**		**2,617.4735**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1535	0.9158	2.3501	5.3300e-003	0.1563	0.0231	0.1794	0.0445	0.0212	0.0658		498.3618	498.3618	3.4800e-003		498.4348
Worker	0.6532	0.8536	8.9934	0.0344	2.9062	0.0222	2.9284	0.7707	0.0206	0.7913		2,362.0381	2,362.0381	0.1061		2,364.2651
Total	**0.8067**	**1.7693**	**11.3435**	**0.0398**	**3.0625**	**0.0453**	**3.1078**	**0.8153**	**0.0418**	**0.8571**		**2,860.3998**	**2,860.3998**	**0.1095**		**2,862.7000**

3.6 Paving 2 - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7839	7.3126	6.2273	8.9700e-003		0.4809	0.4809		0.4433	0.4433		855.0418	855.0418	0.2682		860.6744
Paving	0.0160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7999**	**7.3126**	**6.2273**	**8.9700e-003**		**0.4809**	**0.4809**		**0.4433**	**0.4433**		**855.0418**	**855.0418**	**0.2682**		**860.6744**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0828	0.1114	1.1651	3.7000e-003	0.3130	2.3900e-003	0.3154	0.0830	2.2200e-003	0.0852		266.8675	266.8675	0.0130		267.1398
Total	**0.0828**	**0.1114**	**1.1651**	**3.7000e-003**	**0.3130**	**2.3900e-003**	**0.3154**	**0.0830**	**2.2200e-003**	**0.0852**		**266.8675**	**266.8675**	**0.0130**		**267.1398**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1477	0.7251	6.6200	8.9700e-003		0.0246	0.0246		0.0246	0.0246	0.0000	855.0418	855.0418	0.2682		860.6744
Paving	0.0160					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1637**	**0.7251**	**6.6200**	**8.9700e-003**		**0.0246**	**0.0246**		**0.0246**	**0.0246**	**0.0000**	**855.0418**	**855.0418**	**0.2682**		**860.6744**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0828	0.1114	1.1651	3.7000e-003	0.3130	2.3900e-003	0.3154	0.0830	2.2200e-003	0.0852		266.8675	266.8675	0.0130		267.1398
Total	**0.0828**	**0.1114**	**1.1651**	**3.7000e-003**	**0.3130**	**2.3900e-003**	**0.3154**	**0.0830**	**2.2200e-003**	**0.0852**		**266.8675**	**266.8675**	**0.0130**		**267.1398**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329
Total	**27.2664**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.8329**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1167	0.1535	1.6161	5.8300e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		405.9917	405.9917	0.0187		406.3840
Total	**0.1167**	**0.1535**	**1.6161**	**5.8300e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**405.9917**	**405.9917**	**0.0187**		**406.3840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.8329
Total	**27.0915**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.8329**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1167	0.1535	1.6161	5.8300e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		405.9917	405.9917	0.0187		406.3840
Total	**0.1167**	**0.1535**	**1.6161**	**5.8300e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**405.9917**	**405.9917**	**0.0187**		**406.3840**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8017
Total	**27.2535**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.1445	1.5220	5.8300e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		399.7295	399.7295	0.0180		400.1064
Total	**0.1105**	**0.1445**	**1.5220**	**5.8300e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**399.7295**	**399.7295**	**0.0180**		**400.1064**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.0618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8017
Total	**27.0915**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8017**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1105	0.1445	1.5220	5.8300e-003	0.4918	3.7600e-003	0.4956	0.1304	3.4900e-003	0.1339		399.7295	399.7295	0.0180		400.1064
Total	**0.1105**	**0.1445**	**1.5220**	**5.8300e-003**	**0.4918**	**3.7600e-003**	**0.4956**	**0.1304**	**3.4900e-003**	**0.1339**		**399.7295**	**399.7295**	**0.0180**		**400.1064**

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9590	9.3955	10.4173	0.0147		0.5631	0.5631		0.5180	0.5180		1,419.7572	1,419.7572	0.4592		1,429.4000
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9658**	**9.3955**	**10.4173**	**0.0147**		**0.5631**	**0.5631**		**0.5180**	**0.5180**		**1,419.7572**	**1,419.7572**	**0.4592**		**1,429.4000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0132	0.0922	0.1953	4.3000e-004	0.0125	1.8700e-003	0.0144	3.5600e-003	1.7200e-003	5.2800e-003		40.0625	40.0625	3.1000e-004		40.0690
Worker	0.1273	0.1675	1.7630	6.3600e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8100e-003	0.1461		442.9000	442.9000	0.0204		443.3279
Total	**0.1405**	**0.2597**	**1.9583**	**6.7900e-003**	**0.5490**	**5.9700e-003**	**0.5550**	**0.1459**	**5.5300e-003**	**0.1514**		**482.9626**	**482.9626**	**0.0207**		**483.3970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1796	0.7781	11.0728	0.0147		0.0239	0.0239		0.0239	0.0239	0.0000	1,419.7572	1,419.7572	0.4592		1,429.4000
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1864**	**0.7781**	**11.0728**	**0.0147**		**0.0239**	**0.0239**		**0.0239**	**0.0239**	**0.0000**	**1,419.7572**	**1,419.7572**	**0.4592**		**1,429.4000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0132	0.0922	0.1953	4.3000e-004	0.0125	1.8700e-003	0.0144	3.5600e-003	1.7200e-003	5.2800e-003		40.0625	40.0625	3.1000e-004		40.0690
Worker	0.1273	0.1675	1.7630	6.3600e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8100e-003	0.1461		442.9000	442.9000	0.0204		443.3279
Total	**0.1405**	**0.2597**	**1.9583**	**6.7900e-003**	**0.5490**	**5.9700e-003**	**0.5550**	**0.1459**	**5.5300e-003**	**0.1514**		**482.9626**	**482.9626**	**0.0207**		**483.3970**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8997	8.7790	10.3989	0.0147		0.5057	0.5057		0.4652	0.4652		1,420.6911	1,420.6911	0.4595		1,430.3401
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9065**	**8.7790**	**10.3989**	**0.0147**		**0.5057**	**0.5057**		**0.4652**	**0.4652**		**1,420.6911**	**1,420.6911**	**0.4595**		**1,430.3401**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0123	0.0733	0.1880	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.8689	39.8689	2.8000e-004		39.8748
Worker	0.1206	0.1576	1.6603	6.3600e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		436.0686	436.0686	0.0196		436.4797
Total	**0.1329**	**0.2308**	**1.8483**	**6.7900e-003**	**0.5490**	**5.9500e-003**	**0.5550**	**0.1459**	**5.5000e-003**	**0.1514**		**475.9375**	**475.9375**	**0.0199**		**476.3545**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1796	0.7781	11.0728	0.0147		0.0239	0.0239		0.0239	0.0239	0.0000	1,420.6911	1,420.6911	0.4595		1,430.3401
Paving	6.8600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1864**	**0.7781**	**11.0728**	**0.0147**		**0.0239**	**0.0239**		**0.0239**	**0.0239**	**0.0000**	**1,420.6911**	**1,420.6911**	**0.4595**		**1,430.3401**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0123	0.0733	0.1880	4.3000e-004	0.0125	1.8500e-003	0.0144	3.5600e-003	1.7000e-003	5.2600e-003		39.8689	39.8689	2.8000e-004		39.8748
Worker	0.1206	0.1576	1.6603	6.3600e-003	0.5365	4.1000e-003	0.5406	0.1423	3.8000e-003	0.1461		436.0686	436.0686	0.0196		436.4797
Total	**0.1329**	**0.2308**	**1.8483**	**6.7900e-003**	**0.5490**	**5.9500e-003**	**0.5550**	**0.1459**	**5.5000e-003**	**0.1514**		**475.9375**	**475.9375**	**0.0199**		**476.3545**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

Phase M Construction Emissions

Harbor UCLA Master Plan- Phase M

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	55.60	1000sqft	1.28	55,600.00	0
Hospital	55.60	1000sqft	1.28	55,600.00	0
Parking Lot	128.00	Space	1.15	41,650.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2017
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Trips and VMT - Client Provided Informatrion

Demolition -

Grading -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	230.00	95.00
tblConstructionPhase	NumDays	20.00	52.00
tblConstructionPhase	NumDays	8.00	53.00
tblConstructionPhase	NumDays	18.00	87.00
tblConstructionPhase	NumDays	18.00	65.00
tblConstructionPhase	PhaseEndDate	8/10/2017	8/11/2017

tblConstructionPhase	PhaseStartDate	3/31/2017	4/1/2017
tblGrading	MaterialExported	0.00	8,744.00
tblGrading	MaterialImported	0.00	14,574.00
tblLandUse	LandUseSquareFeet	51,200.00	41,650.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	159.00	1,311.50
tblTripsAndVMT	HaulingTripNumber	2,915.00	3,886.30
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	25.00	27.00
tblTripsAndVMT	WorkerTripNumber	10.00	102.00
tblTripsAndVMT	WorkerTripNumber	15.00	252.00
tblTripsAndVMT	WorkerTripNumber	15.00	156.00
tblTripsAndVMT	WorkerTripNumber	53.00	150.00
tblTripsAndVMT	WorkerTripNumber	10.00	28.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.2553	52.8227	48.2439	0.1173	4.6867	2.1138	6.8005	1.1652	1.9446	3.1098	0.0000	11,304.9261	11,304.9261	1.0397	0.0000	11,326.7601
2017	3.3342	25.4470	23.9091	0.0477	1.8454	1.3575	3.2030	0.4927	1.2777	1.7704	0.0000	4,323.3325	4,323.3325	0.6158	0.0000	4,336.2633
Total	**8.5895**	**78.2696**	**72.1531**	**0.1650**	**6.5321**	**3.4713**	**10.0034**	**1.6579**	**3.2223**	**4.8802**	**0.0000**	**15,628.2587**	**15,628.2587**	**1.6555**	**0.0000**	**15,663.0234**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	2.6602	23.2154	49.2939	0.1173	4.3329	0.3844	4.7173	1.1256	0.3571	1.4827	0.0000	11,304.9261	11,304.9261	1.0397	0.0000	11,326.7601
2017	1.4821	5.5043	23.3555	0.0477	1.8454	0.2037	2.0491	0.4927	0.1999	0.6926	0.0000	4,323.3325	4,323.3325	0.6158	0.0000	4,336.2633
Total	**4.1423**	**28.7197**	**72.6494**	**0.1650**	**6.1783**	**0.5881**	**6.7664**	**1.6184**	**0.5570**	**2.1754**	**0.0000**	**15,628.2587**	**15,628.2587**	**1.6555**	**0.0000**	**15,663.0234**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**51.78**	**63.31**	**-0.69**	**0.00**	**5.42**	**83.06**	**32.36**	**2.38**	**82.71**	**55.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/6/2016	9/15/2016	5	52	
2	Grading	Grading	9/16/2016	11/29/2016	5	53	
3	Paving	Paving	11/30/2016	3/30/2017	5	87	
4	Building Construction	Building Construction	4/1/2017	8/11/2017	5	95	
5	Paving 2	Paving	8/12/2017	11/10/2017	5	65	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 26.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	0	6.00	130	0.36
Paving	Rollers	0	6.00	80	0.38

Paving	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 2	Cement and Mortar Mixers	0	6.00	9	0.56
Paving 2	Pavers	0	8.00	125	0.42
Paving 2	Paving Equipment	2	6.00	130	0.36
Paving 2	Rollers	0	6.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving 2	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	102.00	2.00	1,311.50	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	252.00	2.00	3,886.30	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	156.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	150.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6631	0.0000	0.6631	0.1004	0.0000	0.1004			0.0000			0.0000
Off-Road	2.0219	16.9299	13.3915	0.0209		1.1632	1.1632		1.1257	1.1257		2,058.9267	2,058.9267	0.3782		2,066.8694
Total	**2.0219**	**16.9299**	**13.3915**	**0.0209**	**0.6631**	**1.1632**	**1.8263**	**0.1004**	**1.1257**	**1.2261**		**2,058.9267**	**2,058.9267**	**0.3782**		**2,066.8694**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4349	6.9831	4.9094	0.0186	0.4394	0.1080	0.5474	0.1203	0.0994	0.2197		1,877.2862	1,877.2862	0.0135		1,877.5688
Vendor	0.0167	0.1737	0.1995	4.4000e-004	0.0125	2.8200e-003	0.0153	3.5600e-003	2.5900e-003	6.1500e-003		43.6396	43.6396	3.1000e-004		43.6462
Worker	0.4246	0.5311	6.6161	0.0145	1.1401	9.5300e-003	1.1497	0.3024	8.7600e-003	0.3111		1,213.3742	1,213.3742	0.0622		1,214.6805
Total	**0.8762**	**7.6878**	**11.7249**	**0.0335**	**1.5920**	**0.1204**	**1.7124**	**0.4263**	**0.1107**	**0.5370**		**3,134.3000**	**3,134.3000**	**0.0760**		**3,135.8954**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2586	0.0000	0.2586	0.0392	0.0000	0.0392			0.0000			0.0000
Off-Road	0.2283	0.9892	14.0766	0.0209		0.0304	0.0304		0.0304	0.0304	0.0000	2,058.9267	2,058.9267	0.3782		2,066.8694
Total	**0.2283**	**0.9892**	**14.0766**	**0.0209**	**0.2586**	**0.0304**	**0.2891**	**0.0392**	**0.0304**	**0.0696**	**0.0000**	**2,058.9267**	**2,058.9267**	**0.3782**		**2,066.8694**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4349	6.9831	4.9094	0.0186	0.4394	0.1080	0.5474	0.1203	0.0994	0.2197		1,877.2862	1,877.2862	0.0135		1,877.5688
Vendor	0.0167	0.1737	0.1995	4.4000e-004	0.0125	2.8200e-003	0.0153	3.5600e-003	2.5900e-003	6.1500e-003		43.6396	43.6396	3.1000e-004		43.6462
Worker	0.4246	0.5311	6.6161	0.0145	1.1401	9.5300e-003	1.1497	0.3024	8.7600e-003	0.3111		1,213.3742	1,213.3742	0.0622		1,214.6805
Total	**0.8762**	**7.6878**	**11.7249**	**0.0335**	**1.5920**	**0.1204**	**1.7124**	**0.4263**	**0.1107**	**0.5370**		**3,134.3000**	**3,134.3000**	**0.0760**		**3,135.8954**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5800	0.0000	0.5800	0.0648	0.0000	0.0648			0.0000			0.0000
Off-Road	2.9255	31.0389	17.4286	0.0270		1.7734	1.7734		1.6316	1.6316		2,806.7307	2,806.7307	0.8466		2,824.5095
Total	**2.9255**	**31.0389**	**17.4286**	**0.0270**	**0.5800**	**1.7734**	**2.3534**	**0.0648**	**1.6316**	**1.6963**		**2,806.7307**	**2,806.7307**	**0.8466**		**2,824.5095**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2640	20.2980	14.2703	0.0541	1.2774	0.3140	1.5914	0.3498	0.2888	0.6386		5,456.8078	5,456.8078	0.0391		5,457.6292
Vendor	0.0167	0.1737	0.1995	4.4000e-004	0.0125	2.8200e-003	0.0153	3.5600e-003	2.5900e-003	6.1500e-003		43.6396	43.6396	3.1000e-004		43.6462
Worker	1.0491	1.3120	16.3456	0.0357	2.8168	0.0235	2.8403	0.7470	0.0217	0.7687		2,997.7481	2,997.7481	0.1537		3,000.9753
Total	**2.3298**	**21.7838**	**30.8154**	**0.0903**	**4.1067**	**0.3404**	**4.4470**	**1.1004**	**0.3131**	**1.4134**		**8,498.1955**	**8,498.1955**	**0.1931**		**8,502.2506**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2262	0.0000	0.2262	0.0253	0.0000	0.0253			0.0000			0.0000
Off-Road	0.3304	1.4317	18.4786	0.0270		0.0441	0.0441		0.0441	0.0441	0.0000	2,806.7307	2,806.7307	0.8466		2,824.5095
Total	**0.3304**	**1.4317**	**18.4786**	**0.0270**	**0.2262**	**0.0441**	**0.2703**	**0.0253**	**0.0441**	**0.0693**	**0.0000**	**2,806.7307**	**2,806.7307**	**0.8466**		**2,824.5095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2640	20.2980	14.2703	0.0541	1.2774	0.3140	1.5914	0.3498	0.2888	0.6386		5,456.8078	5,456.8078	0.0391		5,457.6292
Vendor	0.0167	0.1737	0.1995	4.4000e-004	0.0125	2.8200e-003	0.0153	3.5600e-003	2.5900e-003	6.1500e-003		43.6396	43.6396	3.1000e-004		43.6462
Worker	1.0491	1.3120	16.3456	0.0357	2.8168	0.0235	2.8403	0.7470	0.0217	0.7687		2,997.7481	2,997.7481	0.1537		3,000.9753
Total	**2.3298**	**21.7838**	**30.8154**	**0.0903**	**4.1067**	**0.3404**	**4.4470**	**1.1004**	**0.3131**	**1.4134**		**8,498.1955**	**8,498.1955**	**0.1931**		**8,502.2506**

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4506	13.5740	10.1130	0.0135		1.0247	1.0247		0.9446	0.9446		1,370.4837	1,370.4837	0.3984		1,378.8501
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4852**	**13.5740**	**10.1130**	**0.0135**		**1.0247**	**1.0247**		**0.9446**	**0.9446**		**1,370.4837**	**1,370.4837**	**0.3984**		**1,378.8501**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6494	0.8122	10.1187	0.0221	1.7437	0.0146	1.7583	0.4624	0.0134	0.4758		1,855.7488	1,855.7488	0.0951		1,857.7466
Total	**0.6494**	**0.8122**	**10.1187**	**0.0221**	**1.7437**	**0.0146**	**1.7583**	**0.4624**	**0.0134**	**0.4758**		**1,855.7488**	**1,855.7488**	**0.0951**		**1,857.7466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2402	1.2121	9.8308	0.0135		0.0425	0.0425		0.0425	0.0425	0.0000	1,370.4837	1,370.4837	0.3984		1,378.8501
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2748**	**1.2121**	**9.8308**	**0.0135**		**0.0425**	**0.0425**		**0.0425**	**0.0425**	**0.0000**	**1,370.4837**	**1,370.4837**	**0.3984**		**1,378.8501**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6494	0.8122	10.1187	0.0221	1.7437	0.0146	1.7583	0.4624	0.0134	0.4758		1,855.7488	1,855.7488	0.0951		1,857.7466
Total	**0.6494**	**0.8122**	**10.1187**	**0.0221**	**1.7437**	**0.0146**	**1.7583**	**0.4624**	**0.0134**	**0.4758**		**1,855.7488**	**1,855.7488**	**0.0951**		**1,857.7466**

3.4 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3553	12.7282	10.0379	0.0135		0.9377	0.9377		0.8644	0.8644		1,348.8342	1,348.8342	0.3979		1,357.1908
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3899**	**12.7282**	**10.0379**	**0.0135**		**0.9377**	**0.9377**		**0.8644**	**0.8644**		**1,348.8342**	**1,348.8342**	**0.3979**		**1,357.1908**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5838	0.7335	9.1577	0.0221	1.7437	0.0140	1.7577	0.4624	0.0129	0.4754		1,784.7298	1,784.7298	0.0878		1,786.5735
Total	**0.5838**	**0.7335**	**9.1577**	**0.0221**	**1.7437**	**0.0140**	**1.7577**	**0.4624**	**0.0129**	**0.4754**		**1,784.7298**	**1,784.7298**	**0.0878**		**1,786.5735**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2401	1.2110	9.8308	0.0135		0.0423	0.0423		0.0423	0.0423	0.0000	1,348.8342	1,348.8342	0.3979		1,357.1908
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2747**	**1.2110**	**9.8308**	**0.0135**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**1,348.8342**	**1,348.8342**	**0.3979**		**1,357.1908**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5838	0.7335	9.1577	0.0221	1.7437	0.0140	1.7577	0.4624	0.0129	0.4754		1,784.7298	1,784.7298	0.0878		1,786.5735
Total	**0.5838**	**0.7335**	**9.1577**	**0.0221**	**1.7437**	**0.0140**	**1.7577**	**0.4624**	**0.0129**	**0.4754**		**1,784.7298**	**1,784.7298**	**0.0878**		**1,786.5735**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5661	22.6066	12.5707	0.0206		1.3101	1.3101		1.2340	1.2340		2,027.6449	2,027.6449	0.5272		2,038.7170
Total	**2.5661**	**22.6066**	**12.5707**	**0.0206**		**1.3101**	**1.3101**		**1.2340**	**1.2340**		**2,027.6449**	**2,027.6449**	**0.5272**		**2,038.7170**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2067	2.1351	2.5329	5.8700e-003	0.1688	0.0340	0.2028	0.0481	0.0313	0.0793		579.6013	579.6013	4.0900e-003		579.6872
Worker	0.5614	0.7053	8.8055	0.0212	1.6767	0.0135	1.6901	0.4447	0.0124	0.4571		1,716.0863	1,716.0863	0.0844		1,717.8591
Total	**0.7681**	**2.8403**	**11.3384**	**0.0271**	**1.8454**	**0.0475**	**1.8929**	**0.4927**	**0.0437**	**0.5364**		**2,295.6876**	**2,295.6876**	**0.0885**		**2,297.5463**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7140	2.6640	12.0171	0.0206		0.1562	0.1562		0.1562	0.1562	0.0000	2,027.6449	2,027.6449	0.5272		2,038.7170
Total	**0.7140**	**2.6640**	**12.0171**	**0.0206**		**0.1562**	**0.1562**		**0.1562**	**0.1562**	**0.0000**	**2,027.6449**	**2,027.6449**	**0.5272**		**2,038.7170**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2067	2.1351	2.5329	5.8700e-003	0.1688	0.0340	0.2028	0.0481	0.0313	0.0793		579.6013	579.6013	4.0900e-003		579.6872
Worker	0.5614	0.7053	8.8055	0.0212	1.6767	0.0135	1.6901	0.4447	0.0124	0.4571		1,716.0863	1,716.0863	0.0844		1,717.8591
Total	**0.7681**	**2.8403**	**11.3384**	**0.0271**	**1.8454**	**0.0475**	**1.8929**	**0.4927**	**0.0437**	**0.5364**		**2,295.6876**	**2,295.6876**	**0.0885**		**2,297.5463**

3.6 Paving 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2781	12.5797	8.9984	0.0126		0.8390	0.8390		0.7719	0.7719		1,287.9365	1,287.9365	0.3946		1,296.2236
Paving	0.0464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3244**	**12.5797**	**8.9984**	**0.0126**		**0.8390**	**0.8390**		**0.7719**	**0.7719**		**1,287.9365**	**1,287.9365**	**0.3946**		**1,296.2236**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1048	0.1317	1.6437	3.9600e-003	0.3130	2.5200e-003	0.3155	0.0830	2.3200e-003	0.0853		320.3361	320.3361	0.0158		320.6670
Total	**0.1048**	**0.1317**	**1.6437**	**3.9600e-003**	**0.3130**	**2.5200e-003**	**0.3155**	**0.0830**	**2.3200e-003**	**0.0853**		**320.3361**	**320.3361**	**0.0158**		**320.6670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1546	0.6699	9.5334	0.0126		0.0206	0.0206		0.0206	0.0206	0.0000	1,287.9365	1,287.9365	0.3946		1,296.2236
Paving	0.0464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2010**	**0.6699**	**9.5334**	**0.0126**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**1,287.9365**	**1,287.9365**	**0.3946**		**1,296.2236**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1048	0.1317	1.6437	3.9600e-003	0.3130	2.5200e-003	0.3155	0.0830	2.3200e-003	0.0853		320.3361	320.3361	0.0158		320.6670
Total	**0.1048**	**0.1317**	**1.6437**	**3.9600e-003**	**0.3130**	**2.5200e-003**	**0.3155**	**0.0830**	**2.3200e-003**	**0.0853**		**320.3361**	**320.3361**	**0.0158**		**320.6670**

Harbor UCLA Master Plan- Phase M

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	55.60	1000sqft	1.28	55,600.00	0
Hospital	55.60	1000sqft	1.28	55,600.00	0
Parking Lot	128.00	Space	1.15	41,650.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2017
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Off-road Equipment - Client Provided Informatrion

Trips and VMT - Client Provided Informatrion

Demolition -

Grading -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	230.00	95.00
tblConstructionPhase	NumDays	20.00	52.00
tblConstructionPhase	NumDays	8.00	53.00
tblConstructionPhase	NumDays	18.00	87.00
tblConstructionPhase	NumDays	18.00	65.00
tblConstructionPhase	PhaseEndDate	8/10/2017	8/11/2017

tblConstructionPhase	PhaseStartDate	3/31/2017	4/1/2017
tblGrading	MaterialExported	0.00	8,744.00
tblGrading	MaterialImported	0.00	14,574.00
tblLandUse	LandUseSquareFeet	51,200.00	41,650.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	159.00	1,311.50
tblTripsAndVMT	HaulingTripNumber	2,915.00	3,886.30
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	25.00	27.00
tblTripsAndVMT	WorkerTripNumber	10.00	102.00
tblTripsAndVMT	WorkerTripNumber	15.00	252.00
tblTripsAndVMT	WorkerTripNumber	15.00	156.00
tblTripsAndVMT	WorkerTripNumber	53.00	150.00
tblTripsAndVMT	WorkerTripNumber	10.00	28.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.3512	53.6913	49.0879	0.1149	4.6867	2.1146	6.8012	1.1652	1.9453	3.1105	0.0000	11,105.4050	11,105.4050	1.0402	0.0000	11,127.2500
2017	3.3645	25.5689	23.7278	0.0464	1.8454	1.3579	3.2033	0.4927	1.2780	1.7707	0.0000	4,211.6461	4,211.6461	0.6159	0.0000	4,224.5796
Total	**8.7158**	**79.2601**	**72.8156**	**0.1613**	**6.5321**	**3.4724**	**10.0045**	**1.6579**	**3.2233**	**4.8812**	**0.0000**	**15,317.0511**	**15,317.0511**	**1.6561**	**0.0000**	**15,351.8295**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	2.7561	24.0840	50.1378	0.1149	4.3329	0.3852	4.7181	1.1256	0.3578	1.4835	0.0000	11,105.4050	11,105.4050	1.0402	0.0000	11,127.2500
2017	1.5124	5.6262	23.1741	0.0464	1.8454	0.2040	2.0494	0.4927	0.2002	0.6929	0.0000	4,211.6461	4,211.6461	0.6159	0.0000	4,224.5795
Total	**4.2685**	**29.7102**	**73.3120**	**0.1613**	**6.1783**	**0.5892**	**6.7675**	**1.6184**	**0.5580**	**2.1764**	**0.0000**	**15,317.0511**	**15,317.0511**	**1.6561**	**0.0000**	**15,351.8295**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**51.03**	**62.52**	**-0.68**	**0.00**	**5.42**	**83.03**	**32.36**	**2.38**	**82.69**	**55.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/6/2016	9/15/2016	5	52	
2	Grading	Grading	9/16/2016	11/29/2016	5	53	
3	Paving	Paving	11/30/2016	3/30/2017	5	87	
4	Building Construction	Building Construction	4/1/2017	8/11/2017	5	95	
5	Paving 2	Paving	8/12/2017	11/10/2017	5	65	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 26.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	0	6.00	130	0.36
Paving	Rollers	0	6.00	80	0.38

Paving	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 2	Cement and Mortar Mixers	0	6.00	9	0.56
Paving 2	Pavers	0	8.00	125	0.42
Paving 2	Paving Equipment	2	6.00	130	0.36
Paving 2	Rollers	0	6.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving 2	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	102.00	2.00	1,311.50	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	252.00	2.00	3,886.30	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	156.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	150.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6631	0.0000	0.6631	0.1004	0.0000	0.1004			0.0000			0.0000
Off-Road	2.0219	16.9299	13.3915	0.0209		1.1632	1.1632		1.1257	1.1257		2,058.9267	2,058.9267	0.3782		2,066.8694
Total	**2.0219**	**16.9299**	**13.3915**	**0.0209**	**0.6631**	**1.1632**	**1.8263**	**0.1004**	**1.1257**	**1.2261**		**2,058.9267**	**2,058.9267**	**0.3782**		**2,066.8694**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4592	7.2359	5.6249	0.0186	0.4394	0.1083	0.5477	0.1203	0.0996	0.2199		1,872.8279	1,872.8279	0.0136		1,873.1142
Vendor	0.0183	0.1781	0.2395	4.3000e-004	0.0125	2.8500e-003	0.0154	3.5600e-003	2.6200e-003	6.1800e-003		43.2739	43.2739	3.2000e-004		43.2807
Worker	0.4341	0.5833	6.0996	0.0135	1.1401	9.5300e-003	1.1497	0.3024	8.7600e-003	0.3111		1,138.0091	1,138.0091	0.0622		1,139.3153
Total	**0.9117**	**7.9974**	**11.9640**	**0.0326**	**1.5920**	**0.1207**	**1.7127**	**0.4263**	**0.1110**	**0.5372**		**3,054.1108**	**3,054.1108**	**0.0762**		**3,055.7101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2586	0.0000	0.2586	0.0392	0.0000	0.0392			0.0000			0.0000
Off-Road	0.2283	0.9892	14.0766	0.0209		0.0304	0.0304		0.0304	0.0304	0.0000	2,058.9267	2,058.9267	0.3782		2,066.8694
Total	**0.2283**	**0.9892**	**14.0766**	**0.0209**	**0.2586**	**0.0304**	**0.2891**	**0.0392**	**0.0304**	**0.0696**	**0.0000**	**2,058.9267**	**2,058.9267**	**0.3782**		**2,066.8694**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4592	7.2359	5.6249	0.0186	0.4394	0.1083	0.5477	0.1203	0.0996	0.2199		1,872.8279	1,872.8279	0.0136		1,873.1142
Vendor	0.0183	0.1781	0.2395	4.3000e-004	0.0125	2.8500e-003	0.0154	3.5600e-003	2.6200e-003	6.1800e-003		43.2739	43.2739	3.2000e-004		43.2807
Worker	0.4341	0.5833	6.0996	0.0135	1.1401	9.5300e-003	1.1497	0.3024	8.7600e-003	0.3111		1,138.0091	1,138.0091	0.0622		1,139.3153
Total	**0.9117**	**7.9974**	**11.9640**	**0.0326**	**1.5920**	**0.1207**	**1.7127**	**0.4263**	**0.1110**	**0.5372**		**3,054.1108**	**3,054.1108**	**0.0762**		**3,055.7101**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5800	0.0000	0.5800	0.0648	0.0000	0.0648			0.0000			0.0000
Off-Road	2.9255	31.0389	17.4286	0.0270		1.7734	1.7734		1.6316	1.6316		2,806.7307	2,806.7307	0.8466		2,824.5095
Total	**2.9255**	**31.0389**	**17.4286**	**0.0270**	**0.5800**	**1.7734**	**2.3534**	**0.0648**	**1.6316**	**1.6963**		**2,806.7307**	**2,806.7307**	**0.8466**		**2,824.5095**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3349	21.0331	16.3502	0.0540	1.2774	0.3147	1.5921	0.3498	0.2895	0.6393		5,443.8486	5,443.8486	0.0396		5,444.6809
Vendor	0.0183	0.1781	0.2395	4.3000e-004	0.0125	2.8500e-003	0.0154	3.5600e-003	2.6200e-003	6.1800e-003		43.2739	43.2739	3.2000e-004		43.2807
Worker	1.0725	1.4412	15.0696	0.0335	2.8168	0.0235	2.8403	0.7470	0.0217	0.7687		2,811.5518	2,811.5518	0.1537		2,814.7790
Total	**2.4257**	**22.6523**	**31.6593**	**0.0879**	**4.1067**	**0.3411**	**4.4478**	**1.1004**	**0.3138**	**1.4141**		**8,298.6743**	**8,298.6743**	**0.1936**		**8,302.7405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2262	0.0000	0.2262	0.0253	0.0000	0.0253			0.0000			0.0000
Off-Road	0.3304	1.4317	18.4786	0.0270		0.0441	0.0441		0.0441	0.0441	0.0000	2,806.7307	2,806.7307	0.8466		2,824.5095
Total	**0.3304**	**1.4317**	**18.4786**	**0.0270**	**0.2262**	**0.0441**	**0.2703**	**0.0253**	**0.0441**	**0.0693**	**0.0000**	**2,806.7307**	**2,806.7307**	**0.8466**		**2,824.5095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3349	21.0331	16.3502	0.0540	1.2774	0.3147	1.5921	0.3498	0.2895	0.6393		5,443.8486	5,443.8486	0.0396		5,444.6809
Vendor	0.0183	0.1781	0.2395	4.3000e-004	0.0125	2.8500e-003	0.0154	3.5600e-003	2.6200e-003	6.1800e-003		43.2739	43.2739	3.2000e-004		43.2807
Worker	1.0725	1.4412	15.0696	0.0335	2.8168	0.0235	2.8403	0.7470	0.0217	0.7687		2,811.5518	2,811.5518	0.1537		2,814.7790
Total	**2.4257**	**22.6523**	**31.6593**	**0.0879**	**4.1067**	**0.3411**	**4.4478**	**1.1004**	**0.3138**	**1.4141**		**8,298.6743**	**8,298.6743**	**0.1936**		**8,302.7405**

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4506	13.5740	10.1130	0.0135		1.0247	1.0247		0.9446	0.9446		1,370.4837	1,370.4837	0.3984		1,378.8501
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4852**	**13.5740**	**10.1130**	**0.0135**		**1.0247**	**1.0247**		**0.9446**	**0.9446**		**1,370.4837**	**1,370.4837**	**0.3984**		**1,378.8501**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6639	0.8922	9.3288	0.0207	1.7437	0.0146	1.7583	0.4624	0.0134	0.4758		1,740.4845	1,740.4845	0.0951		1,742.4822
Total	**0.6639**	**0.8922**	**9.3288**	**0.0207**	**1.7437**	**0.0146**	**1.7583**	**0.4624**	**0.0134**	**0.4758**		**1,740.4845**	**1,740.4845**	**0.0951**		**1,742.4822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2402	1.2121	9.8308	0.0135		0.0425	0.0425		0.0425	0.0425	0.0000	1,370.4837	1,370.4837	0.3984		1,378.8501
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2748**	**1.2121**	**9.8308**	**0.0135**		**0.0425**	**0.0425**		**0.0425**	**0.0425**	**0.0000**	**1,370.4837**	**1,370.4837**	**0.3984**		**1,378.8501**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6639	0.8922	9.3288	0.0207	1.7437	0.0146	1.7583	0.4624	0.0134	0.4758		1,740.4845	1,740.4845	0.0951		1,742.4822
Total	**0.6639**	**0.8922**	**9.3288**	**0.0207**	**1.7437**	**0.0146**	**1.7583**	**0.4624**	**0.0134**	**0.4758**		**1,740.4845**	**1,740.4845**	**0.0951**		**1,742.4822**

3.4 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3553	12.7282	10.0379	0.0135		0.9377	0.9377		0.8644	0.8644		1,348.8342	1,348.8342	0.3979		1,357.1908
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3899**	**12.7282**	**10.0379**	**0.0135**		**0.9377**	**0.9377**		**0.8644**	**0.8644**		**1,348.8342**	**1,348.8342**	**0.3979**		**1,357.1908**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5955	0.8055	8.4118	0.0207	1.7437	0.0140	1.7577	0.4624	0.0129	0.4754		1,673.6396	1,673.6396	0.0878		1,675.4833
Total	**0.5955**	**0.8055**	**8.4118**	**0.0207**	**1.7437**	**0.0140**	**1.7577**	**0.4624**	**0.0129**	**0.4754**		**1,673.6396**	**1,673.6396**	**0.0878**		**1,675.4833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2401	1.2110	9.8308	0.0135		0.0423	0.0423		0.0423	0.0423	0.0000	1,348.8342	1,348.8342	0.3979		1,357.1908
Paving	0.0346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2747**	**1.2110**	**9.8308**	**0.0135**		**0.0423**	**0.0423**		**0.0423**	**0.0423**	**0.0000**	**1,348.8342**	**1,348.8342**	**0.3979**		**1,357.1908**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5955	0.8055	8.4118	0.0207	1.7437	0.0140	1.7577	0.4624	0.0129	0.4754		1,673.6396	1,673.6396	0.0878		1,675.4833
Total	**0.5955**	**0.8055**	**8.4118**	**0.0207**	**1.7437**	**0.0140**	**1.7577**	**0.4624**	**0.0129**	**0.4754**		**1,673.6396**	**1,673.6396**	**0.0878**		**1,675.4833**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5661	22.6066	12.5707	0.0206		1.3101	1.3101		1.2340	1.2340		2,027.6449	2,027.6449	0.5272		2,038.7170
Total	**2.5661**	**22.6066**	**12.5707**	**0.0206**		**1.3101**	**1.3101**		**1.2340**	**1.2340**		**2,027.6449**	**2,027.6449**	**0.5272**		**2,038.7170**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2258	2.1877	3.0688	5.8300e-003	0.1688	0.0343	0.2031	0.0481	0.0316	0.0796		574.7325	574.7325	4.2100e-003		574.8210
Worker	0.5726	0.7745	8.0883	0.0199	1.6767	0.0135	1.6901	0.4447	0.0124	0.4571		1,609.2688	1,609.2688	0.0844		1,611.0416
Total	**0.7984**	**2.9622**	**11.1570**	**0.0257**	**1.8454**	**0.0478**	**1.8932**	**0.4927**	**0.0440**	**0.5367**		**2,184.0013**	**2,184.0013**	**0.0886**		**2,185.8626**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7140	2.6640	12.0171	0.0206		0.1562	0.1562		0.1562	0.1562	0.0000	2,027.6449	2,027.6449	0.5272		2,038.7170
Total	**0.7140**	**2.6640**	**12.0171**	**0.0206**		**0.1562**	**0.1562**		**0.1562**	**0.1562**	**0.0000**	**2,027.6449**	**2,027.6449**	**0.5272**		**2,038.7170**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2258	2.1877	3.0688	5.8300e-003	0.1688	0.0343	0.2031	0.0481	0.0316	0.0796		574.7325	574.7325	4.2100e-003		574.8210
Worker	0.5726	0.7745	8.0883	0.0199	1.6767	0.0135	1.6901	0.4447	0.0124	0.4571		1,609.2688	1,609.2688	0.0844		1,611.0416
Total	**0.7984**	**2.9622**	**11.1570**	**0.0257**	**1.8454**	**0.0478**	**1.8932**	**0.4927**	**0.0440**	**0.5367**		**2,184.0013**	**2,184.0013**	**0.0886**		**2,185.8626**

3.6 Paving 2 - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2781	12.5797	8.9984	0.0126		0.8390	0.8390		0.7719	0.7719		1,287.9365	1,287.9365	0.3946		1,296.2236
Paving	0.0464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3244**	**12.5797**	**8.9984**	**0.0126**		**0.8390**	**0.8390**		**0.7719**	**0.7719**		**1,287.9365**	**1,287.9365**	**0.3946**		**1,296.2236**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.1446	1.5098	3.7100e-003	0.3130	2.5200e-003	0.3155	0.0830	2.3200e-003	0.0853		300.3968	300.3968	0.0158		300.7278
Total	**0.1069**	**0.1446**	**1.5098**	**3.7100e-003**	**0.3130**	**2.5200e-003**	**0.3155**	**0.0830**	**2.3200e-003**	**0.0853**		**300.3968**	**300.3968**	**0.0158**		**300.7278**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1546	0.6699	9.5334	0.0126		0.0206	0.0206		0.0206	0.0206	0.0000	1,287.9365	1,287.9365	0.3946		1,296.2236
Paving	0.0464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2010**	**0.6699**	**9.5334**	**0.0126**		**0.0206**	**0.0206**		**0.0206**	**0.0206**	**0.0000**	**1,287.9365**	**1,287.9365**	**0.3946**		**1,296.2236**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.1446	1.5098	3.7100e-003	0.3130	2.5200e-003	0.3155	0.0830	2.3200e-003	0.0853		300.3968	300.3968	0.0158		300.7278
Total	**0.1069**	**0.1446**	**1.5098**	**3.7100e-003**	**0.3130**	**2.5200e-003**	**0.3155**	**0.0830**	**2.3200e-003**	**0.0853**		**300.3968**	**300.3968**	**0.0158**		**300.7278**

Appendix B. 2

Construction Emissions – CalEEMod Output (Summer and Winter)

LA Biomed Construction Emissions

Harbor UCLA Master Plan- LA BIOMED

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	225.00	1000sqft	5.17	225,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2030
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

See AQ Construction Modal Inputs

Construction Off-road Equipment Mitigation - Tier 4 Equipment

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	NumDays	230.00	183.00
tblConstructionPhase	NumDays	20.00	77.00
tblConstructionPhase	NumDays	20.00	108.00
tblConstructionPhase	PhaseEndDate	6/30/2023	12/30/2029
tblConstructionPhase	PhaseEndDate	5/29/2030	12/30/2029
tblConstructionPhase	PhaseStartDate	12/31/2022	7/1/2029

tblConstructionPhase	PhaseStartDate	12/31/2029	8/1/2029
tblGrading	AcresOfGrading	38.50	10.00
tblProjectCharacteristics	OperationalYear	2014	2030

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1490	20.7357	22.1645	0.0450	6.3275	1.0438	7.3713	3.3696	0.9603	4.3299	0.0000	4,000.2520	4,000.2520	0.9381	0.0000	4,019.9516
2029	41.2336	13.8226	20.7804	0.0450	1.0362	0.5639	1.6001	0.2794	0.5298	0.8091	0.0000	3,950.4406	3,950.4406	0.7239	0.0000	3,965.6431
2030	1.6230	9.3192	20.7731	0.0490	1.0362	0.1866	1.2228	0.2794	0.1835	0.4629	0.0000	4,285.1637	4,285.1637	0.1451	0.0000	4,288.2101
Total	**45.0056**	**43.8774**	**63.7180**	**0.1390**	**8.3999**	**1.7943**	**10.1942**	**3.9283**	**1.6736**	**5.6019**	**0.0000**	**12,235.8563**	**12,235.8563**	**1.8071**	**0.0000**	**12,273.8048**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.8573	4.3555	23.3474	0.0450	2.5700	0.1116	2.6196	1.3413	0.1084	1.3908	0.0000	4,000.2520	4,000.2520	0.9381	0.0000	4,019.9516
2029	40.4696	3.8108	22.2171	0.0450	1.0362	0.0985	1.1347	0.2794	0.0954	0.3748	0.0000	3,950.4406	3,950.4406	0.7239	0.0000	3,965.6431
2030	0.7055	3.7257	22.1052	0.0490	1.0362	0.0863	1.1225	0.2794	0.0833	0.3626	0.0000	4,285.1637	4,285.1637	0.1451	0.0000	4,288.2101
Total	**42.0324**	**11.8920**	**67.6697**	**0.1390**	**4.6424**	**0.2964**	**4.8769**	**1.9000**	**0.2871**	**2.1282**	**0.0000**	**12,235.8563**	**12,235.8563**	**1.8071**	**0.0000**	**12,273.8048**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.61**	**72.90**	**-6.20**	**0.00**	**44.73**	**83.48**	**52.16**	**51.63**	**82.85**	**62.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/2/2022	4/19/2022	5	77	
2	Building Construction	Building Construction	4/20/2022	12/30/2022	5	183	
3	Architectural Coating	Architectural Coating	7/1/2029	12/30/2029	5	130	
4	Paving	Paving	8/1/2029	12/30/2029	5	108	
5	Building Construction 2	Building Construction	12/31/2029	11/15/2030	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 337,500; Non-Residential Outdoor: 112,500 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction 2	Cranes	1	7.00	226	0.29
Building Construction 2	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction 2	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	1	8.00	46	0.45
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction 2	9	72.00	37.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	37.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1598	0.0000	6.1598	3.3251	0.0000	3.3251			0.0000			0.0000
Off-Road	2.1098	20.6879	21.4529	0.0297		1.0426	1.0426		0.9592	0.9592		2,880.8001	2,880.8001	0.9317		2,900.3660
Total	**2.1098**	**20.6879**	**21.4529**	**0.0297**	**6.1598**	**1.0426**	**7.2024**	**3.3251**	**0.9592**	**4.2843**		**2,880.8001**	**2,880.8001**	**0.9317**		**2,900.3660**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0391	0.0478	0.6073	2.1200e-003	0.1677	1.2800e-003	0.1690	0.0445	1.1900e-003	0.0457		147.7086	147.7086	6.3700e-003		147.8423
Total	**0.0391**	**0.0478**	**0.6073**	**2.1200e-003**	**0.1677**	**1.2800e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**147.7086**	**147.7086**	**6.3700e-003**		**147.8423**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4023	0.0000	2.4023	1.2968	0.0000	1.2968			0.0000			0.0000
Off-Road	0.3625	1.5709	19.6566	0.0297		0.0483	0.0483		0.0483	0.0483	0.0000	2,880.8001	2,880.8001	0.9317		2,900.3660
Total	**0.3625**	**1.5709**	**19.6566**	**0.0297**	**2.4023**	**0.0483**	**2.4507**	**1.2968**	**0.0483**	**1.3451**	**0.0000**	**2,880.8001**	**2,880.8001**	**0.9317**		**2,900.3660**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0391	0.0478	0.6073	2.1200e-003	0.1677	1.2800e-003	0.1690	0.0445	1.1900e-003	0.0457		147.7086	147.7086	6.3700e-003		147.8423
Total	**0.0391**	**0.0478**	**0.6073**	**2.1200e-003**	**0.1677**	**1.2800e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**147.7086**	**147.7086**	**6.3700e-003**		**147.8423**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**		**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2265	1.6679	2.9221	7.9800e-003	0.2314	0.0343	0.2657	0.0659	0.0316	0.0975		747.5010	747.5010	5.5000e-003		747.6165
Worker	0.1879	0.2292	2.9148	0.0102	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		709.0013	709.0013	0.0306		709.6432
Total	**0.4144**	**1.8971**	**5.8369**	**0.0182**	**1.0362**	**0.0405**	**1.0766**	**0.2793**	**0.0373**	**0.3166**		**1,456.5023**	**1,456.5023**	**0.0361**		**1,457.2597**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4429	2.4584	17.5105	0.0268		0.0711	0.0711		0.0711	0.0711	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**0.4429**	**2.4584**	**17.5105**	**0.0268**		**0.0711**	**0.0711**		**0.0711**	**0.0711**	**0.0000**	**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2265	1.6679	2.9221	7.9800e-003	0.2314	0.0343	0.2657	0.0659	0.0316	0.0975		747.5010	747.5010	5.5000e-003		747.6165
Worker	0.1879	0.2292	2.9148	0.0102	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		709.0013	709.0013	0.0306		709.6432
Total	**0.4144**	**1.8971**	**5.8369**	**0.0182**	**1.0362**	**0.0405**	**1.0766**	**0.2793**	**0.0373**	**0.3166**		**1,456.5023**	**1,456.5023**	**0.0361**		**1,457.2597**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	40.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**40.2814**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0265	0.0320	0.4182	1.9900e-003	0.1565	1.2300e-003	0.1577	0.0415	1.1400e-003	0.0426		128.0861	128.0861	4.8500e-003		128.1881
Total	**0.0265**	**0.0320**	**0.4182**	**1.9900e-003**	**0.1565**	**1.2300e-003**	**0.1577**	**0.0415**	**1.1400e-003**	**0.0426**		**128.0861**	**128.0861**	**4.8500e-003**		**128.1881**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	40.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**40.1403**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0265	0.0320	0.4182	1.9900e-003	0.1565	1.2300e-003	0.1577	0.0415	1.1400e-003	0.0426		128.0861	128.0861	4.8500e-003		128.1881
Total	**0.0265**	**0.0320**	**0.4182**	**1.9900e-003**	**0.1565**	**1.2300e-003**	**0.1577**	**0.0415**	**1.1400e-003**	**0.0426**		**128.0861**	**128.0861**	**4.8500e-003**		**128.1881**

3.5 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8973**	**8.4215**	**14.2781**	**0.0223**		**0.4109**	**0.4109**		**0.3781**	**0.3781**		**2,159.7967**	**2,159.7967**	**0.6985**		**2,174.4656**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0284	0.0343	0.4481	2.1300e-003	0.1677	1.3200e-003	0.1690	0.0445	1.2300e-003	0.0457		137.2352	137.2352	5.2000e-003		137.3443
Total	**0.0284**	**0.0343**	**0.4481**	**2.1300e-003**	**0.1677**	**1.3200e-003**	**0.1690**	**0.0445**	**1.2300e-003**	**0.0457**		**137.2352**	**137.2352**	**5.2000e-003**		**137.3443**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	1.1895	16.9276	0.0223		0.0366	0.0366		0.0366	0.0366	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.1895**	**16.9276**	**0.0223**		**0.0366**	**0.0366**		**0.0366**	**0.0366**	**0.0000**	**2,159.7967**	**2,159.7967**	**0.6985**		**2,174.4656**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0284	0.0343	0.4481	2.1300e-003	0.1677	1.3200e-003	0.1690	0.0445	1.2300e-003	0.0457		137.2352	137.2352	5.2000e-003		137.3443
Total	**0.0284**	**0.0343**	**0.4481**	**2.1300e-003**	**0.1677**	**1.3200e-003**	**0.1690**	**0.0445**	**1.2300e-003**	**0.0457**		**137.2352**	**137.2352**	**5.2000e-003**		**137.3443**

3.6 Building Construction 2 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1906	1.2483	2.5778	7.9600e-003	0.2314	0.0326	0.2640	0.0659	0.0300	0.0959		745.8214	745.8214	4.8800e-003		745.9238
Worker	0.1361	0.1646	2.1508	0.0102	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		658.7287	658.7287	0.0250		659.2529
Total	**0.3267**	**1.4129**	**4.7287**	**0.0182**	**1.0362**	**0.0389**	**1.0751**	**0.2794**	**0.0359**	**0.3152**		**1,404.5501**	**1,404.5501**	**0.0298**		**1,405.1766**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4145	2.3979	17.4884	0.0269		0.0596	0.0596		0.0596	0.0596	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**0.4145**	**2.3979**	**17.4884**	**0.0269**		**0.0596**	**0.0596**		**0.0596**	**0.0596**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1906	1.2483	2.5778	7.9600e-003	0.2314	0.0326	0.2640	0.0659	0.0300	0.0959		745.8214	745.8214	4.8800e-003		745.9238
Worker	0.1361	0.1646	2.1508	0.0102	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		658.7287	658.7287	0.0250		659.2529
Total	**0.3267**	**1.4129**	**4.7287**	**0.0182**	**1.0362**	**0.0389**	**1.0751**	**0.2794**	**0.0359**	**0.3152**		**1,404.5501**	**1,404.5501**	**0.0298**		**1,405.1766**

3.6 Building Construction 2 - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1886	1.2431	2.5599	7.9600e-003	0.2314	0.0326	0.2640	0.0659	0.0300	0.0959		745.8189	745.8189	4.8800e-003		745.9214
Worker	0.1303	0.1582	2.0819	0.0102	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		654.5149	654.5149	0.0244		655.0270
Total	**0.3189**	**1.4013**	**4.6418**	**0.0182**	**1.0362**	**0.0390**	**1.0752**	**0.2794**	**0.0359**	**0.3153**		**1,400.3337**	**1,400.3337**	**0.0293**		**1,400.9484**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3865	2.3244	17.4634	0.0308		0.0474	0.0474		0.0474	0.0474	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**0.3865**	**2.3244**	**17.4634**	**0.0308**		**0.0474**	**0.0474**		**0.0474**	**0.0474**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1886	1.2431	2.5599	7.9600e-003	0.2314	0.0326	0.2640	0.0659	0.0300	0.0959		745.8189	745.8189	4.8800e-003		745.9214
Worker	0.1303	0.1582	2.0819	0.0102	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		654.5149	654.5149	0.0244		655.0270
Total	**0.3189**	**1.4013**	**4.6418**	**0.0182**	**1.0362**	**0.0390**	**1.0752**	**0.2794**	**0.0359**	**0.3153**		**1,400.3337**	**1,400.3337**	**0.0293**		**1,400.9484**

Harbor UCLA Master Plan- LA BIOMED

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	225.00	1000sqft	5.17	225,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2030
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

See AQ Construction Modal Inputs

Construction Off-road Equipment Mitigation - Tier 4 Equipment

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	NumDays	230.00	183.00
tblConstructionPhase	NumDays	20.00	77.00
tblConstructionPhase	NumDays	20.00	108.00
tblConstructionPhase	PhaseEndDate	6/30/2023	12/30/2029
tblConstructionPhase	PhaseEndDate	5/29/2030	12/30/2029
tblConstructionPhase	PhaseStartDate	12/31/2022	7/1/2029

tblConstructionPhase	PhaseStartDate	12/31/2029	8/1/2029
tblGrading	AcresOfGrading	38.50	10.00
tblProjectCharacteristics	OperationalYear	2014	2030

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1496	20.7402	22.5845	0.0443	6.3275	1.0438	7.3713	3.3696	0.9603	4.3299	0.0000	3,949.2565	3,949.2565	0.9381	0.0000	3,968.9562
2029	41.2345	13.8588	21.1752	0.0443	1.0362	0.5642	1.6004	0.2794	0.5300	0.8093	0.0000	3,901.9202	3,901.9202	0.7239	0.0000	3,917.1227
2030	1.6398	9.3545	21.1682	0.0483	1.0362	0.1868	1.2230	0.2794	0.1837	0.4631	0.0000	4,236.8262	4,236.8262	0.1453	0.0000	4,239.8770
Total	**45.0239**	**43.9535**	**64.9279**	**0.1369**	**8.3999**	**1.7948**	**10.1947**	**3.9283**	**1.6741**	**5.6023**	**0.0000**	**12,088.0029**	**12,088.0029**	**1.8073**	**0.0000**	**12,125.9558**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.8785	4.4155	23.7674	0.0443	2.5700	0.1118	2.6196	1.3413	0.1086	1.3908	0.0000	3,949.2565	3,949.2565	0.9381	0.0000	3,968.9562
2029	40.4705	3.8470	22.6118	0.0443	1.0362	0.0988	1.1350	0.2794	0.0957	0.3750	0.0000	3,901.9202	3,901.9202	0.7239	0.0000	3,917.1226
2030	0.7222	3.7609	22.5003	0.0483	1.0362	0.0866	1.1228	0.2794	0.0835	0.3629	0.0000	4,236.8262	4,236.8262	0.1453	0.0000	4,239.8770
Total	**42.0712**	**12.0235**	**68.8796**	**0.1369**	**4.6424**	**0.2972**	**4.8774**	**1.9000**	**0.2878**	**2.1287**	**0.0000**	**12,088.0029**	**12,088.0029**	**1.8073**	**0.0000**	**12,125.9558**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.56**	**72.64**	**-6.09**	**0.00**	**44.73**	**83.44**	**52.16**	**51.63**	**82.81**	**62.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/2/2022	4/19/2022	5	77	
2	Building Construction	Building Construction	4/20/2022	12/30/2022	5	183	
3	Architectural Coating	Architectural Coating	7/1/2029	12/30/2029	5	130	
4	Paving	Paving	8/1/2029	12/30/2029	5	108	
5	Building Construction 2	Building Construction	12/31/2029	11/15/2030	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 337,500; Non-Residential Outdoor: 112,500 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction 2	Cranes	1	7.00	226	0.29
Building Construction 2	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction 2	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	1	8.00	46	0.45
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction 2	9	72.00	37.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	37.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1598	0.0000	6.1598	3.3251	0.0000	3.3251			0.0000			0.0000
Off-Road	2.1098	20.6879	21.4529	0.0297		1.0426	1.0426		0.9592	0.9592		2,880.8001	2,880.8001	0.9317		2,900.3660
Total	**2.1098**	**20.6879**	**21.4529**	**0.0297**	**6.1598**	**1.0426**	**7.2024**	**3.3251**	**0.9592**	**4.2843**		**2,880.8001**	**2,880.8001**	**0.9317**		**2,900.3660**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0398	0.0523	0.5510	1.9900e-003	0.1677	1.2800e-003	0.1690	0.0445	1.1900e-003	0.0457		138.4063	138.4063	6.3700e-003		138.5400
Total	**0.0398**	**0.0523**	**0.5510**	**1.9900e-003**	**0.1677**	**1.2800e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**138.4063**	**138.4063**	**6.3700e-003**		**138.5400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4023	0.0000	2.4023	1.2968	0.0000	1.2968			0.0000			0.0000
Off-Road	0.3625	1.5709	19.6566	0.0297		0.0483	0.0483		0.0483	0.0483	0.0000	2,880.8001	2,880.8001	0.9317		2,900.3660
Total	**0.3625**	**1.5709**	**19.6566**	**0.0297**	**2.4023**	**0.0483**	**2.4507**	**1.2968**	**0.0483**	**1.3451**	**0.0000**	**2,880.8001**	**2,880.8001**	**0.9317**		**2,900.3660**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0398	0.0523	0.5510	1.9900e-003	0.1677	1.2800e-003	0.1690	0.0445	1.1900e-003	0.0457		138.4063	138.4063	6.3700e-003		138.5400
Total	**0.0398**	**0.0523**	**0.5510**	**1.9900e-003**	**0.1677**	**1.2800e-003**	**0.1690**	**0.0445**	**1.1900e-003**	**0.0457**		**138.4063**	**138.4063**	**6.3700e-003**		**138.5400**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**		**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2447	1.7060	3.6124	7.9200e-003	0.2314	0.0346	0.2660	0.0659	0.0318	0.0977		741.1568	741.1568	5.7100e-003		741.2767
Worker	0.1909	0.2512	2.6446	9.5400e-003	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		664.3500	664.3500	0.0306		664.9919
Total	**0.4356**	**1.9572**	**6.2569**	**0.0175**	**1.0362**	**0.0407**	**1.0769**	**0.2793**	**0.0375**	**0.3169**		**1,405.5069**	**1,405.5069**	**0.0363**		**1,406.2686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4429	2.4584	17.5105	0.0268		0.0711	0.0711		0.0711	0.0711	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**0.4429**	**2.4584**	**17.5105**	**0.0268**		**0.0711**	**0.0711**		**0.0711**	**0.0711**	**0.0000**	**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2447	1.7060	3.6124	7.9200e-003	0.2314	0.0346	0.2660	0.0659	0.0318	0.0977		741.1568	741.1568	5.7100e-003		741.2767
Worker	0.1909	0.2512	2.6446	9.5400e-003	0.8048	6.1500e-003	0.8109	0.2134	5.7100e-003	0.2191		664.3500	664.3500	0.0306		664.9919
Total	**0.4356**	**1.9572**	**6.2569**	**0.0175**	**1.0362**	**0.0407**	**1.0769**	**0.2793**	**0.0375**	**0.3169**		**1,405.5069**	**1,405.5069**	**0.0363**		**1,406.2686**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	40.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.7705
Total	**40.2814**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.7705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0269	0.0349	0.3752	1.8600e-003	0.1565	1.2300e-003	0.1577	0.0415	1.1400e-003	0.0426		119.8860	119.8860	4.8500e-003		119.9879
Total	**0.0269**	**0.0349**	**0.3752**	**1.8600e-003**	**0.1565**	**1.2300e-003**	**0.1577**	**0.0415**	**1.1400e-003**	**0.0426**		**119.8860**	**119.8860**	**4.8500e-003**		**119.9879**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	40.1106					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.7705
Total	**40.1403**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0269	0.0349	0.3752	1.8600e-003	0.1565	1.2300e-003	0.1577	0.0415	1.1400e-003	0.0426		119.8860	119.8860	4.8500e-003		119.9879
Total	**0.0269**	**0.0349**	**0.3752**	**1.8600e-003**	**0.1565**	**1.2300e-003**	**0.1577**	**0.0415**	**1.1400e-003**	**0.0426**		**119.8860**	**119.8860**	**4.8500e-003**		**119.9879**

3.5 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8973	8.4215	14.2781	0.0223		0.4109	0.4109		0.3781	0.3781		2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8973**	**8.4215**	**14.2781**	**0.0223**		**0.4109**	**0.4109**		**0.3781**	**0.3781**		**2,159.7967**	**2,159.7967**	**0.6985**		**2,174.4656**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0288	0.0374	0.4020	1.9900e-003	0.1677	1.3200e-003	0.1690	0.0445	1.2300e-003	0.0457		128.4493	128.4493	5.2000e-003		128.5585
Total	**0.0288**	**0.0374**	**0.4020**	**1.9900e-003**	**0.1677**	**1.3200e-003**	**0.1690**	**0.0445**	**1.2300e-003**	**0.0457**		**128.4493**	**128.4493**	**5.2000e-003**		**128.5585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2745	1.1895	16.9276	0.0223		0.0366	0.0366		0.0366	0.0366	0.0000	2,159.7967	2,159.7967	0.6985		2,174.4656
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2745**	**1.1895**	**16.9276**	**0.0223**		**0.0366**	**0.0366**		**0.0366**	**0.0366**	**0.0000**	**2,159.7967**	**2,159.7967**	**0.6985**		**2,174.4656**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0288	0.0374	0.4020	1.9900e-003	0.1677	1.3200e-003	0.1690	0.0445	1.2300e-003	0.0457		128.4493	128.4493	5.2000e-003		128.5585
Total	**0.0288**	**0.0374**	**0.4020**	**1.9900e-003**	**0.1677**	**1.3200e-003**	**0.1690**	**0.0445**	**1.2300e-003**	**0.0457**		**128.4493**	**128.4493**	**5.2000e-003**		**128.5585**

3.6 Building Construction 2 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2053	1.2694	3.1938	7.9000e-003	0.2314	0.0328	0.2642	0.0659	0.0302	0.0961		739.4731	739.4731	5.0800e-003		739.5798
Worker	0.1383	0.1797	1.9296	9.5700e-003	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		616.5565	616.5565	0.0250		617.0806
Total	**0.3436**	**1.4491**	**5.1234**	**0.0175**	**1.0362**	**0.0392**	**1.0754**	**0.2794**	**0.0361**	**0.3154**		**1,356.0296**	**1,356.0296**	**0.0300**		**1,356.6605**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4145	2.3979	17.4884	0.0269		0.0596	0.0596		0.0596	0.0596	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**0.4145**	**2.3979**	**17.4884**	**0.0269**		**0.0596**	**0.0596**		**0.0596**	**0.0596**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2053	1.2694	3.1938	7.9000e-003	0.2314	0.0328	0.2642	0.0659	0.0302	0.0961		739.4731	739.4731	5.0800e-003		739.5798
Worker	0.1383	0.1797	1.9296	9.5700e-003	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		616.5565	616.5565	0.0250		617.0806
Total	**0.3436**	**1.4491**	**5.1234**	**0.0175**	**1.0362**	**0.0392**	**1.0754**	**0.2794**	**0.0361**	**0.3154**		**1,356.0296**	**1,356.0296**	**0.0300**		**1,356.6605**

3.6 Building Construction 2 - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2031	1.2640	3.1717	7.9000e-003	0.2314	0.0329	0.2643	0.0659	0.0303	0.0962		739.4704	739.4704	5.0900e-003		739.5772
Worker	0.1326	0.1726	1.8652	9.5700e-003	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		612.5259	612.5259	0.0244		613.0381
Total	**0.3357**	**1.4366**	**5.0369**	**0.0175**	**1.0362**	**0.0392**	**1.0754**	**0.2794**	**0.0361**	**0.3155**		**1,351.9963**	**1,351.9963**	**0.0295**		**1,352.6153**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3865	2.3244	17.4634	0.0308		0.0474	0.0474		0.0474	0.0474	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**0.3865**	**2.3244**	**17.4634**	**0.0308**		**0.0474**	**0.0474**		**0.0474**	**0.0474**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2031	1.2640	3.1717	7.9000e-003	0.2314	0.0329	0.2643	0.0659	0.0303	0.0962		739.4704	739.4704	5.0900e-003		739.5772
Worker	0.1326	0.1726	1.8652	9.5700e-003	0.8048	6.3400e-003	0.8111	0.2134	5.8800e-003	0.2193		612.5259	612.5259	0.0244		613.0381
Total	**0.3357**	**1.4366**	**5.0369**	**0.0175**	**1.0362**	**0.0392**	**1.0754**	**0.2794**	**0.0361**	**0.3155**		**1,351.9963**	**1,351.9963**	**0.0295**		**1,352.6153**

Appendix B. 3
Localized Significance Threshold Analysis

Harbor-UCLA Medical Center Campus Master Plan
Localized Significance Thresholds Analysis

Maximum Mitigated On-Site (Localized) Construction Emissions

	Emissions (pounds per day)							
Construction Phase	NOx	CO	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
On-Site Emissions								
2016	1.43	18.48	0.26	0.04	0.29	0.0392	0.04	0.07
2017	2.66	25.50	0.25	0.16	0.31	0.0375	0.16	0.16
2018	9.50	82.11	2.62	0.40	3.02	1.32243	0.40	1.73
2019	10.61	82.05	2.62	0.48	3.04	1.32243	0.48	1.79
2020	13.10	86.00	2.56	0.56	3.12	1.3137	0.56	1.88
2021	**52.64**	**106.21**	**4.09**	**2.53**	**6.29**	**1.546**	**2.40**	**3.62**
2022	15.82	78.59	1.44	0.67	2.12	0.2184	0.67	0.89
2023	15.39	97.83	2.78	0.55	3.12	1.3383	0.55	1.68
2024	**11.99**	**86.91**	**0.23**	**0.39**	**0.62**	**0.02556**	**0.39**	**0.41**
2025	7.38	46.24	0.02	0.23	0.25	0.00326	0.23	0.23
2026	3.91	19.16	-	0.12	0.12	0	0.12	0.12
2027	3.03	20.71	-	0.10	0.10	0	0.10	0.10
2028	2.78	16.75	-	0.09	0.09	0	0.09	0.09
2029	2.90	18.58	-	0.09	0.09	0	0.09	0.09
2030	2.20	24.86	-	0.07	0.07	0	0.07	0.07
2021 (pounds per day)	52.64	106.21	4.09	2.53	6.29	1.55	2.40	3.62
2021 (grams per second) [a]	**0.83**	**1.67**	**0.06**	**0.04**	**0.10**	**0.02**	**0.04**	**0.06**
2022 (pounds per day)	11.99	86.91	0.23	0.39	0.62	0.03	0.39	0.41
2022 (pounds per day)	**0.19**	**1.37**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**

Notes:

a. Converted to grams per second assuming a total of 8-hours of emissions generating activity from active construction equipment usage.

Note: Bold indicates maximum daily emissions.

Source: PCR Services Corporation, 2016

Harbor-UCLA Medical Center Campus Master Plan
Localized Significance Thresholds Analysis

AERMOD Source Characteristics

Emission Source	Source Type	Number of Sources	Release Height (m)	Length of Side X (m)	Length of Side Y (m)	Initial Lateral (m)	Initial Vertical (m)	Plume Height (m)	Plume Width (m)	Exit Temp (°F)	Inside Diameter (ft)	Exit Flow Rate (ft^3/s)
Source Group 1												
Phase 1 On-Site HD Construction Equip	Volume	10	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 2												
Phase 2 On-Site HD Construction Equip	Volume	6	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 3												
Phase 3 On-Site HD Construction Equip	Volume	9	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 4												
Phase 4 On-Site HD Construction Equip	Volume	8	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 5												
Phase 5 On-Site HD Construction Equip	Volume	20	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 6												
Phase 6 On-Site HD Construction Equip	Volume	9	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 7												
Phase C On-Site HD Construction Equip	Volume	11	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a

Source: PCR Services Corporation, 2016

Harbor-UCLA Medical Center Campus Master Plan
Localized Significance Thresholds Analysis

AERMOD Source Emission Rates

									Aermod Input (grams per second)			
Construction Phase	CO	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	No. Of Sources	NOx	CO	Exhaust PM10	Exhaust PM2.5
2021												
Phase C- Building Construction	18.3521		0.1134	0.1134		0.1134	0.1134	11				
Conversion to g/s	2.89E-01	0.00E+00	1.79E-03	1.79E-03	0.00E+00	1.79E-03	1.79E-03					
Idling truck emissions	3.07E-04		1.34E-06			1.28E-06						
Total	**2.89E-01**	**0.00E+00**	**1.79E-03**	**1.79E-03**	**0.00E+00**	**1.79E-03**	**1.79E-03**		**4.24E-03**	**2.63E-02**	**1.62E-04**	**1.62E-04**
Phase2- Building Construction 2	8.767		0.0222	0.0222		0.0222	0.0222	6				
Conversion to g/s	1.38E-01	0.00E+00	3.50E-04	3.50E-04	0.00E+00	3.50E-04	3.50E-04					
Idling truck emissions	4.49E-04		1.95E-06			1.87E-06						
Total	**1.39E-01**	**0.00E+00**	**3.52E-04**	**3.50E-04**	**0.00E+00**	**3.52E-04**	**3.50E-04**		**2.56E-03**	**2.31E-02**	**5.86E-05**	**5.86E-05**
Phase 3 Building Construction	37.1211	1.4424	0.4264	1.8688	0.2184	0.4264	0.6448	9				
Conversion to g/s	5.85E-01	2.27E-02	6.72E-03	2.94E-02	3.44E-03	6.72E-03	1.02E-02					
Idling truck emissions	1.02E-03		4.42E-06			4.23E-06						
Total	**5.86E-01**	**2.27E-02**	**6.72E-03**	**2.94E-02**	**3.44E-03**	**6.72E-03**	**1.02E-02**		**1.62E-02**	**6.51E-02**	**7.47E-04**	**7.47E-04**
Phase 6 Demolition	40.2995	1.4424	1.9641	3.4065	0.2184	1.8347	2.0531	9				
Conversion to g/s	6.35E-01	2.27E-02	3.09E-02	5.37E-02	3.44E-03	2.89E-02	3.23E-02					
Idling truck emissions	1.44E-03		6.27E-06			6.00E-06						
Total	**6.36E-01**	**2.27E-02**	**3.09E-02**	**5.37E-02**	**3.44E-03**	**2.89E-02**	**3.23E-02**		**7.22E-02**	**7.07E-02**	**3.44E-03**	**3.21E-03**

2024	CO	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	No. Of Sources	NOx	CO	Exhaust PM10	Exhaust PM2.5
Phase 4 Building Construction	35.8252		0.2197	0.2197		0.2197	0.2197	8				
Conversion to g/s	5.64E-01	0.00E+00	3.46E-03	3.46E-03	0.00E+00	3.46E-03	3.46E-03					
Idling truck emissions	1.03E-03		1.03E-06			9.90E-07						
Total	**5.65E-01**	**0.00E+00**	**3.46E-03**	**3.46E-03**	**0.00E+00**	**3.46E-03**	**3.46E-03**		**1.42E-02**	**7.07E-02**	**4.33E-04**	**4.33E-04**
Phase 5 Grading	18.7096	0.0215	0.0446	0.0661	0.00326	0.0446	0.0478	20				
Phase 5 Building Construction	15.4728		0.0839	0.0839		0.0839	0.0839					
	2.95E-01	3.39E-04	7.02E-04	1.04E-03	5.13E-05	7.02E-04	7.53E-04					
Conversion to g/s	2.44E-01	0.00E+00	1.32E-03	1.32E-03	0.00E+00	1.32E-03	1.32E-03					
Idling truck emissions	1.54E-03		1.55E-06			1.48E-06						
Total	**5.40E-01**	**3.39E-04**	**2.03E-03**	**2.36E-03**	**5.13E-05**	**2.03E-03**	**2.07E-03**		**3.79E-03**	**2.70E-02**	**1.01E-04**	**1.01E-04**
Phase 6 Grading	16.9046	0.2068	0.0407	0.2475	0.0223	0.0407	0.063	9				
Conversion to g/s	2.66E-01	3.26E-03	6.41E-04	3.90E-03	3.51E-04	6.41E-04	9.92E-04					
Idling truck emissions	5.21E-05		5.24E-08			5.01E-08						
Total	**2.66E-01**	**3.26E-03**	**6.41E-04**	**3.90E-03**	**3.51E-04**	**6.41E-04**	**9.92E-04**		**2.36E-03**	**2.96E-02**	**7.12E-05**	**7.12E-05**

Source: PCR Services Corporation, 2016

Harbor-UCLA Medical Center Campus Master Plan
Localized Significance Thresholds Analysis

LST Impacts: Unmitigated Construction

	Project Concentrations (µg/m^3)			
Source	NO_2	CO	PM10	PM2.5
Project On-Site Construction Emissions [a]				
1-hour average	86.1	273.1	—	—
1-hour average (3-year avg of 98th per.)	50.9	—	—	—
8-hour average	—	42.66	—	—
24-hour average	—	—	0.87	0.34
Background [b]				
1-hour average	163.6	3,548	—	—
1-hour average (3-year avg of 98th per.)	112.2	—	—	—
8-hour average	—	2,861	—	—
24-hour average	—	—	—	—
Total (Project + Background)				
1-hour average	249.7	3,821	—	—
1-hour average (3-year avg of 98th per.)	163.0	—	—	—
8-hour average	—	2,904	—	—
24-hour average	—	—	0.87	0.34
Localized Significance Thresholds				
1-hour average	339.0	23,000	—	—
1-hour average (3-year avg of 98th per.)	188.0	—	—	—
8-hour average	—	10,000	—	—
24-hour average	—	—	10.4	10.4
Exceeds Thresholds?				
1-hour average	NO	NO	—	—
1-hour average (3-year avg of 98th per.)	NO	—	—	—
8-hour average	—	NO	—	—
24-hour average	—	—	NO	NO

	Project NOx (1-hr 98th Percentile) (µg/m^3)		
	Grad.	Grad./Util.	Ut./S.P./B.C.
1-hr 98th per.	181.8	219.9	17.06
3-year avg.	139.6		

	Background NOx (1-hr 98th Percentile) (µg/m^3)		
	2012	2013	2014
1-hr 98th per.	103.4	109.0	124.1
3-year avg.	112.2		

Notes:

a. Project concentrations are based on the results from the AERMOD dispersion model. NO2 concentrations are based on Ambient Ratio Method (ARM) conversion from NO_X emissions.

b. Background concentrations are based on the maximum of the most recent three years for which data is available from the SCAQMD for the Long Beach Monitoring Station (2011-2013). See SCAQMD website: http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. The 1-hour CO concentration is based on data from the same time period from the USEPA. See USEPA website: http://www.epa.gov/airdata/ad_rep_mon.html.

Source: PCR Services Corporation, 2016

Harbor UCLA
Draft Environmental Impact Report
Construction Localized Significance Threshold Assessment

On-Road Truck On-Site Idling Emissions

Construction Phase	Source	Year	Daily Number of Trucks	Work Hours per Day	Idling Time per Truck	Idling Emissions Factor (grams/hour)				Emissions Rate for AERMOD (grams/second)			
				(hours/day)	(minutes)	NOX	CO	PM10	PM2.5	NOX	CO	PM10	PM2.5
Scenario A													
Phase C Building Construction	Idling HHDT Trucks	2021	13	8	15	24.2738	2.7217	0.0118	0.0113	**2.74E-03**	**3.07E-04**	**1.34E-06**	**1.28E-06**
Phase 2 Building Construction 2	Idling HHDT Trucks	2021	19	8	15	24.2738	2.7217	0.0118	0.0113	**4.00E-03**	**4.49E-04**	**1.95E-06**	**1.87E-06**
Phase 3 Demolition	Idling HHDT Trucks	2021	9	8	15	24.2738	2.7217	0.0118	0.0113	1.90E-03	2.13E-04	9.26E-07	8.86E-07
Phase 3 Grading	Idling HHDT Trucks	2021	34	8	15	24.2738	2.7217	0.0118	0.0113	7.16E-03	8.03E-04	3.50E-06	3.35E-06
										9.06E-03	**1.02E-03**	**4.42E-06**	**4.23E-06**
Phase 6 Demolition	Idling HHDT Trucks	2021	61	8	15	24.2738	2.7217	0.0118	0.0113	**1.29E-02**	**1.44E-03**	**6.27E-06**	**6.00E-06**
Scenario B													
Phase 4 Building Construction	Idling HHDT Trucks	2024	79	8	15	12.4390	1.5000	0.0015	0.0014	**8.53E-03**	**1.03E-03**	**1.03E-06**	**9.90E-07**
Phase 5 Grading	Idling HHDT Trucks	2024	41	8	15	12.4390	1.5000	0.0015	0.0014	4.43E-03	5.34E-04	5.37E-07	5.14E-07
Phase 5 Building Construction	Idling HHDT Trucks	2024	77	8	15	12.4390	1.5000	0.0015	0.0014	8.31E-03	1.00E-03	1.01E-06	9.65E-07
										1.27E-02	**1.54E-03**	**1.55E-06**	**1.48E-06**
Phase 6 Grading	Idling HHDT Trucks	2024	4	8	15	12.4390	1.5000	0.0015	0.0014	**4.32E-04**	**5.21E-05**	**5.24E-08**	**5.01E-08**

Source: PCR Services Corporation, 2016

Appendix B. 4
Construction Health Risk Assessment Calculations

Harbor UCLA
Draft Environmental Impact Report
Construction Health Risk Assessment

Off-Road Heavy-Duty Construction Equipment Emission Rates

Construction Phase	DPM Source	Year	Annual DPM Emissions [a] (pounds/year)	Work Days per Year (days/year)	Work Hours per Day (hours/day)	Emissions Rate during Work Period (grams/second)
Off-Road Equipment						
Source Group 1						
Phase 1	Off-Road Equipment	Year 2	0.92	14	8	1.03E-03
Phase 1	Off-Road Equipment	Year 3	9.56	173	8	8.70E-04
Phase 1	Off-Road Equipment	Year 5	24.96	237	8	1.66E-03
Phase 1	Off-Road Equipment	Year 6	1.62	13	8	1.96E-03
			Emissions Rate Averaged over Project Construction			**1.07E-04**
Source Group 2						
Phase 2	Off-Road Equipment	Year 6	6.48	248	8	4.12E-04
Phase 2	Off-Road Equipment	Year 7	10.5	129	8	1.28E-03
Phase 2	Off-Road Equipment	Year 8	31.6	202	8	2.46E-03
			Emissions Rate Averaged over Project Construction			**1.40E-04**
Source Group 3						
Phase 3	Off-Road Equipment	Year 6	22.12	254	8	1.37E-03
Phase 3	Off-Road Equipment	Year 7	25.4	260	8	1.54E-03
Phase 3	Off-Road Equipment	Year 8	7.98	62	8	2.03E-03
			Emissions Rate Averaged over Project Construction			**1.60E-04**
Source Group 4						
Phase 4	Off-Road Equipment	Year 8	16.54	198	8	1.32E-03
Phase 4	Off-Road Equipment	Year 9	55.38	262	8	3.33E-03
Phase 4	Off-Road Equipment	Year 10	27.72	261	8	1.67E-03
Phase 4	Off-Road Equipment	Year 11	2.36	22	8	1.69E-03
Phase 4	Off-Road Equipment	Year 12	13.66	162	8	1.33E-03
			Emissions Rate Averaged over Project Construction			**3.33E-04**
Source Group 5						
Phase 5	Off-Road Equipment	Year 9	13.74	107	8	2.02E-03
Phase 5	Off-Road Equipment	Year 10	10.46	261	8	6.31E-04
Phase 5	Off-Road Equipment	Year 11	2.96	261	8	1.79E-04
Phase 5	Off-Road Equipment	Year 12	1.2	106	8	1.78E-04
Phase 5	Off-Road Equipment	Year 13	12.92	152	8	1.34E-03
Phase 5	Off-Road Equipment	Year 14	9.18	261	8	5.54E-04
Phase 5	Off-Road Equipment	Year 15	0.78	80	8	1.54E-04
			Emissions Rate Averaged over Project Construction			**1.47E-04**

Source Group 6						
Phase 6	Off-Road Equipment	Year 6	14.08	33	8	6.72E-03
Phase 6	Off-Road Equipment	Year 7	30.2	260	8	1.83E-03
Phase 6	Off-Road Equipment	Year 8	32.56	260	8	1.97E-03
Phase 6	Off-Road Equipment	Year 9	18.38	93	8	3.11E-03
			Emissions Rate Averaged over Project Construction			**2.74E-04**
Source Group 7						
Phase C	Off-Road Equipment	Year 3	18.76	88	8	3.36E-03
Phase C	Off-Road Equipment	Year 4	76.3	261	8	4.60E-03
Phase C	Off-Road Equipment	Year 5	86.08	262	8	5.17E-03
Phase C	Off-Road Equipment	Year 6	40.18	261	8	2.42E-03
Phase C	Off-Road Equipment	Year 7	27.58	260	8	1.67E-03
Phase C	Off-Road Equipment	Year 8	7.58	62	8	1.93E-03
			Emissions Rate Averaged over Project Construction			**7.38E-04**
Source Group 8						
Phase M	Off-Road Equipment	Year 1	4.9	128	8	6.03E-04
Phase M	Off-Road Equipment	Year 2	18.88	225	8	1.32E-03
			Emissions Rate Averaged over Project Construction			**6.84E-05**
Source Group 9						
BIOMED	Off-Road Equipment	Year 7	16.74	260	8	1.01E-03
BIOMED	Off-Road Equipment	Year 14	4.54	131	8	5.46E-04
BIOMED	Off-Road Equipment	Year 15	10.84	229	8	7.46E-04
			Emissions Rate Averaged over Project Construction			**9.24E-05**
Maximum 12-Month Emissions	*Off-Road Equipment*	*Yr.5/Ph. 1*	*25.0*	*261*	*8*	*1.51E-03*
(for Chronic HI analysis)		*Yr. 5/Ph. C*	*86.1*	*261*	*8*	*5.19E-03*

Notes:

a. California Air Resources Board, California Emissions Estimator Model (CalEEMod).

Source: PCR Services Corporation, 2016

Idling Construction Haul, Concrete, and Vendor Truck Emission Rates

Construction Phase	DPM Source	Year	Total Number of Trucks	Work Days per Year (days/year)	Work Hours per Day (hours/day)	Idling Time per Truck (minutes)	DPM Idling Emissions Factor [a] (grams/min)	Emissions Rate during Work Period (grams/second)
On-Road Trucks								
Source Group 1								
Phase 1	Idling HHDT Trucks	Year 2	433	14	8	15	1.05E-04	1.70E-06
Phase 1	Idling HHDT Trucks	Year 3	5341	173	8	15	7.87E-05	1.27E-06
Phase 1	Idling HHDT Trucks	Year 5	7316	237	8	15	9.37E-06	1.51E-07
Phase 1	Idling HHDT Trucks	Year 6	402	13	8	15	8.23E-06	1.33E-07
					Emissions Rate Averaged over Project Construction			**5.12E-08**
Source Group 2								
Phase 2	Idling HHDT Trucks	Year 6	4289	248	8	15	8.23E-06	7.41E-08
Phase 2	Idling HHDT Trucks	Year 7	2231	129	8	15	7.09E-06	6.38E-08
Phase 2	Idling HHDT Trucks	Year 8	3494	202	8	15	1.08E-06	9.77E-09
					Emissions Rate Averaged over Project Construction			**5.22E-09**
Source Group 3								
Phase 3	Idling HHDT Trucks	Year 6	6138	254	8	15	8.23E-06	1.04E-07
Phase 3	Idling HHDT Trucks	Year 7	6283	260	8	15	7.09E-06	8.92E-08
Phase 3	Idling HHDT Trucks	Year 8	1499	62	8	15	1.08E-06	1.37E-08
					Emissions Rate Averaged over Project Construction			**9.19E-09**
Source Group 4								
Phase 4	Idling HHDT Trucks	Year 8	11453	198	8	15	1.08E-06	3.27E-08
Phase 4	Idling HHDT Trucks	Year 9	15155	262	8	15	1.05E-06	3.16E-08
Phase 4	Idling HHDT Trucks	Year 10	15097	261	8	15	1.02E-06	3.06E-08
Phase 4	Idling HHDT Trucks	Year 11	1273	22	8	15	9.87E-07	2.98E-08
Phase 4	Idling HHDT Trucks	Year 12	9371	162	8	15	9.64E-07	2.90E-08
					Emissions Rate Averaged over Project Construction			**5.13E-09**
Source Group 5								
Phase 5	Idling HHDT Trucks	Year 9	8772	107	8	15	1.05E-06	4.47E-08
Phase 5	Idling HHDT Trucks	Year 10	21398	261	8	15	1.02E-06	4.33E-08
Phase 5	Idling HHDT Trucks	Year 11	21398	261	8	15	9.87E-07	4.22E-08
Phase 5	Idling HHDT Trucks	Year 12	8691	106	8	15	9.64E-07	4.12E-08
Phase 5	Idling HHDT Trucks	Year 13	12462	152	8	15	9.43E-07	4.03E-08
Phase 5	Idling HHDT Trucks	Year 14	21398	261	8	15	9.26E-07	3.95E-08
Phase 5	Idling HHDT Trucks	Year 15	6559	80	8	15	9.12E-07	3.89E-08
					Emissions Rate Averaged over Project Construction			**9.32E-09**
Source Group 6								
Phase 6	Idling HHDT Trucks	Year 6	2925	33	8	15	8.23E-06	3.80E-07
Phase 6	Idling HHDT Trucks	Year 7	23039	260	8	15	7.09E-06	3.27E-07
Phase 6	Idling HHDT Trucks	Year 8	23039	260	8	15	1.08E-06	5.01E-08
Phase 6	Idling HHDT Trucks	Year 9	8241	93	8	15	1.05E-06	4.84E-08
					Emissions Rate Averaged over Project Construction			**2.10E-08**

Source Group 7								
Phase C	Idling HHDT Trucks	Year 3	1367	88	8	15	7.87E-05	6.37E-07
Phase C	Idling HHDT Trucks	Year 4	4052	261	8	15	7.03E-05	5.68E-07
Phase C	Idling HHDT Trucks	Year 5	4068	262	8	15	9.37E-06	7.58E-08
Phase C	Idling HHDT Trucks	Year 6	4052	261	8	15	8.23E-06	6.65E-08
Phase C	Idling HHDT Trucks	Year 7	4037	260	8	15	7.09E-06	5.73E-08
Phase C	Idling HHDT Trucks	Year 8	963	62	8	15	1.08E-06	8.78E-09
					Emissions Rate Averaged over Project Construction			**4.69E-08**
Source Group 8								
Phase M	Idling HHDT Trucks	Year 1	1446	128	8	15	1.35E-04	7.95E-07
Phase M	Idling HHDT Trucks	Year 2	2542	225	8	15	1.05E-04	6.20E-07
					Emissions Rate Averaged over Project Construction			**4.41E-08**
Source Group 9								
BIOMED	Idling HHDT Trucks	Year 7	1607	260	8	15	7.09E-06	2.28E-08
BIOMED	Idling HHDT Trucks	Year 14	810	131	8	15	9.26E-07	2.98E-09
BIOMED	Idling HHDT Trucks	Year 15	1415	229	8	15	9.12E-07	2.93E-09
					Emissions Rate Averaged over Project Construction			**1.28E-09**
Maximum 12-Month Emissions	*On-Road MHDT/HHDT Trucks*	*Yr.5/Ph. 1*	*7316*	*237*	*8*	*15*	*9.37E-06*	*1.51E-07*
(for Chronic HI analysis)		*Yr. 5/Ph. C*	*4068*	*262*	*8*	*15*	*9.37E-06*	*7.58E-08*

Notes:

a. California Air Resources Board, EMFAC2014 on-road vehicle emissions model.

Source: PCR Services Corporation, 2016

On-Road Travel Construction Haul, Concrete, and Vendor Truck Emission Rates

Construction Phase	DPM Source	Year	Total One-Way Truck Trips	Work Days per Year (days/year)	Work Hours per Day (hours/day)	Avg. One-Way Trip Distance per Day [a] (miles)	DPM Running Emissions Factor [b] (grams/mile)	Emissions Rate during Work Period (grams/second)
On-Road Trucks								
Source Group 1								
Phase 1	Idling HHDT Trucks	Year 2	866	14	8	1.01	7.10E-02	1.54E-04
Phase 1	Idling HHDT Trucks	Year 3	10682	173	8	1.01	3.74E-02	8.08E-05
Phase 1	Idling HHDT Trucks	Year 5	14632	237	8	1.01	1.90E-02	4.11E-05
Phase 1	Idling HHDT Trucks	Year 6	804	13	8	1.01	1.69E-02	3.66E-05
Source Group 2								
Phase 2	Idling HHDT Trucks	Year 6	8578	248	8	1.01	1.69E-02	2.05E-05
Phase 2	Idling HHDT Trucks	Year 7	4462	129	8	1.01	1.45E-02	1.75E-05
Phase 2	Idling HHDT Trucks	Year 8	6988	202	8	1.01	4.58E-03	5.54E-06
Source Group 3								
Phase 3	Idling HHDT Trucks	Year 6	12276	254	8	1.01	1.69E-02	2.86E-05
Phase 3	Idling HHDT Trucks	Year 7	12566	260	8	1.01	1.45E-02	2.44E-05
Phase 3	Idling HHDT Trucks	Year 8	2998	62	8	1.01	4.58E-03	7.75E-06
Source Group 4								
Phase 4	Idling HHDT Trucks	Year 8	22906	198	8	1.01	4.58E-03	1.85E-05
Phase 4	Idling HHDT Trucks	Year 9	30310	262	8	1.01	4.55E-03	1.84E-05
Phase 4	Idling HHDT Trucks	Year 10	30194	261	8	1.01	4.52E-03	1.83E-05
Phase 4	Idling HHDT Trucks	Year 11	2546	22	8	1.01	4.50E-03	1.82E-05
Phase 4	Idling HHDT Trucks	Year 12	18742	162	8	1.01	4.47E-03	1.81E-05
Source Group 5								
Phase 5	Idling HHDT Trucks	Year 9	17544	107	8	1.01	4.55E-03	2.61E-05
Phase 5	Idling HHDT Trucks	Year 10	42796	261	8	1.01	4.52E-03	2.59E-05
Phase 5	Idling HHDT Trucks	Year 11	42796	261	8	1.01	4.50E-03	2.58E-05
Phase 5	Idling HHDT Trucks	Year 12	17382	106	8	1.01	4.47E-03	2.57E-05
Phase 5	Idling HHDT Trucks	Year 13	24924	152	8	1.01	4.46E-03	2.56E-05
Phase 5	Idling HHDT Trucks	Year 14	42796	261	8	1.01	4.44E-03	2.55E-05
Phase 5	Idling HHDT Trucks	Year 15	13118	80	8	1.01	4.43E-03	2.54E-05
Source Group 6								
Phase 6	Idling HHDT Trucks	Year 6	5850	33	8	1.01	1.69E-02	1.05E-04
Phase 6	Idling HHDT Trucks	Year 7	46078	260	8	1.01	1.45E-02	8.96E-05
Phase 6	Idling HHDT Trucks	Year 8	46078	260	8	1.01	4.58E-03	2.84E-05
Phase 6	Idling HHDT Trucks	Year 9	16482	93	8	1.01	4.55E-03	2.82E-05

Source Group 7								
Phase C	Idling HHDT Trucks	Year 3	2734	88	8	1.01	3.74E-02	4.06E-05
Phase C	Idling HHDT Trucks	Year 4	8104	261	8	1.01	3.29E-02	3.58E-05
Phase C	Idling HHDT Trucks	Year 5	8136	262	8	1.01	1.90E-02	2.07E-05
Phase C	Idling HHDT Trucks	Year 6	8104	261	8	1.01	1.69E-02	1.84E-05
Phase C	Idling HHDT Trucks	Year 7	8074	260	8	1.01	1.45E-02	1.57E-05
Phase C	Idling HHDT Trucks	Year 8	1926	62	8	1.01	4.58E-03	4.98E-06
Source Group 8								
Phase M	Idling HHDT Trucks	Year 1	2892	128	8	1.01	1.17E-01	9.27E-05
Phase M	Idling HHDT Trucks	Year 2	5084	225	8	1.01	7.10E-02	5.61E-05
Source Group 9								
BIOMED	Idling HHDT Trucks	Year 7	3214	260	8	1.01	1.45E-02	6.25E-06
BIOMED	Idling HHDT Trucks	Year 14	1620	131	8	1.01	4.44E-03	1.92E-06
BIOMED	Idling HHDT Trucks	Year 15	2830	229	8	1.01	4.43E-03	1.91E-06
					Emissions Rate Averaged over Project Construction			**3.44E-05**
Maximum 12-Month Emissions	*Idling MHDT/HHDT Trucks*	*Yr.5/Ph. 1*	*14632*	*237*	*8*	*1.01*	1.90E-02	4.11E-05
(for Chronic HI analysis)		*Yr. 5/Ph. C*	*8136*	*262*	*8*	*1.01*	1.90E-02	2.07E-05
						Emissions Rate Averaged over Period		**4.15E-05**

Notes:

a. The portion of the average on-road trip length within a 1/4 mile of the Project site.

b. California Air Resources Board, EMFAC2014 on-road vehicle emissions model.

Source: PCR Services Corporation, 2016

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AERMOD Source Characteristics

Emission Source	Source Type	Number of Sources	Length of Line (m)	Source Group Unitized Emission Rate (g/s)	Release Height (m)	Length of Side X (m)	Length of Side Y (m)	Initial Lateral (m)	Initial Vertical (m)	Plume Height (m)	Plume Width (m)	Exit Temp (°F)	Inside Diameter (ft)	Exit Flow Rate (ft^3/s)
Source Group 1														
Phase 1 On-Site HD Construction Equip	Volume	10		0.1000	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 2														
Phase 2 On-Site HD Construction Equip	Volume	6		0.1667	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 3														
Phase 3 On-Site HD Construction Equip	Volume	9		0.1111	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 4														
Phase 4 On-Site HD Construction Equip	Volume	8		0.1250	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 5														
Phase 5 On-Site HD Construction Equip	Volume	20		0.0500	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 6														
Phase 6 On-Site HD Construction Equip	Volume	9		0.1111	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 7														
Phase C On-Site HD Construction Equip	Volume	11		0.0909	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 8														
Phase M On-Site HD Construction Equip	Volume	8		0.1250	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 9														
BioMed On-Site HD Construction Equip	Volume	4		0.2500	5	50	50	11.63	1.16	n/a	n/a	n/a	n/a	n/a
Source Group 10														
Off-Site Haul and Vendor Trucks 1	Line-Volume	1	2421.3	0.5728	5	12	12	n/a	n/a	10.2	18.0	n/a	n/a	n/a
Off-Site Haul and Vendor Trucks 2	Line-Volume	1	780.4	0.1846	5	12	12	n/a	n/a	10.2	18.0	n/a	n/a	n/a
Off-Site Haul and Vendor Trucks 3	Line-Volume	1	284.6	0.0673	5	6	6	n/a	n/a	10.2	12.0	n/a	n/a	n/a
Off-Site Haul and Vendor Trucks 4	Line-Volume	1	741.1	0.1753	5	6	6	n/a	n/a	10.2	12.0	n/a	n/a	n/a

Source: PCR Services Corporation, 2016

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AERMOD Dispersion Modeling Results - Maximum Impacted Receptors

		Receptor Coordinates		Source Groups - Unitized Maximum Concentrations (µg/m^3)									
				1	2	3	4	5	6	7	8	9	10
ID #	Discrete Re	X	Y	Concentration (AVERAGE CONC) [ug/m^3]									
1350	UCART1	380260	3743840	0.5497	0.4426	3.2699	1.7932	0.6145	0.3373	6.9062	1.4056	1.3185	1.1393
4382	UCART1	380450	3744250	2.7753	2.1123	1.6928	1.9393	2.2657	1.2287	1.3407	4.4125	1.2528	1.7063
2073	UCART1	380620	3744040	0.4235	0.3176	1.8200	1.9777	8.7098	0.2469	1.4470	0.8998	0.5904	1.3697
1384	UCART1	379790	3743850	0.2514	0.2759	0.2063	0.1929	0.0988	1.3346	0.6588	0.1778	0.6224	0.7523
1820	UCART1	379740	3743960	0.2695	0.3061	0.1762	0.1704	0.0903	1.5354	0.4016	0.1777	0.5067	1.1564

On-Site Heavy Duty Construction Equipment and On-Site Truck Idling DPM

Source Groups - Maximum DPM Concentrations (Unitized Rate × Project DPM Emissions Rate) (µg/m^3)										Total	Receptor Location
1	2	3	4	5	6	7	8	9	10		
Concentration (AVERAGE CONC) [ug/m^3]											
5.86E-05	6.18E-05	5.22E-04	5.97E-04	9.06E-05	9.24E-05	5.10E-03	9.62E-05	1.22E-04	3.92E-05	6.78E-03	SOUTH
2.96E-04	2.95E-04	2.70E-04	6.45E-04	3.34E-04	3.37E-04	9.89E-04	3.02E-04	1.16E-04	5.86E-05	3.64E-03	NORTH
4.52E-05	4.44E-05	2.91E-04	6.58E-04	1.28E-03	6.76E-05	1.07E-03	6.16E-05	5.46E-05	4.71E-05	3.62E-03	EAST
2.68E-05	3.86E-05	3.29E-05	6.42E-05	1.46E-05	3.66E-04	4.86E-04	1.22E-05	5.75E-05	2.59E-05	1.12E-03	
2.87E-05	4.28E-05	2.81E-05	5.67E-05	1.33E-05	4.21E-04	2.96E-04	1.22E-05	4.68E-05	3.97E-05	9.85E-04	WEST

Off-Site Truck Roadway Travel DPM

Source Groups - Maximum DPM Concentrations			Total	Receptor Location
1	7	10		
8.28E-04	3.59E-02	4.73E-05	3.67E-02	SOUTH
4.18E-03	6.96E-03	7.08E-05	1.12E-02	NORTH
6.38E-04	7.52E-03	5.68E-05	8.21E-03	EAST
3.79E-04	3.42E-03	3.12E-05	3.83E-03	WEST
4.06E-04	2.09E-03	4.80E-05	2.54E-03	

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors located North of the Project Site

Cancer Risk Calculations

Parameter		Age Bins: 3rd Trimester	0 < 2	2 < 16	16 < 30	Total 30 Year Exposure	Age Bin: 31 < 70	Total 70 Year Exposure	Age Bin: 16 and Over (70 Year Lifetime)
DBR	Daily Breathing Rate (L/kg (body weight) per day)	361	1090	745	335		290		335
A	Inhalation absorption factor (default = 1).	1	1	1	1		1		1
EF	Exposure Frequency (days/year)	350	350	350	350		350		350
ED	Exposure Duration (years)	0.25	2	14	14	**30.25**	40	**70.25**	70
FAH	Fraction of Time at Home	1	0.85	0.72	0.73		0.73		0.73
AT	Averaged Exposure Time Period (days)	25550	25550	25550	25550		25550		25550
ASF	Age Sensitvity Factor	10	10	3	1		1		1
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	3.64E-03	3.64E-03	3.38E-03	0.00E+00		0		7.81E-04
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	4.50E-03	9.25E-02	3.48E-01	0.00E+00		0.00E+00		1.83E-01
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$								
	Diesel Particulate Matter	1.1	1.1	1.1	1.1		1.1		1.1
RISK	Cancer Risk (in one million) [= *DOSE × CPF × ASF]*	4.95E-02	1.02E+00	1.15E+00	0.00E+00	**2.22E+00**	0.00E+00	**2.22E+00**	**2.01E-01**

Source: PCR Services Corporation, 2016

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors located South of the Project Site

Cancer Risk Calculations

	Parameter	Age Bins: 3rd Trimester	0 < 2	2 < 16	16 < 30	Total 30 Year Exposure	Age Bin: 31 < 70	Total 70 Year Exposure	Age Bin: 16 and Over (70 Year Lifetime)
DBR	Daily Breathing Rate (L/kg (body weight) per day)	361	1090	745	335		290		335
A	Inhalation absorption factor (default = 1).	1	1	1	1		1		1
EF	Exposure Frequency (days/year)	350	350	350	350		350		350
ED	Exposure Duration (years)	0.25	2	14	14	**30.25**	40	**70.25**	70
FAH	Fraction of Time at Home	1	0.85	0.72	0.73		0.73		0.73
AT	Averaged Exposure Time Period (days)	25550	25550	25550	25550		25550		25550
ASF	Age Sensitvity Factor	10	10	3	1		1		1
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	6.78E-03	6.78E-03	6.29E-03	0.00E+00		0		1.45E-03
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	8.38E-03	1.72E-01	6.47E-01	0.00E+00		0.00E+00		3.40E-01
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$								
	Diesel Particulate Matter	1.1	1.1	1.1	1.1		1.1		1.1
RISK	Cancer Risk (in one million) [= *DOSE × CPF × ASF]*	9.21E-02	1.89E+00	2.14E+00	0.00E+00	**4.12E+00**	0.00E+00	**4.12E+00**	**3.74E-01**

Source: PCR Services Corporation, 2016

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors located East of the Project Site

Cancer Risk Calculations

	Parameter	Age Bins				Total 30 Year Exposure	Age Bin	Total 70 Year Exposure	Age Bin
		3rd Trimester	0 < 2	2 < 16	16 < 30		31 < 70		16 and Over (70 Year Lifetime)
DBR	Daily Breathing Rate (L/kg (body weight) per day)	361	1090	745	335		290		335
A	Inhalation absorption factor (default = 1).	1	1	1	1		1		1
EF	Exposure Frequency (days/year)	350	350	350	350		350		350
ED	Exposure Duration (years)	0.25	2	14	14	**30.25**	40	**70.25**	70
FAH	Fraction of Time at Home	1	0.85	0.72	0.73		0.73		0.73
AT	Averaged Exposure Time Period (days)	25550	25550	25550	25550		25550		25550
ASF	Age Sensitvity Factor	10	10	3	1		1		1
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	3.62E-03	3.62E-03	3.36E-03	0.00E+00		0		7.76E-04
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	4.48E-03	9.19E-02	3.46E-01	0.00E+00		0.00E+00		1.82E-01
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$								
	Diesel Particulate Matter	1.1	1.1	1.1	1.1		1.1		1.1
RISK	Cancer Risk (in one million) [= *DOSE × CPF × ASF]*	4.92E-02	1.01E+00	1.14E+00	0.00E+00	**2.20E+00**	0.00E+00	**2.20E+00**	**2.00E-01**

Source: PCR Services Corporation, 2016

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Maximum Individual Cancer Risk Calculations - Sensitive Receptors located West of the Project Site

Cancer Risk Calculations

Parameter		Age Bins: 3rd Trimester	Age Bins: 0 < 2	Age Bins: 2 < 16	Age Bins: 16 < 30	Total 30 Year Exposure	Age Bin: 31 < 70	Total 70 Year Exposure	Age Bin: 16 and Over (70 Year Lifetime)
DBR	Daily Breathing Rate (L/kg (body weight) per day)	361	1090	745	335		290		335
A	Inhalation absorption factor (default = 1).	1	1	1	1		1		1
EF	Exposure Frequency (days/year)	350	350	350	350		350		350
ED	Exposure Duration (years)	0.25	2	14	14	**30.25**	40	**70.25**	70
FAH	Fraction of Time at Home	1	0.85	0.72	0.73		0.73		0.73
AT	Averaged Exposure Time Period (days)	25550	25550	25550	25550		25550		25550
ASF	Age Sensitvity Factor	10	10	3	1		1		1
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	9.85E-04	9.85E-04	9.15E-04	0.00E+00		0		2.11E-04
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	1.22E-03	2.50E-02	9.41E-02	0.00E+00		0.00E+00		4.95E-02
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$								
	Diesel Particulate Matter	1.1	1.1	1.1	1.1		1.1		1.1
RISK	Cancer Risk (in one million) *[= DOSE × CPF × ASF]*	1.34E-02	2.75E-01	3.11E-01	0.00E+00	**5.99E-01**	0.00E+00	**5.99E-01**	**5.45E-02**

Source: PCR Services Corporation, 2016

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Maximum Non-cancer Chronic Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	CREL[1]	CONC	WFrac	$CONC_{WF}$	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over?
MEI Sensitive - North	DPM	5.00E+00	1.12E-02	1.00E+00	1.12E-02	2.24E-03	-	-	-	-	-	-	-	-	-	-	-	2.24E-03	-	1.0	NO
MEI Sensitive - South	DPM	5.00E+00	3.67E-02	1.00E+00	3.67E-02	7.35E-03	-	-	-	-	-	-	-	-	-	-	-	7.35E-03	-	1.0	NO
MEI Sensitive - East	DPM	5.00E+00	8.21E-03	1.00E+00	8.21E-03	1.64E-03	-	-	-	-	-	-	-	-	-	-	-	1.64E-03	-	1.0	NO
MEI Sensitive - West	DPM	5.00E+00	3.83E-03	1.00E+00	3.83E-03	7.66E-04	-	-	-	-	-	-	-	-	-	-	-	7.66E-04	-	1.0	NO

Sources:

1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: January 30, 2014. Downloaded 03/13/2014.

Where:

$CONC_{WF}$	Pollutant Concentration ($\mu g/m^3$) multiplied by the weight fraction
CREL	Chronic Reference Exposure Level
HI	Hazard Index
MEI	Maximally Exposed Individual
WFrac	Weight fraction of speciated component

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

Haul/Concrete Truck Running Emission Factors (Aggregate Model Year, Aggregate Speeds)

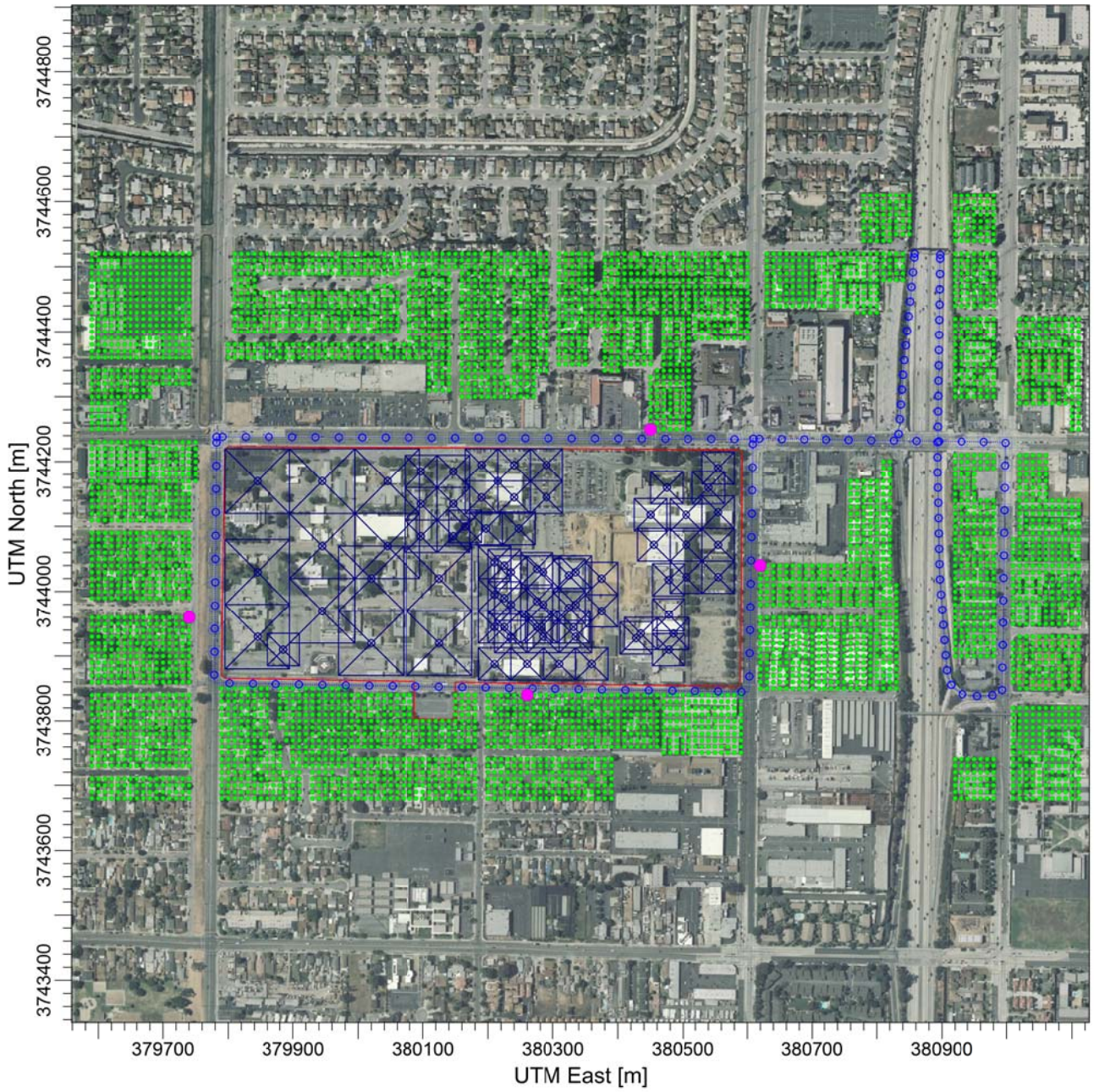
EMFAC2014 (v1.0.7) Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	CO_RUNEX	CO_IDLEX	NOx_RUNEX	NOx_IDLEX	PM10_RUNEX	PM10_IDLEX	PM10_PMTW	PM10_PMBW	PM2_5_RUNEX	PM2_5_IDLEX	PM2_5_PMTW	PM2_5_PMBW
South Coast	2016	T7 single construction	Aggregated	Aggregated	DSL	0.970788	6.789040	7.767023	32.342953	0.117347	0.194448	0.036000	0.061740	0.112271	0.186037	0.009000	0.026460
South Coast	2017	T7 single construction	Aggregated	Aggregated	DSL	0.698729	5.889665	6.345112	31.444264	0.070980	0.151723	0.036000	0.061740	0.067909	0.145159	0.009000	0.026460
South Coast	2018	T7 single construction	Aggregated	Aggregated	DSL	0.505607	5.053253	5.219644	30.340212	0.037409	0.113362	0.036000	0.061740	0.035790	0.108458	0.009000	0.026460
South Coast	2019	T7 single construction	Aggregated	Aggregated	DSL	0.474801	4.753761	4.763364	29.205020	0.032926	0.101170	0.036000	0.061740	0.031502	0.096793	0.009000	0.026460
South Coast	2020	T7 single construction	Aggregated	Aggregated	DSL	0.390243	2.801042	3.927058	25.290221	0.019017	0.013496	0.036000	0.061740	0.018194	0.012912	0.009000	0.026460
South Coast	2021	T7 single construction	Aggregated	Aggregated	DSL	0.388843	2.721714	3.453765	24.273771	0.016932	0.011848	0.036000	0.061740	0.016200	0.011335	0.009000	0.026460
South Coast	2022	T7 single construction	Aggregated	Aggregated	DSL	0.384582	2.632193	3.043259	23.104238	0.014450	0.010206	0.036000	0.061740	0.013825	0.009764	0.009000	0.026460
South Coast	2023	T7 single construction	Aggregated	Aggregated	DSL	0.330843	1.500788	1.135382	12.456420	0.004582	0.001562	0.036000	0.061740	0.004383	0.001495	0.009000	0.026460
South Coast	2024	T7 single construction	Aggregated	Aggregated	DSL	0.340174	1.499964	1.142091	12.438961	0.004554	0.001509	0.036000	0.061740	0.004357	0.001444	0.009000	0.026460
South Coast	2025	T7 single construction	Aggregated	Aggregated	DSL	0.342682	1.499159	1.128159	12.422643	0.004522	0.001462	0.036000	0.061740	0.004327	0.001398	0.009000	0.026460
South Coast	2026	T7 single construction	Aggregated	Aggregated	DSL	0.344866	1.498393	1.115405	12.408150	0.004497	0.001422	0.036000	0.061740	0.004303	0.001360	0.009000	0.026460
South Coast	2027	T7 single construction	Aggregated	Aggregated	DSL	0.346573	1.497699	1.100997	12.395660	0.004474	0.001388	0.036000	0.061740	0.004280	0.001328	0.009000	0.026460
South Coast	2028	T7 single construction	Aggregated	Aggregated	DSL	0.348216	1.497030	1.089017	12.384346	0.004457	0.001358	0.036000	0.061740	0.004264	0.001299	0.009000	0.026460
South Coast	2029	T7 single construction	Aggregated	Aggregated	DSL	0.349579	1.496415	1.077720	12.374511	0.004444	0.001333	0.036000	0.061740	0.004251	0.001276	0.009000	0.026460
South Coast	2030	T7 single construction	Aggregated	Aggregated	DSL	0.350253	1.495890	1.061702	12.366435	0.004426	0.001313	0.036000	0.061740	0.004235	0.001256	0.009000	0.026460

Source: California Air Resources Board, EMFAC2014, http://www.arb.ca.gov/emfac/2014/. Accessed Februrary 2016.

PROJECT TITLE:

C:\AERMOD\Projects\HUCLA_Con\HRA\HRA.isc



COMMENTS:	SOURCES: **89**	COMPANY NAME: **PCR Services Corporation**	
	RECEPTORS: **5619**		
		SCALE: 1:9,856 0 0.3 km	
		DATE: **3/2/2016**	PROJECT NO.:

Appendix B. 5
Operational Emissions – CalEEMod Output (Summer and Winter)

- Existing Operations
- Interim Operations
- Full Build-Out Operations

Appendix B. 5

Operational Emissions – CalEEMod Output (Summer and Winter)

Existing Operations

Harbor-UCLA Medical Center (Existing Operations)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	23.43	1000sqft	0.54	23,435.00	0
Hospital	373.00	Bed	6.13	266,977.58	0
Medical Office Building	327.30	1000sqft	7.51	327,304.00	0
Research & Development	94.75	1000sqft	2.18	94,754.00	0
Library	22.50	1000sqft	0.52	22,500.00	0
General Light Industry	112.72	1000sqft	2.59	112,719.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Energy Use - See "Existing and Project Operational Inputs (Existing Elec Existing NG)

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	4.29	4.63
tblEnergyUse	LightingElect	5.60	5.99
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	4.29	4.63
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	2.23	2.38
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	5.62	6.30
tblEnergyUse	T24E	10.44	11.85
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	5.62	6.30
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	0.79	0.89
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	10.54	12.44
tblEnergyUse	T24NG	55.22	63.57
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	10.54	12.44
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	0.88	1.04
tblLandUse	LandUseSquareFeet	23,430.00	23,435.00
tblLandUse	LandUseSquareFeet	327,300.00	327,304.00
tblLandUse	LandUseSquareFeet	94,750.00	94,754.00
tblLandUse	LandUseSquareFeet	112,720.00	112,719.00
tblLandUse	LandUseSquareFeet	45,400.00	45,402.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	18.60

tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	10.14
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	18.60
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	10.14
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	18.60
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	10.14
tblVehicleTrips	WD_TR	2.59	3.56

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.3639	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317
Energy	0.8512	7.7379	6.4998	0.0464		0.5881	0.5881		0.5881	0.5881		9,285.4789	9,285.4789	0.1780	0.1702	9,341.9888
Mobile	73.5359	199.9619	831.2718	1.9010	124.5582	2.9094	127.4676	33.3040	2.6746	35.9786		167,471.5220	167,471.5220	6.9839		167,618.1844
Total	**97.7510**	**207.7008**	**837.8763**	**1.9475**	**124.5582**	**3.4978**	**128.0560**	**33.3040**	**3.2631**	**36.5671**		**176,757.2195**	**176,757.2195**	**7.1625**	**0.1702**	**176,960.4048**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	73.5359	199.9619	831.2718	1.9010	124.5582	2.9094	127.4676	33.3040	2.6746	35.9786		167,471.5220	167,471.5220	6.9839		167,618.1844
Unmitigated	73.5359	199.9619	831.2718	1.9010	124.5582	2.9094	127.4676	33.3040	2.6746	35.9786		167,471.5220	167,471.5220	6.9839		167,618.1844

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	169.08	169.08	169.08	748,733	748,733
General Office Building	435.80	435.80	435.80	1,403,906	1,403,906
Hospital	4,826.62	4,826.62	4826.62	18,712,042	18,712,042
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	11,825.35	11,825.35	11825.35	30,673,282	30,673,282
Research & Development	960.77	960.77	960.77	3,246,089	3,246,089
Unrefrigerated Warehouse-No Rail	161.62	161.62	161.62	692,675	692,675
Total	19,644.64	19,644.64	19,644.64	58,671,465	58,671,465

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8512	7.7379	6.4998	0.0464		0.5881	0.5881		0.5881	0.5881		9,285.4789	9,285.4789	0.1780	0.1702	9,341.9888
NaturalGas Unmitigated	0.8512	7.7379	6.4998	0.0464		0.5881	0.5881		0.5881	0.5881		9,285.4789	9,285.4789	0.1780	0.1702	9,341.9888

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.823756	8.8800e-003	0.0808	0.0678	4.8000e-004		6.1400e-003	6.1400e-003		6.1400e-003	6.1400e-003		96.9125	96.9125	1.8600e-003	1.7800e-003	97.5023
Hospital	53.6808	0.5789	5.2628	4.4208	0.0316		0.4000	0.4000		0.4000	0.4000		6,315.3859	6,315.3859	0.1210	0.1158	6,353.8202
Library	1.25075	0.0135	0.1226	0.1030	7.4000e-004		9.3200e-003	9.3200e-003		9.3200e-003	9.3200e-003		147.1475	147.1475	2.8200e-003	2.7000e-003	148.0430
Medical Office Building	11.505	0.1241	1.1279	0.9475	6.7700e-003		0.0857	0.0857		0.0857	0.0857		1,353.5247	1,353.5247	0.0259	0.0248	1,361.7620
Research & Development	5.26728	0.0568	0.5164	0.4338	3.1000e-003		0.0393	0.0393		0.0393	0.0393		619.6805	619.6805	0.0119	0.0114	623.4517
Unrefrigerated Warehouse-No Rail	0.133096	1.4400e-003	0.0131	0.0110	8.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004		15.6584	15.6584	3.0000e-004	2.9000e-004	15.7537
General Light Industry	6.26594	0.0676	0.6143	0.5160	3.6900e-003		0.0467	0.0467		0.0467	0.0467		737.1695	737.1695	0.0141	0.0135	741.6558

Total		**0.8512**	**7.7379**	**6.4998**	**0.0464**		**0.5881**	**0.5881**		**0.5881**	**0.5881**		**9,285.4789**	**9,285.4789**	**0.1780**	**0.1702**	**9,341.9888**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	23.3639	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317
Unmitigated	23.3639	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.6705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.6832					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0102	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317
Total	**23.3639**	**1.0000e-003**	**0.1046**	**1.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**		**0.2187**	**0.2187**	**6.2000e-004**		**0.2317**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Harbor-UCLA Medical Center (Existing Operations)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	23.43	1000sqft	0.54	23,435.00	0
Hospital	373.00	Bed	6.13	266,977.58	0
Medical Office Building	327.30	1000sqft	7.51	327,304.00	0
Research & Development	94.75	1000sqft	2.18	94,754.00	0
Library	22.50	1000sqft	0.52	22,500.00	0
General Light Industry	112.72	1000sqft	2.59	112,719.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Energy Use - See "Existing and Project Operational Inputs (Existing Elec Existing NG)

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	4.29	4.63
tblEnergyUse	LightingElect	5.60	5.99
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	4.29	4.63
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	2.23	2.38
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	5.62	6.30
tblEnergyUse	T24E	10.44	11.85
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	5.62	6.30
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	0.79	0.89
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	10.54	12.44
tblEnergyUse	T24NG	55.22	63.57
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	10.54	12.44
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	0.88	1.04
tblLandUse	LandUseSquareFeet	23,430.00	23,435.00
tblLandUse	LandUseSquareFeet	327,300.00	327,304.00
tblLandUse	LandUseSquareFeet	94,750.00	94,754.00
tblLandUse	LandUseSquareFeet	112,720.00	112,719.00
tblLandUse	LandUseSquareFeet	45,400.00	45,402.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	18.60

tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	10.14
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	18.60
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	10.14
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	18.60
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	10.14
tblVehicleTrips	WD_TR	2.59	3.56

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	23.3639	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317
Energy	0.8512	7.7379	6.4998	0.0464		0.5881	0.5881		0.5881	0.5881		9,285.4789	9,285.4789	0.1780	0.1702	9,341.9888
Mobile	77.4027	210.8071	834.4254	1.8150	124.5582	2.9226	127.4808	33.3040	2.6868	35.9908		160,118.4719	160,118.4719	6.9893		160,265.2461
Total	**101.6178**	**218.5460**	**841.0299**	**1.8614**	**124.5582**	**3.5111**	**128.0693**	**33.3040**	**3.2753**	**36.5793**		**169,404.1695**	**169,404.1695**	**7.1678**	**0.1702**	**169,607.4665**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	77.4027	210.8071	834.4254	1.8150	124.5582	2.9226	127.4808	33.3040	2.6868	35.9908		160,118.4719	160,118.4719	6.9893		160,265.2461
Unmitigated	77.4027	210.8071	834.4254	1.8150	124.5582	2.9226	127.4808	33.3040	2.6868	35.9908		160,118.4719	160,118.4719	6.9893		160,265.2461

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	169.08	169.08	169.08	748,733	748,733
General Office Building	435.80	435.80	435.80	1,403,906	1,403,906
Hospital	4,826.62	4,826.62	4826.62	18,712,042	18,712,042
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	11,825.35	11,825.35	11825.35	30,673,282	30,673,282
Research & Development	960.77	960.77	960.77	3,246,089	3,246,089
Unrefrigerated Warehouse-No Rail	161.62	161.62	161.62	692,675	692,675
Total	19,644.64	19,644.64	19,644.64	58,671,465	58,671,465

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8512	7.7379	6.4998	0.0464		0.5881	0.5881		0.5881	0.5881		9,285.4789	9,285.4789	0.1780	0.1702	9,341.9888
NaturalGas Unmitigated	0.8512	7.7379	6.4998	0.0464		0.5881	0.5881		0.5881	0.5881		9,285.4789	9,285.4789	0.1780	0.1702	9,341.9888

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.823756	8.8800e-003	0.0808	0.0678	4.8000e-004		6.1400e-003	6.1400e-003		6.1400e-003	6.1400e-003		96.9125	96.9125	1.8600e-003	1.7800e-003	97.5023
Hospital	53.6808	0.5789	5.2628	4.4208	0.0316		0.4000	0.4000		0.4000	0.4000		6,315.3859	6,315.3859	0.1210	0.1158	6,353.8202
Library	1.25075	0.0135	0.1226	0.1030	7.4000e-004		9.3200e-003	9.3200e-003		9.3200e-003	9.3200e-003		147.1475	147.1475	2.8200e-003	2.7000e-003	148.0430
Medical Office Building	11.505	0.1241	1.1279	0.9475	6.7700e-003		0.0857	0.0857		0.0857	0.0857		1,353.5247	1,353.5247	0.0259	0.0248	1,361.7620
Research & Development	5.26728	0.0568	0.5164	0.4338	3.1000e-003		0.0393	0.0393		0.0393	0.0393		619.6805	619.6805	0.0119	0.0114	623.4517
Unrefrigerated Warehouse-No Rail	0.133096	1.4400e-003	0.0131	0.0110	8.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004		15.6584	15.6584	3.0000e-004	2.9000e-004	15.7537

General Light Industry	6.26594	0.0676	0.6143	0.5160	3.6900e-003		0.0467	0.0467		0.0467	0.0467		737.1695	737.1695	0.0141	0.0135	741.6558
Total		**0.8512**	**7.7379**	**6.4998**	**0.0464**		**0.5881**	**0.5881**		**0.5881**	**0.5881**		**9,285.4789**	**9,285.4789**	**0.1780**	**0.1702**	**9,341.9888**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	23.3639	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317
Unmitigated	23.3639	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.6705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	17.6832					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0102	1.0000e-003	0.1046	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2187	0.2187	6.2000e-004		0.2317
Total	**23.3639**	**1.0000e-003**	**0.1046**	**1.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**		**0.2187**	**0.2187**	**6.2000e-004**		**0.2317**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix B. 5

Operational Emissions – CalEEMod Output (Summer and Winter)

Interim Operations

Harbor-UCLA Medical Center (Interim Operations)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	52.64	1000sqft	1.21	52,635.00	0
General Light Industry	129.21	1000sqft	2.97	129,205.00	0
Hospital	379.00	Bed	6.23	271,272.12	0
Library	22.50	1000sqft	0.52	22,500.00	0
Medical Office Building	338.70	1000sqft	7.78	338,700.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0
Research & Development	237.50	1000sqft	5.45	237,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2023
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	15.31
tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	9.76
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	15.31
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	9.76
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	15.31
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	9.76
tblVehicleTrips	WD_TR	2.59	3.56

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	28.7028	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782
Energy	0.6825	6.2046	5.2119	0.0372		0.4716	0.4716		0.4716	0.4716		7,445.5370	7,445.5370	0.1427	0.1365	7,490.8492
Mobile	55.3941	125.1538	602.0224	2.1616	140.1322	2.8512	142.9834	37.4838	2.6308	40.1147		162,235.3942	162,235.3942	5.2987		162,346.6672
Total	**84.7794**	**131.3595**	**607.3573**	**2.1988**	**140.1322**	**3.3232**	**143.4554**	**37.4838**	**3.1028**	**40.5866**		**169,681.1948**	**169,681.1948**	**5.4421**	**0.1365**	**169,837.7946**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.22**	**1.25**	**0.23**	**0.45**	**0.00**	**3.66**	**0.09**	**0.00**	**3.91**	**0.31**	**0.00**	**1.16**	**1.16**	**0.70**	**21.12**	**1.17**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	55.3941	125.1538	602.0224	2.1616	140.1322	2.8512	142.9834	37.4838	2.6308	40.1147		162,235.3942	162,235.3942	5.2987		162,346.6672
Unmitigated	55.3941	125.1538	602.0224	2.1616	140.1322	2.8512	142.9834	37.4838	2.6308	40.1147		162,235.3942	162,235.3942	5.2987		162,346.6672

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	193.81	193.81	193.81	858,233	858,233
General Office Building	805.84	805.84	805.84	2,595,988	2,595,988
Hospital	4,904.26	4,904.26	4904.26	19,013,040	19,013,040
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	12,237.23	12,237.23	12237.23	31,741,646	31,741,646
Research & Development	2,318.00	2,318.00	2318.00	7,831,712	7,831,712
Unrefrigerated Warehouse-No Rail	161.63	161.63	161.63	692,705	692,705
Total	21,886.17	21,886.17	21,886.17	65,928,062	65,928,062

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.522550	0.057918	0.180146	0.126595	0.040312	0.006532	0.017397	0.036650	0.002593	0.003201	0.003751	0.000525	0.001830

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6825	6.2046	5.2119	0.0372		0.4716	0.4716		0.4716	0.4716		7,445.5370	7,445.5370	0.1427	0.1365	7,490.8492
NaturalGas Unmitigated	0.8652	7.8655	6.6070	0.0472		0.5978	0.5978		0.5978	0.5978		9,438.5470	9,438.5470	0.1809	0.1730	9,495.9884

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	38.0784	0.4107	3.7332	3.1359	0.0224		0.2837	0.2837		0.2837	0.2837		4,479.8153	4,479.8153	0.0859	0.0821	4,507.0787
Library	0.938219	0.0101	0.0920	0.0773	5.5000e-004		6.9900e-003	6.9900e-003		6.9900e-003	6.9900e-003		110.3787	110.3787	2.1200e-003	2.0200e-003	111.0505
Medical Office Building	7.69731	0.0830	0.7546	0.6339	4.5300e-003		0.0574	0.0574		0.0574	0.0574		905.5654	905.5654	0.0174	0.0166	911.0765
Research & Development	9.90342	0.1068	0.9709	0.8156	5.8300e-003		0.0738	0.0738		0.0738	0.0738		1,165.1088	1,165.1088	0.0223	0.0214	1,172.1994
Unrefrigerated Warehouse-No Rail	0.0858284	9.3000e-004	8.4100e-003	7.0700e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004		10.0975	10.0975	1.9000e-004	1.9000e-004	10.1589
General Light Industry	5.38767	0.0581	0.5282	0.4437	3.1700e-003		0.0401	0.0401		0.0401	0.0401		633.8437	633.8437	0.0122	0.0116	637.7012
General Office Building	1.19618	0.0129	0.1173	0.0985	7.0000e-004		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003		140.7276	140.7276	2.7000e-003	2.5800e-003	141.5840
Total		**0.6825**	**6.2046**	**5.2119**	**0.0372**		**0.4715**	**0.4715**		**0.4715**	**0.4715**		**7,445.5369**	**7,445.5369**	**0.1427**	**0.1365**	**7,490.8492**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	28.7028	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782
Unmitigated	28.7028	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.9666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	21.7248					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0114	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782
Total	**28.7028**	**1.1200e-003**	**0.1230**	**1.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**		**0.2637**	**0.2637**	**6.9000e-004**		**0.2782**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Harbor-UCLA Medical Center (Interim Operations)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	52.64	1000sqft	1.21	52,635.00	0
General Light Industry	129.21	1000sqft	2.97	129,205.00	0
Hospital	379.00	Bed	6.23	271,272.12	0
Library	22.50	1000sqft	0.52	22,500.00	0
Medical Office Building	338.70	1000sqft	7.78	338,700.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0
Research & Development	237.50	1000sqft	5.45	237,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2023
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	15.31
tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	9.76
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	15.31
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	9.76
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	15.31
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	9.76
tblVehicleTrips	WD_TR	2.59	3.56

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	28.7028	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782
Energy	0.6825	6.2046	5.2119	0.0372		0.4716	0.4716		0.4716	0.4716		7,445.5370	7,445.5370	0.1427	0.1365	7,490.8492
Mobile	58.0035	131.8732	610.6413	2.0646	140.1322	2.8602	142.9924	37.4838	2.6391	40.1230		155,426.1253	155,426.1253	5.3070		155,537.5715
Total	**87.3888**	**138.0789**	**615.9762**	**2.1018**	**140.1322**	**3.3322**	**143.4644**	**37.4838**	**3.1111**	**40.5949**		**162,871.9259**	**162,871.9259**	**5.4504**	**0.1365**	**163,028.6990**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.21**	**1.19**	**0.23**	**0.47**	**0.00**	**3.65**	**0.09**	**0.00**	**3.90**	**0.31**	**0.00**	**1.21**	**1.21**	**0.70**	**21.12**	**1.21**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	58.0035	131.8732	610.6413	2.0646	140.1322	2.8602	142.9924	37.4838	2.6391	40.1230		155,426.1253	155,426.1253	5.3070		155,537.5715
Unmitigated	58.0035	131.8732	610.6413	2.0646	140.1322	2.8602	142.9924	37.4838	2.6391	40.1230		155,426.1253	155,426.1253	5.3070		155,537.5715

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	193.81	193.81	193.81	858,233	858,233
General Office Building	805.84	805.84	805.84	2,595,988	2,595,988
Hospital	4,904.26	4,904.26	4904.26	19,013,040	19,013,040
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	12,237.23	12,237.23	12237.23	31,741,646	31,741,646
Research & Development	2,318.00	2,318.00	2318.00	7,831,712	7,831,712
Unrefrigerated Warehouse-No Rail	161.63	161.63	161.63	692,705	692,705
Total	21,886.17	21,886.17	21,886.17	65,928,062	65,928,062

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.522550	0.057918	0.180146	0.126595	0.040312	0.006532	0.017397	0.036650	0.002593	0.003201	0.003751	0.000525	0.001830

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6825	6.2046	5.2119	0.0372		0.4716	0.4716		0.4716	0.4716		7,445.5370	7,445.5370	0.1427	0.1365	7,490.8492
NaturalGas Unmitigated	0.8652	7.8655	6.6070	0.0472		0.5978	0.5978		0.5978	0.5978		9,438.5470	9,438.5470	0.1809	0.1730	9,495.9884

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	38.0784	0.4107	3.7332	3.1359	0.0224		0.2837	0.2837		0.2837	0.2837		4,479.8153	4,479.8153	0.0859	0.0821	4,507.0787
Library	0.938219	0.0101	0.0920	0.0773	5.5000e-004		6.9900e-003	6.9900e-003		6.9900e-003	6.9900e-003		110.3787	110.3787	2.1200e-003	2.0200e-003	111.0505
Medical Office Building	7.69731	0.0830	0.7546	0.6339	4.5300e-003		0.0574	0.0574		0.0574	0.0574		905.5654	905.5654	0.0174	0.0166	911.0765
Research & Development	9.90342	0.1068	0.9709	0.8156	5.8300e-003		0.0738	0.0738		0.0738	0.0738		1,165.1088	1,165.1088	0.0223	0.0214	1,172.1994
Unrefrigerated Warehouse-No Rail	0.0858284	9.3000e-004	8.4100e-003	7.0700e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004		10.0975	10.0975	1.9000e-004	1.9000e-004	10.1589
General Light Industry	5.38767	0.0581	0.5282	0.4437	3.1700e-003		0.0401	0.0401		0.0401	0.0401		633.8437	633.8437	0.0122	0.0116	637.7012
General Office Building	1.19618	0.0129	0.1173	0.0985	7.0000e-004		8.9100e-003	8.9100e-003		8.9100e-003	8.9100e-003		140.7276	140.7276	2.7000e-003	2.5800e-003	141.5840
Total		**0.6825**	**6.2046**	**5.2119**	**0.0372**		**0.4715**	**0.4715**		**0.4715**	**0.4715**		**7,445.5369**	**7,445.5369**	**0.1427**	**0.1365**	**7,490.8492**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	28.7028	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782
Unmitigated	28.7028	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.9666					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	21.7248					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0114	1.1200e-003	0.1230	1.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004		0.2637	0.2637	6.9000e-004		0.2782
Total	**28.7028**	**1.1200e-003**	**0.1230**	**1.0000e-005**		**4.4000e-004**	**4.4000e-004**		**4.4000e-004**	**4.4000e-004**		**0.2637**	**0.2637**	**6.9000e-004**		**0.2782**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix B. 5

Operational Emissions – CalEEMod Output (Summer and Winter)

Full Build-Out Operations

Harbor-UCLA Medical Center (Full Build-Out Operations)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.64	1000sqft	3.00	130,635.00	0
General Light Industry	129.21	1000sqft	2.97	129,205.00	0
Hospital	379.00	Bed	6.23	271,272.12	0
Library	22.50	1000sqft	0.52	22,500.00	0
Medical Office Building	412.60	1000sqft	9.47	412,598.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0
Research & Development	475.00	1000sqft	10.90	475,000.00	0
Strip Mall	35.00	1000sqft	0.80	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	129,210.00	129,205.00
tblLandUse	LandUseSquareFeet	45,400.00	45,402.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	12.31
tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	8.67
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	ST_TR	42.04	42.70
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	12.31
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	8.67
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	SU_TR	20.43	42.70
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	8.67
tblVehicleTrips	WD_TR	2.59	3.56
tblVehicleTrips	WD_TR	44.32	42.70

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	39.8043	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759
Energy	0.8280	7.5271	6.3228	0.0452		0.5721	0.5721		0.5721	0.5721		9,032.5334	9,032.5334	0.1731	0.1656	9,087.5039
Mobile	60.2979	140.9235	649.1757	2.8280	179.5340	3.8065	183.3405	48.0450	3.5129	51.5579		203,744.7084	203,744.7084	5.7629		203,865.7284
Total	**100.9302**	**148.4521**	**655.6640**	**2.8732**	**179.5340**	**4.3792**	**183.9132**	**48.0450**	**4.0855**	**52.1306**		**212,777.5984**	**212,777.5984**	**5.9369**	**0.1656**	**212,953.6082**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.22**	**1.33**	**0.26**	**0.42**	**0.00**	**3.35**	**0.08**	**0.00**	**3.59**	**0.29**	**0.00**	**1.12**	**1.12**	**0.77**	**20.99**	**1.12**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	60.2979	140.9235	649.1757	2.8280	179.5340	3.8065	183.3405	48.0450	3.5129	51.5579		203,744.7084	203,744.7084	5.7629		203,865.7284
Unmitigated	60.2979	140.9235	649.1757	2.8280	179.5340	3.8065	183.3405	48.0450	3.5129	51.5579		203,744.7084	203,744.7084	5.7629		203,865.7284

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	193.82	193.82	193.82	858,267	858,267
General Office Building	1,608.12	1,608.12	1608.12	5,180,486	5,180,486
Hospital	4,904.26	4,904.26	4904.26	19,013,040	19,013,040
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	14,907.17	14,907.17	14907.17	38,667,079	38,667,079
Research & Development	4,118.25	4,118.25	4118.25	13,914,128	13,914,128
Unrefrigerated Warehouse-No Rail	161.62	161.62	161.62	692,675	692,675
Strip Mall	1,494.50	1,494.50	1494.50	2,843,429	2,843,429
Total	28,653.13	28,653.13	28,653.13	84,363,840	84,363,840

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508453	0.058534	0.182003	0.128323	0.043028	0.007073	0.018375	0.041612	0.002788	0.003272	0.003888	0.000508	0.002143

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8280	7.5271	6.3228	0.0452		0.5721	0.5721		0.5721	0.5721		9,032.5334	9,032.5334	0.1731	0.1656	9,087.5039
NaturalGas Unmitigated	1.0480	9.5273	8.0030	0.0572		0.7241	0.7241		0.7241	0.7241		11,432.78440	11,432.7840	0.2191	0.2096	11,502.3620

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	38.0784	0.4107	3.7332	3.1359	0.0224		0.2837	0.2837		0.2837	0.2837		4,479.8153	4,479.8153	0.0859	0.0821	4,507.0787
Library	0.938219	0.0101	0.0920	0.0773	5.5000e-004		6.9900e-003	6.9900e-003		6.9900e-003	6.9900e-003		110.3787	110.3787	2.1200e-003	2.0200e-003	111.0505
Medical Office Building	9.37671	0.1011	0.9193	0.7722	5.5200e-003		0.0699	0.0699		0.0699	0.0699		1,103.1428	1,103.1428	0.0211	0.0202	1,109.8563
Research & Development	19.8068	0.2136	1.9419	1.6312	0.0117		0.1476	0.1476		0.1476	0.1476		2,330.2176	2,330.2176	0.0447	0.0427	2,344.3989
Strip Mall	0.134007	1.4500e-003	0.0131	0.0110	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003		15.7655	15.7655	3.0000e-004	2.9000e-004	15.8615
Unrefrigerated Warehouse-No Rail	0.0858284	9.3000e-004	8.4100e-003	7.0700e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004		10.0975	10.0975	1.9000e-004	1.9000e-004	10.1589
General Light Industry	5.38767	0.0581	0.5282	0.4437	3.1700e-003		0.0401	0.0401		0.0401	0.0401		633.8437	633.8437	0.0122	0.0116	637.7012
General Office Building	2.96881	0.0320	0.2911	0.2445	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.2723	349.2723	6.6900e-003	6.4000e-003	351.3979
Total		**0.8280**	**7.5271**	**6.3228**	**0.0452**		**0.5721**	**0.5721**		**0.5721**	**0.5721**		**9,032.5334**	**9,032.5334**	**0.1731**	**0.1656**	**9,087.5039**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	39.8043	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759
Unmitigated	39.8043	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.6612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.1279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0151	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759
Total	**39.8043**	**1.4900e-003**	**0.1655**	**1.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**		**0.3566**	**0.3566**	**9.2000e-004**		**0.3759**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Harbor-UCLA Medical Center (Full Build-Out Operations)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.64	1000sqft	3.00	130,635.00	0
General Light Industry	129.21	1000sqft	2.97	129,205.00	0
Hospital	379.00	Bed	6.23	271,272.12	0
Library	22.50	1000sqft	0.52	22,500.00	0
Medical Office Building	412.60	1000sqft	9.47	412,598.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0
Research & Development	475.00	1000sqft	10.90	475,000.00	0
Strip Mall	35.00	1000sqft	0.80	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	129,210.00	129,205.00
tblLandUse	LandUseSquareFeet	45,400.00	45,402.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	12.31
tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	8.67
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	ST_TR	42.04	42.70
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	12.31
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	8.67
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	SU_TR	20.43	42.70
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	8.67
tblVehicleTrips	WD_TR	2.59	3.56
tblVehicleTrips	WD_TR	44.32	42.70

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	39.8043	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759
Energy	0.8280	7.5271	6.3228	0.0452		0.5721	0.5721		0.5721	0.5721		9,032.5334	9,032.5334	0.1731	0.1656	9,087.5039
Mobile	63.2361	147.6639	665.9048	2.7033	179.5340	3.8194	183.3534	48.0450	3.5247	51.5697		195,501.4401	195,501.4401	5.7751		195,622.7168
Total	**103.8683**	**155.1925**	**672.3931**	**2.7485**	**179.5340**	**4.3920**	**183.9261**	**48.0450**	**4.0974**	**52.1424**		**204,534.3301**	**204,534.3301**	**5.9491**	**0.1656**	**204,710.5966**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.21**	**1.27**	**0.25**	**0.43**	**0.00**	**3.35**	**0.08**	**0.00**	**3.58**	**0.29**	**0.00**	**1.16**	**1.16**	**0.77**	**20.99**	**1.17**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	63.2361	147.6639	665.9048	2.7033	179.5340	3.8194	183.3534	48.0450	3.5247	51.5697		195,501.4401	195,501.4401	5.7751		195,622.7168
Unmitigated	63.2361	147.6639	665.9048	2.7033	179.5340	3.8194	183.3534	48.0450	3.5247	51.5697		195,501.4401	195,501.4401	5.7751		195,622.7168

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	193.82	193.82	193.82	858,267	858,267
General Office Building	1,608.12	1,608.12	1608.12	5,180,486	5,180,486
Hospital	4,904.26	4,904.26	4904.26	19,013,040	19,013,040
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	14,907.17	14,907.17	14907.17	38,667,079	38,667,079
Research & Development	4,118.25	4,118.25	4118.25	13,914,128	13,914,128
Unrefrigerated Warehouse-No Rail	161.62	161.62	161.62	692,675	692,675
Strip Mall	1,494.50	1,494.50	1494.50	2,843,429	2,843,429
Total	28,653.13	28,653.13	28,653.13	84,363,840	84,363,840

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508453	0.058534	0.182003	0.128323	0.043028	0.007073	0.018375	0.041612	0.002788	0.003272	0.003888	0.000508	0.002143

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.8280	7.5271	6.3228	0.0452		0.5721	0.5721		0.5721	0.5721		9,032.5334	9,032.5334	0.1731	0.1656	9,087.5039
NaturalGas Unmitigated	1.0480	9.5273	8.0030	0.0572		0.7241	0.7241		0.7241	0.7241		11,432.78440	11,432.7840	0.2191	0.2096	11,502.3620

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	38.0784	0.4107	3.7332	3.1359	0.0224		0.2837	0.2837		0.2837	0.2837		4,479.8153	4,479.8153	0.0859	0.0821	4,507.0787
Library	0.938219	0.0101	0.0920	0.0773	5.5000e-004		6.9900e-003	6.9900e-003		6.9900e-003	6.9900e-003		110.3787	110.3787	2.1200e-003	2.0200e-003	111.0505
Medical Office Building	9.37671	0.1011	0.9193	0.7722	5.5200e-003		0.0699	0.0699		0.0699	0.0699		1,103.1428	1,103.1428	0.0211	0.0202	1,109.8563
Research & Development	19.8068	0.2136	1.9419	1.6312	0.0117		0.1476	0.1476		0.1476	0.1476		2,330.2176	2,330.2176	0.0447	0.0427	2,344.3989
Strip Mall	0.134007	1.4500e-003	0.0131	0.0110	8.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003		15.7655	15.7655	3.0000e-004	2.9000e-004	15.8615
Unrefrigerated Warehouse-No Rail	0.0858284	9.3000e-004	8.4100e-003	7.0700e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004		10.0975	10.0975	1.9000e-004	1.9000e-004	10.1589
General Light Industry	5.38767	0.0581	0.5282	0.4437	3.1700e-003		0.0401	0.0401		0.0401	0.0401		633.8437	633.8437	0.0122	0.0116	637.7012
General Office Building	2.96881	0.0320	0.2911	0.2445	1.7500e-003		0.0221	0.0221		0.0221	0.0221		349.2723	349.2723	6.6900e-003	6.4000e-003	351.3979
Total		**0.8280**	**7.5271**	**6.3228**	**0.0452**		**0.5721**	**0.5721**		**0.5721**	**0.5721**		**9,032.5334**	**9,032.5334**	**0.1731**	**0.1656**	**9,087.5039**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	39.8043	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759
Unmitigated	39.8043	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	9.6612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	30.1279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0151	1.4900e-003	0.1655	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004		0.3566	0.3566	9.2000e-004		0.3759
Total	**39.8043**	**1.4900e-003**	**0.1655**	**1.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**		**0.3566**	**0.3566**	**9.2000e-004**		**0.3759**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix B. 6
South Coast Air Quality Management District Rule 403

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES	
Earth-moving	(1A)	Cease all active operations; OR
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	(1B)	Apply chemical stabilizers prior to wind event; OR
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	(3B)	Take the actions specified in Table 2, Item (3c); OR
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C)	Apply chemical stabilizers prior to wind event; OR
	(2C)	Apply water twice per hour during active operation; OR
	(3C)	Stop all vehicular traffic.
Open storage piles	(1D)	Apply water twice per hour; OR
	(2D)	Install temporary coverings.
Paved road track-out	(1E)	Cover all haul vehicles; OR
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Appendix C

Preliminary Geotechnical Evaluation

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

PRELIMINARY GEOTECHNICAL EVALUATION
HARBOR-UCLA MEDICAL CENTER MASTER PLAN
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA

PREPARED FOR:
PCR
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Irvine, California 92618

PREPARED BY:
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April 29, 2015
Project No. 209023003

April 29, 2015
Project No. 209023003

Mr. David A. Cook
PCR
One Venture, Suite 150
Irvine, California 92618

Subject: Preliminary Geotechnical Evaluation
Harbor-UCLA Medical Center Master Plan
1000 West Carson Street
Torrance, California

Dear Mr. Cook:

In accordance with your request and authorization, Ninyo & Moore has performed a preliminary geotechnical evaluation for the Harbor-UCLA Medical Center Master Plan project located at 1000 West Carson Street in Torrance, California. Our evaluation was conducted in general accordance with the scope of services presented in our proposal dated February 13, 2013. This report presents our findings and conclusions regarding the subject site. We understand that the results of this evaluation will be utilized in the preparation of environmental planning documents for the project.

We appreciate the opportunity to provide geotechnical consulting services for this project.

Sincerely,
NINYO & MOORE

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1. INTRODUCTION

In accordance with your request and authorization, we have performed a preliminary geotechnical evaluation for the Harbor-UCLA Medical Center Master Plan project (project) located at 1000 West Carson Street in an unincorporated portion of Los Angeles County in the community of Torrance, California (Figure 1). We have performed a geotechnical evaluation of the site geologic conditions and the impacts associated with potential geologic and seismic hazards for inclusion in the environmental planning documents for the project.

The purpose of our preliminary geotechnical evaluation was to assess the geologic conditions at the site and develop preliminary conclusions regarding potential geologic and seismic impacts associated with the project in accordance with the California Environmental Quality Act (CEQA). Where appropriate, recommendations to mitigate potential geologic hazards, as noted in this report, have been provided. Our geotechnical evaluation was based on review of readily available geologic and seismic data and published geotechnical literature pertinent to the project site, and site reconnaissance.

2. SCOPE OF SERVICES

Ninyo & Moore's scope of services has included review of geotechnical background materials, geologic reconnaissance of the project area, and geotechnical analysis. Specifically, we have performed the following tasks:

- Review of readily available topographic and geologic maps, published geotechnical literature, geologic and seismic data, soil data, groundwater data, aerial photographs, and in-house information.
- Review of geotechnical aspects of project plans and documents pertaining to the site.
- Geotechnical site reconnaissance by a representative from Ninyo & Moore conducted on February 16, 2015, to observe and document the existing surface conditions at the project site.
- Compilation and analysis of existing geotechnical data pertaining to the site.
- Assessment of the general geologic conditions and seismic hazards affecting the area and evaluation of their potential impacts on the project.

- Preparation of this report presenting the results of our study, as well as our conclusions regarding the project's geologic and seismic impacts, and recommendations to address the impacts to be included in the environmental planning documents.

3. PROJECT DESCRIPTION

Based on our understanding, the proposed project involves the development of a new long-term master plan to guide future medical campus development and delivery of health care services and health-related community programs. Future development under the master plan would include demolition of approximately 710,000 square feet of existing structures; renovation of approximately 240,000 square feet of existing structures; and construction of approximately 1,400,000 square feet of new facilities, including parking structures, outpatient buildings, an inpatient bed tower, a diagnostic and treatment building, retail space, and a central plant.

4. SITE DESCRIPTION

The project site is located in the Torrance coastal plain west of the Los Angeles River and north of the Los Angeles Harbor. Topography of the site slopes gently down toward the east ranging from an approximate elevation of 40 feet above mean sea level (MSL) near the eastern portion of the project area to an approximate elevation of 50 feet above MSL in the western part of the project area.

The medical center campus is approximately 72 acres and is bounded by West Carson Street to the north, South Vermont Avenue to the east, West 220th Street to the south and South Normandie Avenue to the west (Figure 1). The project is currently improved with a complex of buildings and related improvements dating back to the 1940s. The improvements include an inpatient hospital, outpatient clinics, research/development and education facilities, community/public service areas, and a parking structure (Figure 2). Additionally, the site is improved with paved roads, parking areas, landscaped areas, retaining walls, and developed pedestrian open space. A Los Angeles County Flood Control District rectangular, concrete, open channel extends along the south edge of the project site from South Normandie Avenue toward the east approximately 0.4 mile adjacent to 220th Street.

5. GEOLOGY

5.1. Regional Geology

The project site is located within the Peninsular Ranges Geomorphic Province of southern California. This geomorphic province encompasses an area that extends approximately 125 miles from the Transverse Ranges and the Los Angeles Basin south to the Mexican border, and beyond another approximately 775 miles to the tip of Baja California. The Peninsular Ranges province varies in width from approximately 30 to 100 miles and is characterized by northwest-trending mountain range blocks separated by similarly trending northwest-trending faults (Norris and Webb, 1990).

The project is situated in the Los Angeles Basin, a region divided into four structural blocks that include uplifted zones and synclinal depressions. The structural blocks are generally bounded by fault systems. The project site is situated in the southwestern block of the seaward part of the basin which is bounded by the Newport-Inglewood zone of deformation. This block is a combination of folds and faults and is characterized by overlapping staggering anticlinal hills. The Newport-Inglewood and Palos Verdes are major active fault systems located in the proximity of the project site. The predominant tectonic activity associated with these and other faults within this regional tectonic framework is right-lateral, strike-slip and/or reverse movement (Norris and Webb, 1990).

5.2. Site Geology

Regional geologic maps indicate that the site is underlain by late to middle Pleistocene-age alluvial flood plain deposits generally comprised of dissected gravel, sand, silt, and clay-bearing alluvium (Saucedo, et al., 2003). A regional geologic map of the site vicinity is shown on Figure 3.

5.3. Groundwater

The site is located within the west coast sub-basin of the Los Angeles Coastal Groundwater Basin. Historic groundwater monitoring well data from the State of California Water Resources Control Board's GeoTracker website (State of California, 2015) were reviewed

for wells located on adjacent properties east and north of the site. Based on the groundwater measurements in these wells from 2007 to 2014, groundwater levels at these locations have ranged from approximately 48 to 60 feet below the ground surface. The historic high groundwater in the site vicinity indicated in the Los Angeles County Safety Element is approximately 30 feet deep (Leighton & Associates, Inc., 1990).

Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions may be present.

6. FAULTING AND SEISMICITY

6.1. Regional Seismicity

The project area is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion at the site is considered significant. Table 1 lists selected principal known active faults within approximately 30 miles of the project area and the maximum moment magnitude (M_{max}) as published by the California Geological Survey (CGS) (Cao, et al., 2003). The fault distances in Table 1 are measured from the approximate center of the project area.

Figure 4 shows the approximate site location relative to the principal faults in the region. The active Newport-Inglewood fault is located approximately 3.4 miles northeast of the approximate center of the site. The active Palos Verdes fault is located approximately 3.7 miles southwest of the approximate center of the site. Blind thrust faults are low-angle faults at depths that do not break the surface and are, therefore, not shown on Figure 4. Although blind thrust faults do not have a surface trace, they can be capable of generating damaging earthquakes and are included in Table 1.

Table 1 – Principal Regional Active Faults

Fault	Approximate Fault-to-Site Distance [1] miles (kilometers)	Maximum Moment Magnitude [2] (M_{max})
Newport-Inglewood (Los Angeles Basin)	3.4 (5.5)	7.1
Palos Verdes	3.7 (5.9)	7.3
Puente Hills Blind Thrust	10.3 (16.5)	7.1
Upper Elysian Park Blind Thrust	16.7 (26.8)	6.4
Santa Monica	16.9 (27.1)	6.6
Elsinore	18.1 (29.1)	6.7
Hollywood	18.6 (30.0)	6.4
Malibu	19.1 (30.7)	6.7
Anacapa-Dume	19.8 (31.9)	7.5
Raymond	20.5 (32.9)	6.5
Verdugo	22.2 (35.7)	6.9
San Joaquin Hills Blind Thrust	22.7 (36.5)	6.6
Sierra Madre	26.9 (43.3)	7.2
San Jose	27.8 (44.7)	6.4
Clamshell-Sawpit	29.3 (47.1)	6.5

Notes:
[1] USGS, 2008
[2] Cao, et al., 2003

7. METHODOLOGY FOR GEOLOGIC IMPACT AND HAZARD ANALYSES

As outlined by the CEQA, the proposed project has been evaluated with respect to potential geologic and seismic impacts associated with the project. Evaluation of impacts due to potential geologic and seismic hazards is based on our review of readily available published geotechnical literature and geologic and seismic data pertinent to the proposed project, and site reconnaissance. The references and data reviewed include, but are not limited to, the following:

- Geologic maps and fault maps from the CGS and United States Geological Survey (USGS).
- Topographic maps from the USGS.
- State of California Earthquake Fault Zone Maps.
- State of California Seismic Hazards Zones Reports and Maps.
- Aerial photographs.

- Seismic data from the CGS and USGS.
- Geotechnical publications by the CGS and USGS.
- Los Angeles County Safety Element.

8. THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA guidelines (California Environmental Resources Evaluation System [CERES], 2005a, 2005b), a project is considered to have a geologic impact if its implementation would result in or expose people/structures to potential substantial adverse effects, including the risk of loss, injury, or death involving hazards involving one or more of the geologic conditions presented in Table 2. Table 2 also presents the impact potential as defined by CEQA associated with each of the geologic conditions discussed in the following sections.

Table 2 – Summary of Potential Geologic Impacts/Hazards

Geologic Condition	Impact Potential[1]			
	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
Earthquake Fault Rupture			x	
Strong Seismic Ground Shaking		x		
Seismically Related Ground Failure, Including Liquefaction			x	
Landslides				x
Substantial Soil Erosion			x	
Subsidence				x
Compressible/Collapsible Soils		x		
Expansive Soils		x		
Corrosive Soils		x		
Shallow Groundwater			x	

Note:
[1]Reference: CERES, 2005, Appendix G – Environmental Checklist Form, Final Text, dated October 26. Website: http://ceres.ca.gov/topic/envlaw/ceqa/guidelines/appendices.html

9. CONCLUSIONS AND RECOMMENDATIONS FOR POTENTIAL GEOLOGIC AND SEISMIC IMPACTS/HAZARDS

Based on our review of geologic and seismic background information, and geotechnical site reconnaissance, implementation of the proposed project is not anticipated to have a significant impact on the geologic environment. However, future development within the project area may be subjected to potential impacts from geologic and seismic hazards. Potential impacts on the proposed project based on our evaluation are provided in the following sections.

The potential geologic and seismic hazards described below may be addressed by employing sound engineering practice in the design and construction of future development in the project area. This practice includes the implementation of appropriate geotechnical recommendations prior to the design and construction of the facilities in the project area. Typical methods to reduce potential hazards that may be encountered during the construction of future improvements are described in the following sections. Where appropriate, recommendations to mitigate potential geologic hazards are provided. Prior to design of future improvements, detailed subsurface geotechnical evaluation should be performed to address the site-specific conditions at the locations of the planned improvements and to provide detailed recommendations for design and construction.

9.1. Surface Fault Rupture

Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. Based on our review of referenced geologic and fault hazard data and site reconnaissance, the project site is not transected by known active or potentially active faults. The active Newport-Inglewood fault is located approximately 3.4 mile northeast of the approximate center of the site; and the active Palos Verdes fault is located approximately 3.7 miles southwest of the approximate center of the site. The site is not located within a State of California Earthquake Fault Zone (State of California, 1977). Therefore, the potential for surface rupture is relatively low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

9.2. Seismic Ground Shaking

Earthquake events from one of the regional active or potentially active faults near the project area could result in strong ground shaking which could affect the project area. The level of ground shaking at a given location depends on many factors, including the size and type of earthquake, distance from the earthquake, and subsurface geologic conditions. The type of construction also affects how particular structures and improvements perform during ground shaking.

In order to evaluate the level of ground shaking that might be anticipated in the project area, site-specific analysis was performed. The 2013 California Building Code recommends that the design of structures be based on spectral response accelerations in the direction of maximum horizontal response (5 percent damped) having a 1 percent probability of collapse in 50 years. Such spectral response accelerations represent the Risk-Targeted Maximum Considered Earthquake (MCE_R) ground motion. The horizontal peak ground acceleration (PGA) that corresponds to the MCE_R for the site was calculated as 0.65g using the USGS (USGS, 2014) seismic design tool (web-based). The mapped and design PGA were estimated to be 0.62g and 0.43g, respectively, using the USGS (2014) calculator and the American Society of Civil Engineers 7-10 Standard. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

This potential level of ground shaking could have high impacts on future improvements in the project area without appropriate design mitigation, and should be considered during the detailed design phase of the project. Mitigation of the potential impacts of seismic ground shaking can be achieved through project structural design. Structural elements of future improvements can be designed to resist or accommodate appropriate site-specific ground motions and to conform to the current seismic design standards. Appropriate structural design and mitigation techniques would reduce the impacts related to seismic ground shaking to low levels.

9.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils located below the water table undergo rapid loss of shear strength due to excess pore pressure generation when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to rapid rise in pore water pressure causing the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking. The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of slabs due to sand boiling, buckling of deep foundations due to liquefaction-induced ground settlement.

According to Seismic Hazard Zones Maps published by the State of California (California Department of Conservation, Division of Mines and Geology [CDMG], 1998), the site is not located within an area considered susceptible to liquefaction (Figure 5). Furthermore, based on the recent groundwater depths on the order of 48 to 60 feet in the site vicinity, the potential for liquefaction at the site is considered relatively low. However, the site could be subject to seismically induced dynamic settlement, which would be analyzed with site-specific subsurface evaluation during the detailed design phase of the project.

Assessment of the potential for liquefaction and seismically induced dynamic settlement would be evaluated prior to detailed design and construction of project improvements and incorporated into the design, as appropriate. Structural design and mitigation techniques would be developed to reduce the impacts related to liquefaction to low levels. Therefore, the potential impacts due to liquefaction are considered to be minimal with incorporation of techniques such as structural design, in-situ ground modification, or supporting foundations with piles at depths designed specifically for liquefaction.

To evaluate the potential liquefaction hazard for the proposed project, subsurface evaluation could be performed. Site-specific geotechnical evaluations to assess the liquefaction and dynamic settlement characteristics of the on-site soils would include drilling of exploratory borings, evaluation of groundwater depths, and laboratory testing of soils.

Methods for construction in areas with potential liquefaction hazard may include in-situ ground modification, removal of liquefiable layers and replacement with compacted fill, or support of project improvements with piles at depths designed specifically for liquefaction. Pile foundations can be designed for liquefaction hazard by supporting the piles in dense soil or bedrock below the liquefiable zone or other appropriate methods as evaluated during the site-specific evaluation. Additional recommendations for mitigation of liquefaction may include densification by installation of stone columns, vibration, deep dynamic compaction, and/or compaction grouting.

9.4. Landslides

Landslides, slope failures, and mudflows of earth materials generally occur where slopes are steep and/or the earth materials are too weak to support themselves. Earthquake-induced landslides may also occur due to seismic ground shaking. Landslides are not shown at the site on the geologic maps reviewed. The project site has been extensively developed and is primarily covered with pavements, hardscape and structures. The site includes some graded slopes associated with landscaping and pedestrian areas. An area northwest of the hospital contains a slope that descends approximately 25 feet toward the edge of the building. This slope is landscaped and lined at the bottom edge with a drainage system.

Accordingly, the potential for future landslides or mudflows to affect developments within the project areas is relatively low, and significant impacts related to landslides or mudflows within the project area are not anticipated. Slopes created for future developments within the project area should also be designed to reduce the potential for landslides or mudflows.

9.5. Soil Erosion

Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses.

Based on our review of geologic references and site reconnaissance, the materials exposed at the surface of the project site include clays and silty sand soils. Sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together.

Future construction at the project site would result in ground surface disruption during excavation, grading, and trenching that would create the potential for erosion to occur. However, a Storm Water Pollution Prevention Program (SWPPP) incorporating Best Management Practices (BMPs) for erosion control would be prepared prior to the start of construction in accordance with governing agencies. In addition, the topographic gradients at the project site are relatively gentle. During long-term operation of future developments at the project site, surface drainage provisions, as appropriate, would reduce the potential for soil erosion at the site. Therefore, potential soil erosion would be reduced with incorporation of appropriate BMPs.

With the implementation of BMPs incorporated in the project SWPPP during future construction, water- and wind-related soil erosion can be limited and managed within construction site boundaries. Examples of these procedures could include surface drainage measures for erosion due to water, such as the use of erosion prevention mats or geofabrics, silt fencing, sandbags and plastic sheeting, and temporary drainage devices. Positive surface drainage should be accommodated at project construction sites to allow surface runoff to flow away from site improvements or areas susceptible to erosion. To reduce wind-related

erosion, wetting of soil surfaces and/or covering exposed ground areas and soil stockpiles could be considered during construction operations, as appropriate. The use of soil tackifiers may be considered to reduce the potential for water- and wind-related soil erosion.

During long-term operation of future developments in the project area, soil erosion can be mitigated through site drainage design and maintenance practices. Design procedures can be performed to reduce soil erosion such as appropriate surface drainage design of roadways and facilities to provide for positive surface runoff. These design procedures would address reducing concentrated run-off conditions that could cause erosion and affect the stability of project improvements.

9.6. Subsidence

Subsidence is characterized as a sinking of the ground surface relative to surrounding areas, and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to subsurface vaults, pipelines and other improvements.

Historic subsidence occurred in the City of Long Beach, but is not known to have occurred at the project site. The County of Los Angeles Safety Element (1990) does not indicate mapped areas of subsidence. Therefore, the potential for subsidence in the project area is relatively low.

9.7. Compressible/Collapsible Soils

Compressible soils are generally comprised of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. Soil collapse is a phenomenon where the soils undergo a significant decrease in volume upon increase in moisture content, with or without an increase in external loads. Buildings, structures and other improvements may be subject to excessive settlement-related distress when compressible soils or collapsible soils are present.

Based on our background review, the project area is underlain by older alluvial deposits. The alluvial deposits underlying the site are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse. Older, undocumented fill soils related to previous development may be present at the project site and, if so, may be potentially compressible/collapsible. Due to the presence of potentially compressible/ collapsible soils at the site, there is a potential for differential settlement to cause damage to project improvements. The potential impacts of settlement are significant without appropriate mitigation during detailed project design and construction.

Since future development within the project area will involve construction of new improvements that would be constructed upon the existing soils, potential settlement and/or collapsible soils will be a consideration in the detailed design and construction of project improvements. Assessment of the potential for soils prone to settlement would be evaluated prior to detailed design and construction of project improvements and mitigation techniques would be developed, as appropriate, to reduce the impacts related to settlement to low levels.

To evaluate the potential for settlement to affect future project components, surface reconnaissance and subsurface evaluation would be performed. During the detailed design phase of the project, site-specific geotechnical evaluations would be performed to assess the settlement potential of the on-site natural soils and undocumented fill. This may include detailed surface reconnaissance to evaluate site conditions, and drilling of exploratory borings or test pits and laboratory testing of soils, where appropriate, to evaluate site conditions.

Examples of possible mitigation measures for soils with the potential for settlement include removal of the compressible/collapsible soil layers and replacement with compacted fill; surcharging to induce settlement prior to construction of improvements; allowing for a settlement period after or during construction of new fills; and specialized foundation design, including the use of deep foundation systems to support structures. Varieties of in-situ soil improvement techniques are also available, such as dynamic compaction (heavy tamping) or compaction grouting.

9.8. Expansive Soils

Expansive soils include clay minerals that are characterized by their ability to undergo significant volume change (shrink or swell) due to variations in moisture content. Sandy soils are generally not expansive. Changes in soil moisture content can result from rainfall, irrigation, pipeline leakage, surface drainage, perched groundwater, drought, or other factors. Volumetric change of expansive soil may cause excessive cracking and heaving of structures with shallow foundations, concrete slabs-on-grade, or pavements supported on these materials.

Based on our background review and site reconnaissance, the near-surface soils in the project site are generally clayey and sandy silt soils. Sandy soils typically have a low expansion potential. However, clayey soils are typically expansive. Constructing project improvements on soils known to be potentially expansive could have a significant impact on future improvements.

Detailed assessment of the potential for expansive soils would be evaluated during the design phase of the project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to expansive soils to low levels. Therefore, the potential impacts due to expansive soils would be reduced to low levels with incorporation of techniques such as overexcavation and replacement with non-expansive soil, soil treatment, moisture management, and/or specific structural design for expansive soil conditions developed during design of the project.

9.9. Corrosive Soils

The project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metals. Corrosive soil conditions may exacerbate the corrosion hazard to buried conduits, foundations, and other buried concrete or metal improvements. Corrosive soils could cause premature deterioration of these underground structures or foundations. Constructing future project improvements on corrosive soils could have a substantial impact to the project. Assessment of the potential for corrosive soils would be evaluated during the detailed design phase of the project through

soil testing procedures, and mitigation techniques would be developed, as appropriate, to reduce the impacts related to corrosive soils to low levels.

To evaluate the potential for corrosive soils to affect future project improvements, subsurface evaluation, including laboratory testing, would need to be performed. Evaluation of the corrosive soil potential can be accomplished by the testing and analysis of soils at foundation design depths. The laboratory tests conducted on the soils prior to construction and improvement plan preparation would include corrosivity tests to evaluate the corrosivity of the subsurface soils. Review of these data by a corrosion engineer would result in corrosion protection measures suitable for the project. Evaluation of the potential corrosive soils hazard would be performed prior to detailed design and construction so that, in the event the hazard exists, mitigation techniques can be implemented.

Mitigation of corrosive soil conditions may involve the use of concrete resistant to sulfate exposure. Corrosion protection for metals may be needed for underground foundations or structures in areas where corrosive groundwater or soil could potentially cause deterioration. Typical mitigation techniques include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the appropriate type of cement and water/cement ratio. Specific measures to reduce the potential effects of corrosive soils would be developed in the detailed design phase.

9.10. Groundwater

Based on our background review, groundwater levels in the vicinity of the project site may vary from approximately 48 to 60 feet below the ground surface. The depth to historic high groundwater is approximately 30 feet. Future improvements in the project area are anticipated to consist of excavations and site grading for new medical, office and retail structures, pedestrian areas, landscaping, open space areas, and parking area improvements. Based on the recent depth of groundwater in the project area and the anticipated depth of these construction activities, groundwater would not have a significant impact on excavations for future project improvements. However, areas of shallower perched groundwater may be encountered during excavations. Groundwater levels may be influenced

by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations.

Wet or saturated soil conditions encountered in excavations during construction for the project can cause instability of the excavations, and present a constraint to the construction of foundations. Excavations for foundations in areas with shallow perched groundwater may need to be cased/shored and/or dewatered to maintain stability of the excavations and provide access for construction. Wet soils encountered in excavations below the groundwater can be difficult for the contractor to handle.

Further study, including subsurface exploration, would be performed during the detailed design phase of future improvements to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of project improvements. Assessment of the potential for shallow groundwater would be evaluated during the design phase of the project and mitigation techniques would be developed, as appropriate, to reduce the impacts related to shallow groundwater to low levels. Therefore, the potential impacts due to groundwater would be reduced with incorporation of techniques such as construction dewatering.

10. LIMITATIONS

The purpose of this study was to evaluate geotechnical conditions and potential geologic and seismic hazards at the site by reviewing readily available geotechnical data, and performing a site reconnaissance to provide a preliminary geotechnical report which can be utilized in the preparation of environmental documents for the project.

The geotechnical analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No other warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Our preliminary conclusions and recommendations are based on a review of readily available geotechnical literature, geologic and seismic data, and an analysis of the observed

conditions. Variations may exist and conditions not observed or described in this report may be encountered.

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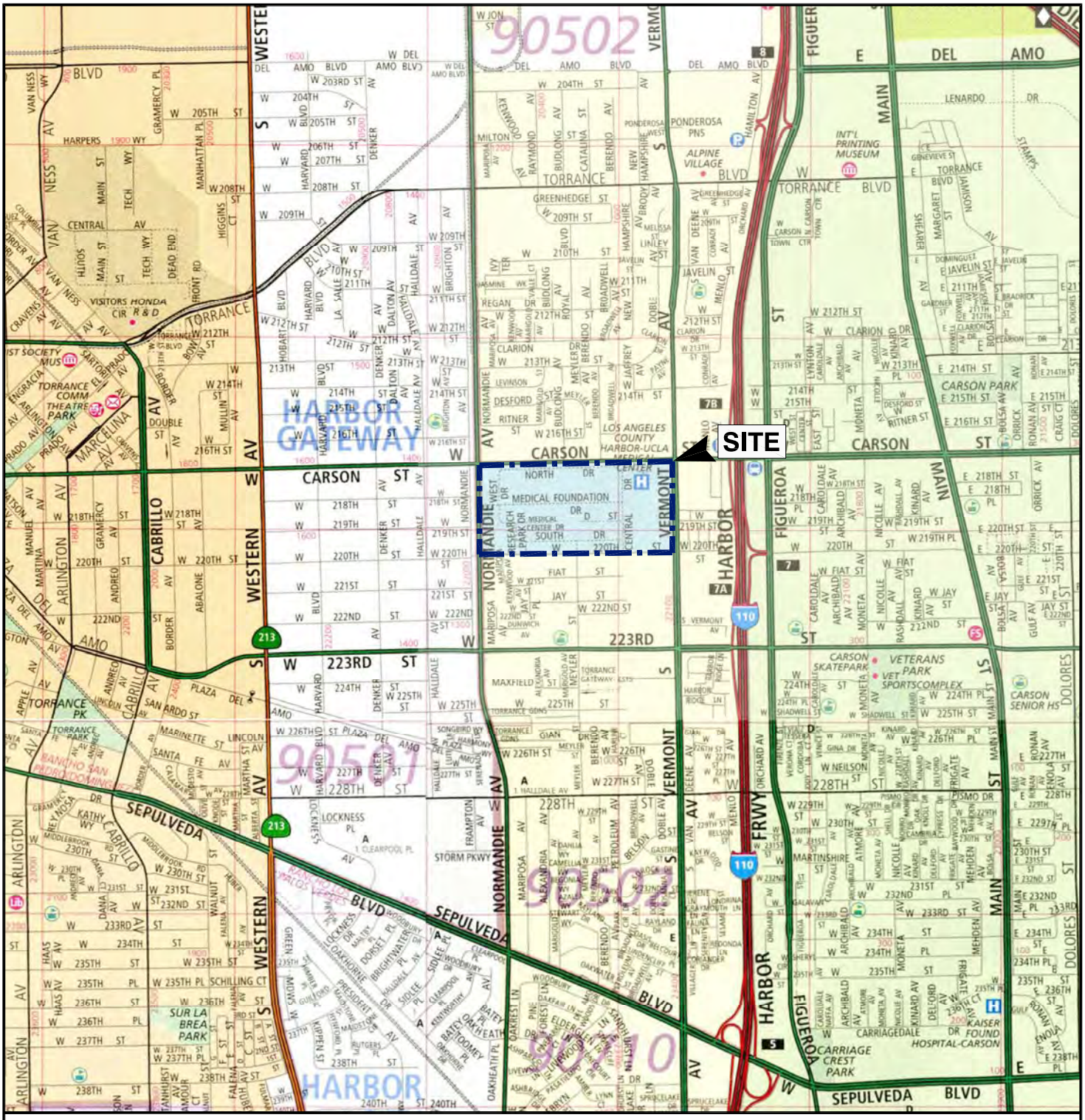

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N

SCALE IN FEET

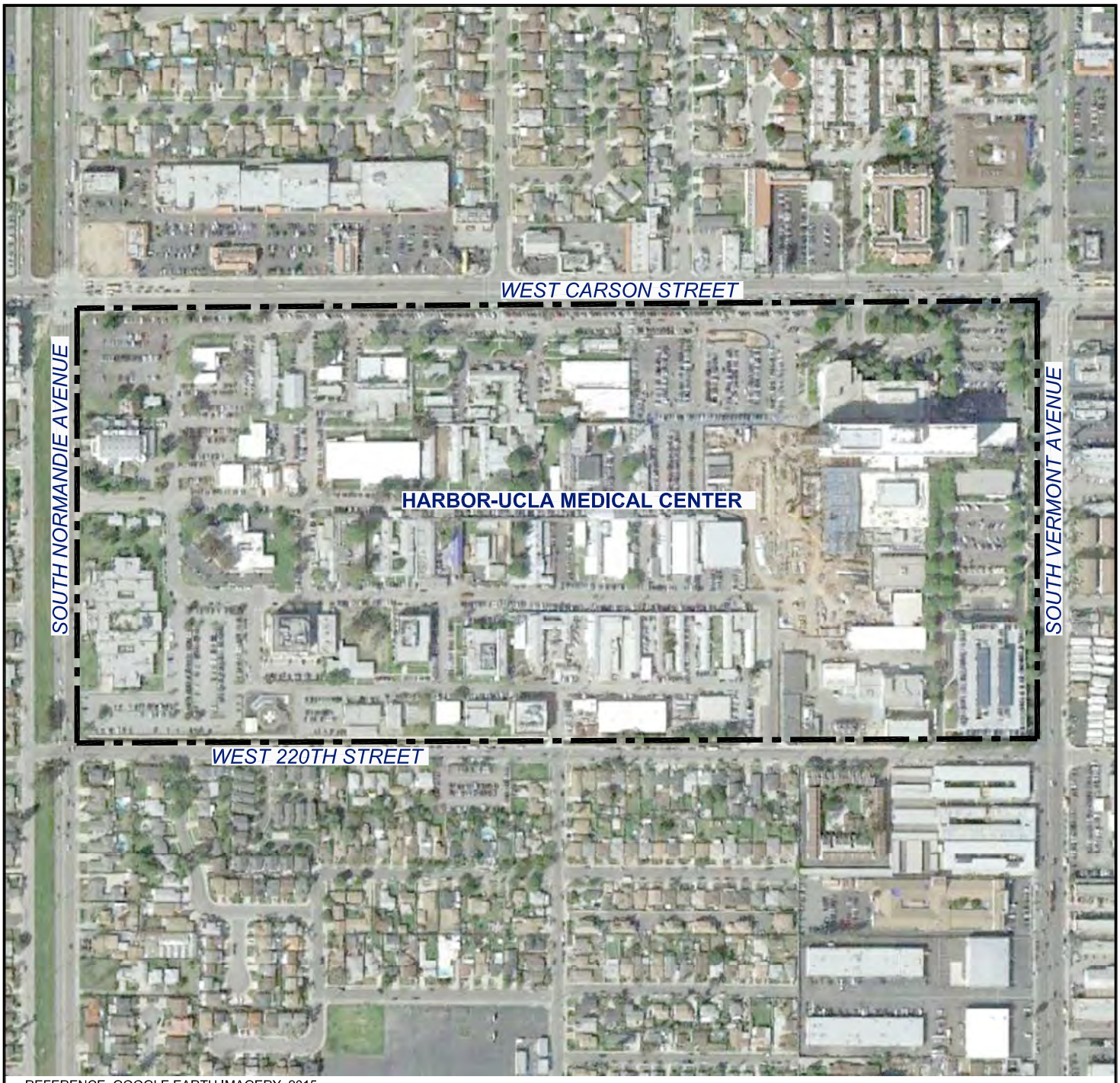
0 2,000 4,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Map © Rand McNally, R.L.07-S-129

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. 209023003 / DATE 4/15	HARBOR-UCLA MEDICAL CENTER MASTER PLAN 1000 WEST CARSON STREET TORRANCE, CALIFORNIA	1

209023003_SL.DWG 11:10:31 03/31/2015 GK



REFERENCE: GOOGLE EARTH IMAGERY, 2015.

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SCALE IN FEET

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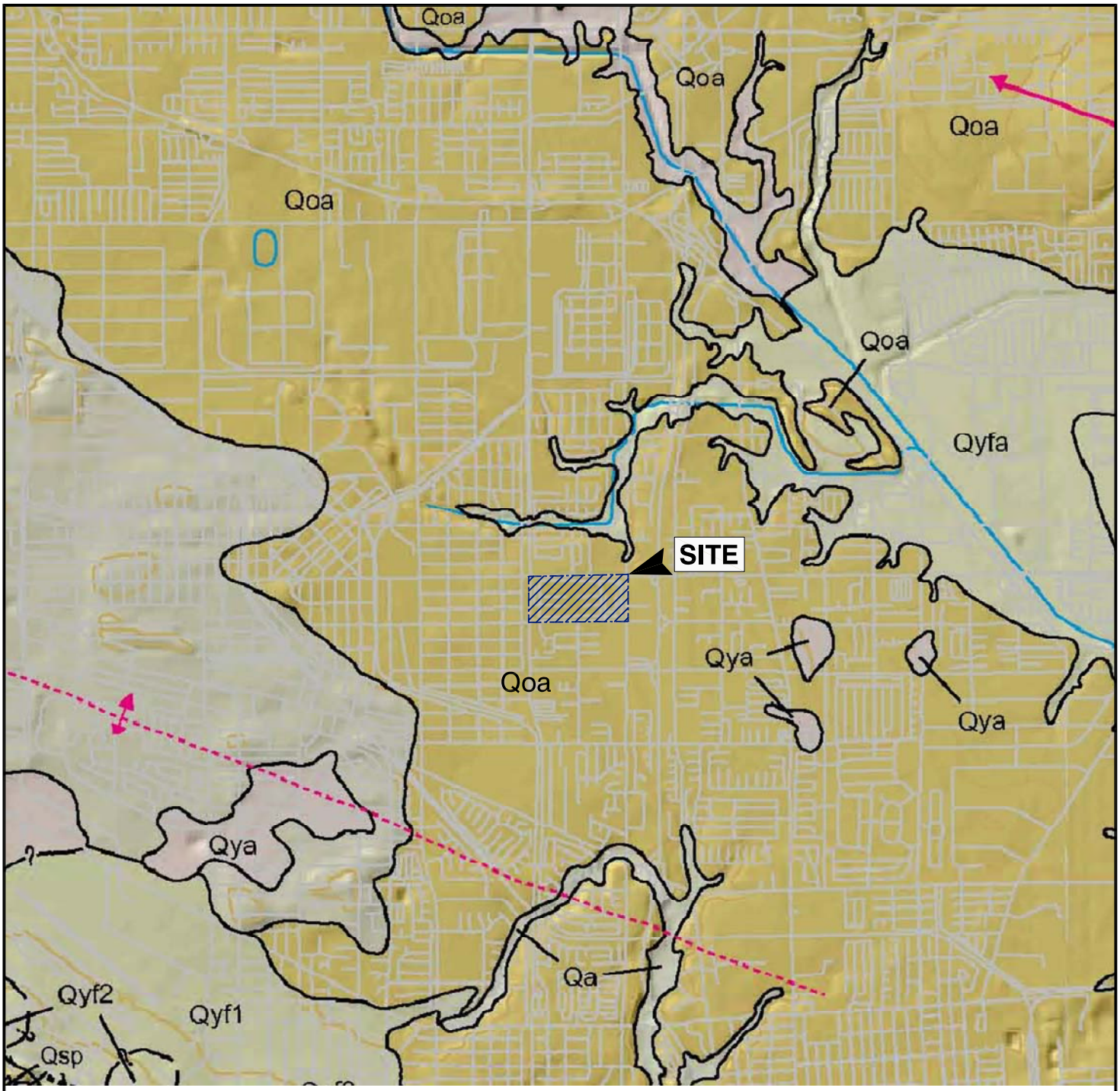
NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

SITE BOUNDARY

Ninyo & Moore	SITE AERIAL	FIGURE
PROJECT NO. 209023003 / DATE 4/15	HARBOR-UCLA MEDICAL CENTER MASTER PLAN 1000 WEST CARSON STREET TORRANCE, CALIFORNIA	2

209023003-SA.dwg, Mar 31, 2015, 11:03am, SN



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SCALE IN FEET

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NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

Qa	ALLUVIAL FLOOD PLAIN DEPOSITS
Qya	YOUNG ALLUVIAL FLOOD PLAIN DEPOSITS
Qyfa	YOUNG ALLUVIAL FAN AND VALLEY DEPOSITS
Qoa	OLDER ALLUVIAL FLOOD PLAIN DEPOSITS

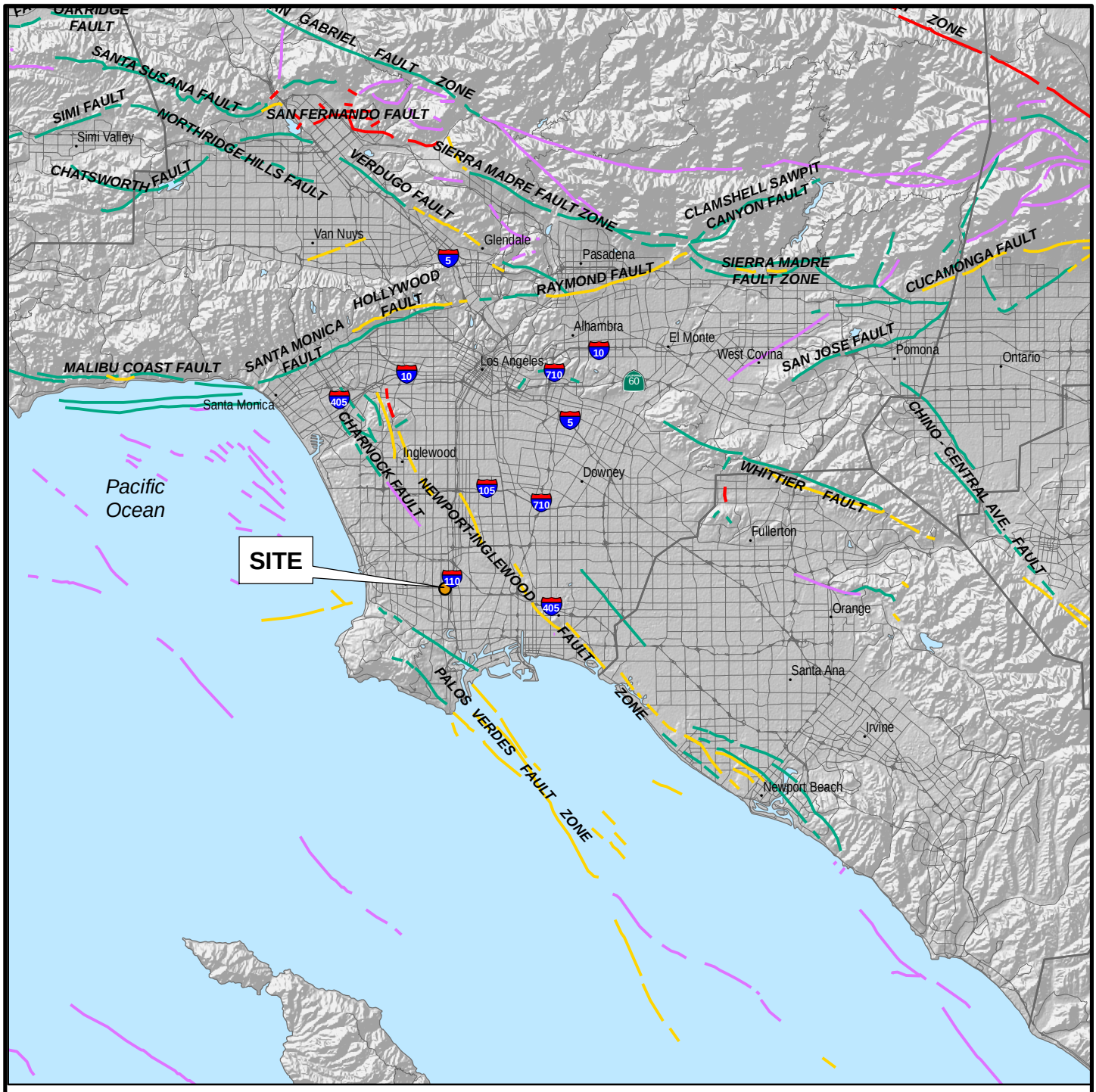
Ninyo & Moore

REGIONAL GEOLOGY

FIGURE 3

PROJECT NO.	DATE
209023003	4/15

HARBOR-UCLA MEDICAL CENTER MASTER PLAN
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)
REFERENCE: JENNINGS, 2010, FAULT ACTIVITY MAP OF CALIFORNIA.

LEGEND

FAULT ACTIVITY:

- HISTORICALLY ACTIVE
- LATE QUATERNARY
- HOLOCENE ACTIVE
- QUATERNARY
- COUNTY BOUNDARIES

N

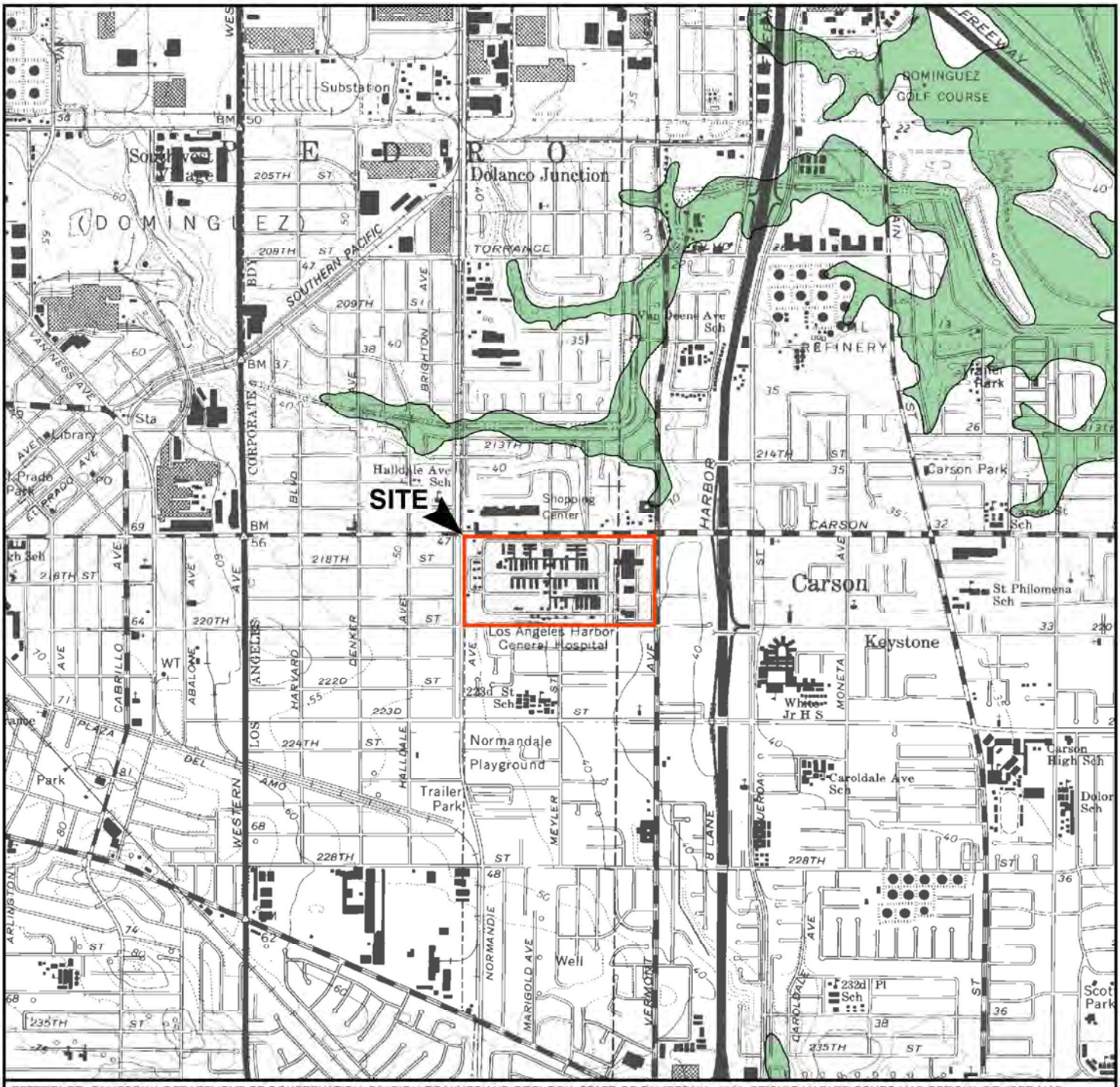
10 0 10

Miles

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	FAULT LOCATIONS	FIGURE
PROJECT NO.	DATE	HARBOR-UCLA MEDICAL CENTER MASTER PLAN 1000 WEST CARSON STREET TORRANCE, CALIFORNIA	4
209023003	4/15		

209023003_FL.....GK



REFERENCE: CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF MINES AND GEOLOGY, STATE OF CALIFORNIA, 1999, SEISMIC HAZARD ZONES MAP OFFICIAL REVISED MAP TORRANCE QUADRANGLE, 7.5-MINUTE SERIES: SCALE 1:24,000.

N

SCALE IN FEET

0 2,000 4,000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

LIQUEFACTION:
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

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SEISMIC HAZARD ZONES

PROJECT NO.	DATE
209023003	4/15

HARBOR-UCLA MEDICAL CENTER MASTER PLAN
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA

FIGURE
5

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Appendix D

Greenhouse Gas Emissions Data Worksheets

Harbor-UCLA Medical Center
Draft EIR
Appendix D, Greenhouse Gas Emissions Data Worksheets

D. 1 Construction Emissions – CalEEMod Output (Annual)

- Phase 1 Construction Emissions
- Phase 2 Construction Emissions
- Phase 3 Construction Emissions
- Phase 4 Construction Emissions
- Phase 5 Construction Emissions
- Phase 6 Construction Emissions
- LA Biomed Construction Emissions

D. 2 Operational Emissions – CalEEMod Output (Annual)

- Existing Operations
- Interim Operations
- Full Build-Out Operations

D.3 Mobile Source Emission Calculations

Appendix D. 1
Construction Emissions – CalEEMod Output (Annual)

- Phase 1 Construction Emissions
- Phase 2 Construction Emissions
- Phase 3 Construction Emissions
- Phase 4 Construction Emissions
- Phase 5 Construction Emissions
- Phase 6 Construction Emissions
- LA Biomed Construction Emissions

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

Phase 1 Construction Emissions

Harbor UCLA Master Plan- Phase 1

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	809.00	Space	7.28	300,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Architectural Coating - Paved Coating Exterior- 6% of the square footage

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	57.00
tblConstructionPhase	NumDays	230.00	250.00

tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	20.00	57.00
tblConstructionPhase	PhaseEndDate	4/8/2021	1/19/2021
tblConstructionPhase	PhaseEndDate	8/14/2019	1/19/2021
tblConstructionPhase	PhaseEndDate	8/28/2018	8/29/2018
tblConstructionPhase	PhaseEndDate	4/8/2021	1/19/2021
tblConstructionPhase	PhaseStartDate	1/20/2021	11/1/2020
tblConstructionPhase	PhaseStartDate	8/30/2018	2/5/2020
tblConstructionPhase	PhaseStartDate	5/31/2018	6/1/2018
tblConstructionPhase	PhaseStartDate	1/20/2021	11/1/2020
tblGrading	MaterialExported	0.00	28,851.00
tblGrading	MaterialImported	0.00	37,067.00
tblLandUse	LandUseSquareFeet	323,600.00	300,700.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripNumber	358.00	3,369.00
tblTripsAndVMT	HaulingTripNumber	8,240.00	10,986.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	128.00
tblTripsAndVMT	WorkerTripNumber	13.00	499.00

tblTripsAndVMT	WorkerTripNumber	126.00	516.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	25.00	68.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0356	0.3438	0.3007	5.6000e-004	0.0370	0.0171	0.0540	8.9500e-003	0.0160	0.0250	0.0000	48.7350	48.7350	7.1100e-003	0.0000	48.8844
2018	0.4730	4.6850	4.8064	0.0113	0.6221	0.1858	0.8078	0.2140	0.1732	0.3872	0.0000	952.2067	952.2067	0.0865	0.0000	954.0227
2020	3.0390	1.7708	4.1059	0.0112	0.7327	0.0731	0.8057	0.1953	0.0683	0.2636	0.0000	785.7822	785.7822	0.0613	0.0000	787.0700
2021	0.8206	0.1495	0.2977	7.8000e-004	0.0465	7.2800e-003	0.0537	0.0124	6.7900e-003	0.0192	0.0000	55.3022	55.3022	5.6100e-003	0.0000	55.4200
Total	**4.3680**	**6.9490**	**9.5107**	**0.0239**	**1.4382**	**0.2832**	**1.7213**	**0.4306**	**0.2643**	**0.6949**	**0.0000**	**1,842.0261**	**1,842.0261**	**0.1605**	**0.0000**	**1,845.3972**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0100	0.0725	0.2704	5.6000e-004	0.0343	1.3100e-003	0.0356	8.5400e-003	1.2400e-003	9.7900e-003	0.0000	48.7350	48.7350	7.1100e-003	0.0000	48.8844
2018	0.2262	2.0140	4.4853	0.0113	0.4709	0.0344	0.5053	0.1447	0.0320	0.1767	0.0000	952.2064	952.2064	0.0865	0.0000	954.0224
2020	2.9611	0.8680	4.1664	0.0112	0.7327	0.0239	0.7565	0.1953	0.0230	0.2183	0.0000	785.7820	785.7820	0.0613	0.0000	787.0699
2021	0.8115	0.0519	0.3056	7.8000e-004	0.0465	1.4600e-003	0.0479	0.0124	1.4100e-003	0.0138	0.0000	55.3022	55.3022	5.6100e-003	0.0000	55.4200
Total	**4.0088**	**3.0064**	**9.2276**	**0.0239**	**1.2843**	**0.0610**	**1.3453**	**0.3609**	**0.0576**	**0.4186**	**0.0000**	**1,842.0255**	**1,842.0255**	**0.1605**	**0.0000**	**1,845.3967**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.22**	**56.74**	**2.98**	**0.00**	**10.70**	**78.46**	**21.84**	**16.18**	**78.19**	**39.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/12/2017	5/30/2018	5	122	
2	Grading	Grading	6/1/2018	8/29/2018	5	64	
3	Building Construction	Building Construction	2/5/2020	1/19/2021	5	250	
4	Paving	Paving	11/1/2020	1/19/2021	5	57	
5	Architectural Coating	Architectural Coating	11/1/2020	1/19/2021	5	57	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 32

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 451,050; Non-Residential Outdoor: 150,350 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	128.00	2.00	3,369.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	499.00	2.00	10,986.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	516.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.4500e-003	0.0000	4.4500e-003	6.7000e-004	0.0000	6.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0290	0.2861	0.2088	3.0000e-004		0.0162	0.0162		0.0153	0.0153	0.0000	26.7858	26.7858	6.5600e-003	0.0000	26.9236
Total	**0.0290**	**0.2861**	**0.2088**	**3.0000e-004**	**4.4500e-003**	**0.0162**	**0.0207**	**6.7000e-004**	**0.0153**	**0.0159**	**0.0000**	**26.7858**	**26.7858**	**6.5600e-003**	**0.0000**	**26.9236**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2700e-003	0.0517	0.0408	1.4000e-004	0.0226	7.6000e-004	0.0234	5.6500e-003	7.0000e-004	6.3400e-003	0.0000	12.8212	12.8212	9.0000e-005	0.0000	12.8231
Vendor	1.1000e-004	1.1600e-003	1.5500e-003	0.0000	9.0000e-005	2.0000e-005	1.0000e-004	2.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.2717	0.2717	0.0000	0.0000	0.2717
Worker	3.2200e-003	4.7600e-003	0.0495	1.2000e-004	9.8300e-003	8.0000e-005	9.9100e-003	2.6100e-003	7.0000e-005	2.6800e-003	0.0000	8.8564	8.8564	4.6000e-004	0.0000	8.8660
Total	**6.6000e-003**	**0.0577**	**0.0919**	**2.6000e-004**	**0.0325**	**8.6000e-004**	**0.0334**	**8.2800e-003**	**7.9000e-004**	**9.0600e-003**	**0.0000**	**21.9492**	**21.9492**	**5.5000e-004**	**0.0000**	**21.9608**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7400e-003	0.0000	1.7400e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4200e-003	0.0148	0.1785	3.0000e-004		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	26.7857	26.7857	6.5600e-003	0.0000	26.9235
Total	**3.4200e-003**	**0.0148**	**0.1785**	**3.0000e-004**	**1.7400e-003**	**4.6000e-004**	**2.2000e-003**	**2.6000e-004**	**4.6000e-004**	**7.2000e-004**	**0.0000**	**26.7857**	**26.7857**	**6.5600e-003**	**0.0000**	**26.9235**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2700e-003	0.0517	0.0408	1.4000e-004	0.0226	7.6000e-004	0.0234	5.6500e-003	7.0000e-004	6.3400e-003	0.0000	12.8212	12.8212	9.0000e-005	0.0000	12.8231
Vendor	1.1000e-004	1.1600e-003	1.5500e-003	0.0000	9.0000e-005	2.0000e-005	1.0000e-004	2.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.2717	0.2717	0.0000	0.0000	0.2717
Worker	3.2200e-003	4.7600e-003	0.0495	1.2000e-004	9.8300e-003	8.0000e-005	9.9100e-003	2.6100e-003	7.0000e-005	2.6800e-003	0.0000	8.8564	8.8564	4.6000e-004	0.0000	8.8660
Total	**6.6000e-003**	**0.0577**	**0.0919**	**2.6000e-004**	**0.0325**	**8.6000e-004**	**0.0334**	**8.2800e-003**	**7.9000e-004**	**9.0600e-003**	**0.0000**	**21.9492**	**21.9492**	**5.5000e-004**	**0.0000**	**21.9608**

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0343	0.0000	0.0343	5.2000e-003	0.0000	5.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1961	1.9337	1.5380	2.2800e-003		0.1061	0.1061		0.0999	0.0999	0.0000	204.2353	204.2353	0.0500	0.0000	205.2853
Total	**0.1961**	**1.9337**	**1.5380**	**2.2800e-003**	**0.0343**	**0.1061**	**0.1404**	**5.2000e-003**	**0.0999**	**0.1051**	**0.0000**	**204.2353**	**204.2353**	**0.0500**	**0.0000**	**205.2853**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0246	0.3705	0.3084	1.1000e-003	0.0281	5.8500e-003	0.0339	7.6300e-003	5.3800e-003	0.0130	0.0000	97.2651	97.2651	7.2000e-004	0.0000	97.2802
Vendor	8.2000e-004	8.1900e-003	0.0114	2.0000e-005	6.6000e-004	1.3000e-004	7.9000e-004	1.9000e-004	1.2000e-004	3.1000e-004	0.0000	2.0606	2.0606	1.0000e-005	0.0000	2.0610
Worker	0.0223	0.0333	0.3460	9.3000e-004	0.0758	6.0000e-004	0.0764	0.0201	5.6000e-004	0.0207	0.0000	65.7707	65.7707	3.2800e-003	0.0000	65.8394
Total	**0.0477**	**0.4120**	**0.6658**	**2.0500e-003**	**0.1046**	**6.5800e-003**	**0.1111**	**0.0280**	**6.0600e-003**	**0.0340**	**0.0000**	**165.0964**	**165.0964**	**4.0100e-003**	**0.0000**	**165.1806**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0134	0.0000	0.0134	2.0300e-003	0.0000	2.0300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.1142	1.3769	2.2800e-003		3.5100e-003	3.5100e-003		3.5100e-003	3.5100e-003	0.0000	204.2351	204.2351	0.0500	0.0000	205.2851
Total	**0.0264**	**0.1142**	**1.3769**	**2.2800e-003**	**0.0134**	**3.5100e-003**	**0.0169**	**2.0300e-003**	**3.5100e-003**	**5.5400e-003**	**0.0000**	**204.2351**	**204.2351**	**0.0500**	**0.0000**	**205.2851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0246	0.3705	0.3084	1.1000e-003	0.0281	5.8500e-003	0.0339	7.6300e-003	5.3800e-003	0.0130	0.0000	97.2651	97.2651	7.2000e-004	0.0000	97.2802
Vendor	8.2000e-004	8.1900e-003	0.0114	2.0000e-005	6.6000e-004	1.3000e-004	7.9000e-004	1.9000e-004	1.2000e-004	3.1000e-004	0.0000	2.0606	2.0606	1.0000e-005	0.0000	2.0610
Worker	0.0223	0.0333	0.3460	9.3000e-004	0.0758	6.0000e-004	0.0764	0.0201	5.6000e-004	0.0207	0.0000	65.7707	65.7707	3.2800e-003	0.0000	65.8394
Total	**0.0477**	**0.4120**	**0.6658**	**2.0500e-003**	**0.1046**	**6.5800e-003**	**0.1111**	**0.0280**	**6.0600e-003**	**0.0340**	**0.0000**	**165.0964**	**165.0964**	**4.0100e-003**	**0.0000**	**165.1806**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2134	0.0000	0.2134	0.1083	0.0000	0.1083	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0866	0.8927	0.6605	7.8000e-004		0.0501	0.0501		0.0461	0.0461	0.0000	71.4241	71.4241	0.0222	0.0000	71.8910
Total	**0.0866**	**0.8927**	**0.6605**	**7.8000e-004**	**0.2134**	**0.0501**	**0.2635**	**0.1083**	**0.0461**	**0.1544**	**0.0000**	**71.4241**	**71.4241**	**0.0222**	**0.0000**	**71.8910**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0906	1.3647	1.1361	4.0400e-003	0.0942	0.0215	0.1157	0.0258	0.0198	0.0456	0.0000	358.2875	358.2875	2.6500e-003	0.0000	358.3432
Vendor	4.9000e-004	4.8500e-003	6.7700e-003	1.0000e-005	3.9000e-004	8.0000e-005	4.7000e-004	1.1000e-004	7.0000e-005	1.8000e-004	0.0000	1.2211	1.2211	1.0000e-005	0.0000	1.2213
Worker	0.0515	0.0770	0.7992	2.1500e-003	0.1752	1.4000e-003	0.1766	0.0465	1.2900e-003	0.0478	0.0000	151.9424	151.9424	7.5700e-003	0.0000	152.1013
Total	**0.1426**	**1.4466**	**1.9421**	**6.2000e-003**	**0.2698**	**0.0230**	**0.2928**	**0.0725**	**0.0212**	**0.0936**	**0.0000**	**511.4510**	**511.4510**	**0.0102**	**0.0000**	**511.6658**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0832	0.0000	0.0832	0.0423	0.0000	0.0423	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5200e-003	0.0412	0.5005	7.8000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	71.4240	71.4240	0.0222	0.0000	71.8909
Total	**9.5200e-003**	**0.0412**	**0.5005**	**7.8000e-004**	**0.0832**	**1.2700e-003**	**0.0845**	**0.0423**	**1.2700e-003**	**0.0435**	**0.0000**	**71.4240**	**71.4240**	**0.0222**	**0.0000**	**71.8909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0906	1.3647	1.1361	4.0400e-003	0.0942	0.0215	0.1157	0.0258	0.0198	0.0456	0.0000	358.2875	358.2875	2.6500e-003	0.0000	358.3432
Vendor	4.9000e-004	4.8500e-003	6.7700e-003	1.0000e-005	3.9000e-004	8.0000e-005	4.7000e-004	1.1000e-004	7.0000e-005	1.8000e-004	0.0000	1.2211	1.2211	1.0000e-005	0.0000	1.2213
Worker	0.0515	0.0770	0.7992	2.1500e-003	0.1752	1.4000e-003	0.1766	0.0465	1.2900e-003	0.0478	0.0000	151.9424	151.9424	7.5700e-003	0.0000	152.1013
Total	**0.1426**	**1.4466**	**1.9421**	**6.2000e-003**	**0.2698**	**0.0230**	**0.2928**	**0.0725**	**0.0212**	**0.0936**	**0.0000**	**511.4510**	**511.4510**	**0.0102**	**0.0000**	**511.6658**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1036	0.8869	0.5638	1.0700e-003		0.0443	0.0443		0.0416	0.0416	0.0000	89.6418	89.6418	0.0251	0.0000	90.1684
Total	**0.1036**	**0.8869**	**0.5638**	**1.0700e-003**		**0.0443**	**0.0443**		**0.0416**	**0.0416**	**0.0000**	**89.6418**	**89.6418**	**0.0251**	**0.0000**	**90.1684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0396	0.3542	0.5755	1.2500e-003	0.0357	6.0000e-003	0.0418	0.0102	5.5200e-003	0.0157	0.0000	106.1809	106.1809	7.7000e-004	0.0000	106.1971
Worker	0.1697	0.2507	2.6118	8.2100e-003	0.6709	5.2200e-003	0.6761	0.1782	4.8400e-003	0.1830	0.0000	536.9514	536.9514	0.0257	0.0000	537.4909
Total	**0.2093**	**0.6048**	**3.1873**	**9.4600e-003**	**0.7066**	**0.0112**	**0.7178**	**0.1884**	**0.0104**	**0.1987**	**0.0000**	**643.1323**	**643.1323**	**0.0265**	**0.0000**	**643.6880**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0500	0.2270	0.6107	1.0700e-003		0.0116	0.0116		0.0116	0.0116	0.0000	89.6417	89.6417	0.0251	0.0000	90.1683
Total	**0.0500**	**0.2270**	**0.6107**	**1.0700e-003**		**0.0116**	**0.0116**		**0.0116**	**0.0116**	**0.0000**	**89.6417**	**89.6417**	**0.0251**	**0.0000**	**90.1683**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0396	0.3542	0.5755	1.2500e-003	0.0357	6.0000e-003	0.0418	0.0102	5.5200e-003	0.0157	0.0000	106.1809	106.1809	7.7000e-004	0.0000	106.1971
Worker	0.1697	0.2507	2.6118	8.2100e-003	0.6709	5.2200e-003	0.6761	0.1782	4.8400e-003	0.1830	0.0000	536.9514	536.9514	0.0257	0.0000	537.4909
Total	**0.2093**	**0.6048**	**3.1873**	**9.4600e-003**	**0.7066**	**0.0112**	**0.7178**	**0.1884**	**0.0104**	**0.1987**	**0.0000**	**643.1323**	**643.1323**	**0.0265**	**0.0000**	**643.6880**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1100e-003	0.0445	0.0298	6.0000e-005		2.1200e-003	2.1200e-003		1.9900e-003	1.9900e-003	0.0000	4.9168	4.9168	1.3500e-003	0.0000	4.9452
Total	**5.1100e-003**	**0.0445**	**0.0298**	**6.0000e-005**		**2.1200e-003**	**2.1200e-003**		**1.9900e-003**	**1.9900e-003**	**0.0000**	**4.9168**	**4.9168**	**1.3500e-003**	**0.0000**	**4.9452**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-003	0.0165	0.0308	7.0000e-005	1.9600e-003	3.0000e-004	2.2600e-003	5.6000e-004	2.8000e-004	8.4000e-004	0.0000	5.8218	5.8218	4.0000e-005	0.0000	5.8227
Worker	8.8100e-003	0.0129	0.1346	4.5000e-004	0.0368	2.9000e-004	0.0371	9.7700e-003	2.7000e-004	0.0100	0.0000	28.9965	28.9965	1.3500e-003	0.0000	29.0248
Total	**0.0109**	**0.0294**	**0.1654**	**5.2000e-004**	**0.0388**	**5.9000e-004**	**0.0393**	**0.0103**	**5.5000e-004**	**0.0109**	**0.0000**	**34.8183**	**34.8183**	**1.3900e-003**	**0.0000**	**34.8475**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4800e-003	0.0121	0.0332	6.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	4.9168	4.9168	1.3500e-003	0.0000	4.9452
Total	**2.4800e-003**	**0.0121**	**0.0332**	**6.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**4.9168**	**4.9168**	**1.3500e-003**	**0.0000**	**4.9452**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-003	0.0165	0.0308	7.0000e-005	1.9600e-003	3.0000e-004	2.2600e-003	5.6000e-004	2.8000e-004	8.4000e-004	0.0000	5.8218	5.8218	4.0000e-005	0.0000	5.8227
Worker	8.8100e-003	0.0129	0.1346	4.5000e-004	0.0368	2.9000e-004	0.0371	9.7700e-003	2.7000e-004	0.0100	0.0000	28.9965	28.9965	1.3500e-003	0.0000	29.0248
Total	**0.0109**	**0.0294**	**0.1654**	**5.2000e-004**	**0.0388**	**5.9000e-004**	**0.0393**	**0.0103**	**5.5000e-004**	**0.0109**	**0.0000**	**34.8183**	**34.8183**	**1.3900e-003**	**0.0000**	**34.8475**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0245	0.2323	0.2130	3.1000e-004		0.0149	0.0149		0.0137	0.0137	0.0000	26.5261	26.5261	8.3600e-003	0.0000	26.7017
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0245**	**0.2323**	**0.2130**	**3.1000e-004**		**0.0149**	**0.0149**		**0.0137**	**0.0137**	**0.0000**	**26.5261**	**26.5261**	**8.3600e-003**	**0.0000**	**26.7017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4400e-003	3.6100e-003	0.0376	1.2000e-004	9.6500e-003	8.0000e-005	9.7300e-003	2.5600e-003	7.0000e-005	2.6300e-003	0.0000	7.7277	7.7277	3.7000e-004	0.0000	7.7355
Total	**2.4400e-003**	**3.6100e-003**	**0.0376**	**1.2000e-004**	**9.6500e-003**	**8.0000e-005**	**9.7300e-003**	**2.5600e-003**	**7.0000e-005**	**2.6300e-003**	**0.0000**	**7.7277**	**7.7277**	**3.7000e-004**	**0.0000**	**7.7355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8600e-003	0.0235	0.2266	3.1000e-004		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	26.5261	26.5261	8.3600e-003	0.0000	26.7016
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8600e-003**	**0.0235**	**0.2266**	**3.1000e-004**		**7.9000e-004**	**7.9000e-004**		**7.9000e-004**	**7.9000e-004**	**0.0000**	**26.5261**	**26.5261**	**8.3600e-003**	**0.0000**	**26.7016**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4400e-003	3.6100e-003	0.0376	1.2000e-004	9.6500e-003	8.0000e-005	9.7300e-003	2.5600e-003	7.0000e-005	2.6300e-003	0.0000	7.7277	7.7277	3.7000e-004	0.0000	7.7355
Total	**2.4400e-003**	**3.6100e-003**	**0.0376**	**1.2000e-004**	**9.6500e-003**	**8.0000e-005**	**9.7300e-003**	**2.5600e-003**	**7.0000e-005**	**2.6300e-003**	**0.0000**	**7.7277**	**7.7277**	**3.7000e-004**	**0.0000**	**7.7355**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6100e-003	0.0631	0.0626	9.0000e-005		3.9000e-003	3.9000e-003		3.5900e-003	3.5900e-003	0.0000	7.8384	7.8384	2.4700e-003	0.0000	7.8903
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.6100e-003**	**0.0631**	**0.0626**	**9.0000e-005**		**3.9000e-003**	**3.9000e-003**		**3.5900e-003**	**3.5900e-003**	**0.0000**	**7.8384**	**7.8384**	**2.4700e-003**	**0.0000**	**7.8903**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-004	1.0000e-003	0.0104	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.2478	2.2478	1.0000e-004	0.0000	2.2500
Total	**6.8000e-004**	**1.0000e-003**	**0.0104**	**3.0000e-005**	**2.8500e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.2478**	**2.2478**	**1.0000e-004**	**0.0000**	**2.2500**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4300e-003	6.9600e-003	0.0669	9.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	7.8384	7.8384	2.4700e-003	0.0000	7.8903
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4300e-003**	**6.9600e-003**	**0.0669**	**9.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**7.8384**	**7.8384**	**2.4700e-003**	**0.0000**	**7.8903**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-004	1.0000e-003	0.0104	3.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.2478	2.2478	1.0000e-004	0.0000	2.2500
Total	**6.8000e-004**	**1.0000e-003**	**0.0104**	**3.0000e-005**	**2.8500e-003**	**2.0000e-005**	**2.8700e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.2478**	**2.2478**	**1.0000e-004**	**0.0000**	**2.2500**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6897					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3300e-003	0.0370	0.0403	7.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	5.6172	5.6172	4.3000e-004	0.0000	5.6263
Total	**2.6950**	**0.0370**	**0.0403**	**7.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**5.6172**	**5.6172**	**4.3000e-004**	**0.0000**	**5.6263**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1500e-003	6.1300e-003	0.0639	2.0000e-004	0.0164	1.3000e-004	0.0165	4.3600e-003	1.2000e-004	4.4800e-003	0.0000	13.1371	13.1371	6.3000e-004	0.0000	13.1503
Total	**4.1500e-003**	**6.1300e-003**	**0.0639**	**2.0000e-004**	**0.0164**	**1.3000e-004**	**0.0165**	**4.3600e-003**	**1.2000e-004**	**4.4800e-003**	**0.0000**	**13.1371**	**13.1371**	**6.3000e-004**	**0.0000**	**13.1503**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6897					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5000e-004	2.8300e-003	0.0403	7.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.6172	5.6172	4.3000e-004	0.0000	5.6263
Total	**2.6903**	**2.8300e-003**	**0.0403**	**7.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**5.6172**	**5.6172**	**4.3000e-004**	**0.0000**	**5.6263**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1500e-003	6.1300e-003	0.0639	2.0000e-004	0.0164	1.3000e-004	0.0165	4.3600e-003	1.2000e-004	4.4800e-003	0.0000	13.1371	13.1371	6.3000e-004	0.0000	13.1503
Total	**4.1500e-003**	**6.1300e-003**	**0.0639**	**2.0000e-004**	**0.0164**	**1.3000e-004**	**0.0165**	**4.3600e-003**	**1.2000e-004**	**4.4800e-003**	**0.0000**	**13.1371**	**13.1371**	**6.3000e-004**	**0.0000**	**13.1503**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4200e-003	9.9200e-003	0.0118	2.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	1.6596	1.6596	1.1000e-004	0.0000	1.6620
Total	**0.7961**	**9.9200e-003**	**0.0118**	**2.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.6596**	**1.6596**	**1.1000e-004**	**0.0000**	**1.6620**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1600e-003	1.6900e-003	0.0177	6.0000e-005	4.8500e-003	4.0000e-005	4.8900e-003	1.2900e-003	4.0000e-005	1.3200e-003	0.0000	3.8213	3.8213	1.8000e-004	0.0000	3.8250
Total	**1.1600e-003**	**1.6900e-003**	**0.0177**	**6.0000e-005**	**4.8500e-003**	**4.0000e-005**	**4.8900e-003**	**1.2900e-003**	**4.0000e-005**	**1.3200e-003**	**0.0000**	**3.8213**	**3.8213**	**1.8000e-004**	**0.0000**	**3.8250**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7947					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9000e-004	8.4000e-004	0.0119	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.6596	1.6596	1.1000e-004	0.0000	1.6620
Total	**0.7949**	**8.4000e-004**	**0.0119**	**2.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**1.6596**	**1.6596**	**1.1000e-004**	**0.0000**	**1.6620**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1600e-003	1.6900e-003	0.0177	6.0000e-005	4.8500e-003	4.0000e-005	4.8900e-003	1.2900e-003	4.0000e-005	1.3200e-003	0.0000	3.8213	3.8213	1.8000e-004	0.0000	3.8250
Total	**1.1600e-003**	**1.6900e-003**	**0.0177**	**6.0000e-005**	**4.8500e-003**	**4.0000e-005**	**4.8900e-003**	**1.2900e-003**	**4.0000e-005**	**1.3200e-003**	**0.0000**	**3.8213**	**3.8213**	**1.8000e-004**	**0.0000**	**3.8250**

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

Phase 2 Construction Emissions

Harbor UCLA Master Plan- Phase 2

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	130.00	1000sqft	2.98	130,000.00	0
Hospital	97.50	1000sqft	2.24	97,500.00	0
Hospital	2.40	1000sqft	0.06	2,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	114.00
tblConstructionPhase	NumDays	230.00	95.00
tblConstructionPhase	NumDays	230.00	108.00
tblConstructionPhase	NumDays	230.00	108.00
tblConstructionPhase	NumDays	230.00	202.00
tblConstructionPhase	NumDays	20.00	64.00
tblConstructionPhase	NumDays	20.00	93.00
tblConstructionPhase	PhaseEndDate	5/15/2024	12/7/2023

tblConstructionPhase	PhaseEndDate	1/27/2022	1/30/2022
tblConstructionPhase	PhaseEndDate	6/29/2022	6/30/2022
tblConstructionPhase	PhaseEndDate	4/10/2023	12/7/2023
tblConstructionPhase	PhaseEndDate	4/16/2024	12/7/2023
tblConstructionPhase	PhaseStartDate	12/8/2023	7/1/2023
tblConstructionPhase	PhaseStartDate	8/31/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	1/31/2022	2/1/2022
tblConstructionPhase	PhaseStartDate	7/1/2022	3/1/2023
tblConstructionPhase	PhaseStartDate	12/8/2023	8/1/2023
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	38.00	40.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	270.00
tblTripsAndVMT	WorkerTripNumber	74.00	455.00
tblTripsAndVMT	WorkerTripNumber	15.00	92.00
tblTripsAndVMT	WorkerTripNumber	13.00	80.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2262	1.6638	2.4480	6.2100e-003	0.2992	0.0745	0.3737	0.0799	0.0695	0.1494	0.0000	462.1452	462.1452	0.0606	0.0000	463.4168
2022	0.1438	0.9287	1.6499	4.1300e-003	0.2046	0.0418	0.2464	0.0546	0.0393	0.0939	0.0000	301.8227	301.8227	0.0350	0.0000	302.5583
2023	3.0246	2.0597	4.2336	0.0113	0.6274	0.0949	0.7223	0.1671	0.0893	0.2564	0.0000	795.5281	795.5281	0.0842	0.0000	797.2956
Total	**3.3946**	**4.6521**	**8.3316**	**0.0217**	**1.1311**	**0.2112**	**1.3423**	**0.3016**	**0.1981**	**0.4998**	**0.0000**	**1,559.4960**	**1,559.4960**	**0.1798**	**0.0000**	**1,563.2706**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1140	0.3854	2.5808	6.2100e-003	0.2992	8.7300e-003	0.3079	0.0799	8.3100e-003	0.0882	0.0000	462.1450	462.1450	0.0606	0.0000	463.4166
2022	0.0870	0.3139	1.7073	4.1300e-003	0.2046	8.9900e-003	0.2135	0.0546	8.7000e-003	0.0633	0.0000	301.8226	301.8226	0.0350	0.0000	302.5582
2023	2.9013	0.7703	4.3608	0.0113	0.6274	0.0242	0.6516	0.1671	0.0236	0.1907	0.0000	795.5278	795.5278	0.0842	0.0000	797.2952
Total	**3.1023**	**1.4695**	**8.6488**	**0.0217**	**1.1311**	**0.0419**	**1.1730**	**0.3016**	**0.0406**	**0.3422**	**0.0000**	**1,559.4953**	**1,559.4953**	**0.1798**	**0.0000**	**1,563.2699**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.61**	**68.41**	**-3.81**	**0.00**	**0.00**	**80.16**	**12.61**	**0.00**	**79.53**	**31.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/20/2021	4/19/2021	5	64	
2	Building Construction	Building Construction	4/20/2021	8/30/2021	5	95	
3	Building Construction 2	Building Construction	9/1/2021	1/30/2022	5	108	
4	Building Construction 3	Building Construction	2/1/2022	6/30/2022	5	108	
5	Building Construction 4	Building Construction	3/1/2023	12/7/2023	5	202	
6	Architectural Coating	Architectural Coating	7/1/2023	12/7/2023	5	114	
7	Paving	Paving	8/1/2023	12/7/2023	5	93	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 344,850; Non-Residential Outdoor: 114,950 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Building Construction 2	Air Compressors	1	8.00	78	0.48
Building Construction 2	Cranes	1	7.00	226	0.29
Building Construction 2	Forklifts	0	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45
Building Construction 3	Air Compressors	1	8.00	78	0.48
Building Construction 3	Cranes	1	7.00	226	0.29
Building Construction 3	Forklifts	1	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 3	Welders	1	8.00	46	0.45
Building Construction 4	Air Compressors	1	8.00	78	0.48
Building Construction 4	Cranes	1	7.00	226	0.29
Building Construction 4	Forklifts	2	8.00	89	0.20
Building Construction 4	Generator Sets	0	8.00	84	0.74

Building Construction 4	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 4	Welders	2	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	2	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	4	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	7	270.00	38.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	8	455.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0168	0.1819	0.1225	3.0000e-004		7.6200e-003	7.6200e-003		7.0100e-003	7.0100e-003	0.0000	25.9586	25.9586	8.4000e-003	0.0000	26.1349
Total	**0.0168**	**0.1819**	**0.1225**	**3.0000e-004**	**0.0000**	**7.6200e-003**	**7.6200e-003**	**0.0000**	**7.0100e-003**	**7.0100e-003**	**0.0000**	**25.9586**	**25.9586**	**8.4000e-003**	**0.0000**	**26.1349**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2000e-004	3.3100e-003	6.1800e-003	1.0000e-005	3.9000e-004	6.0000e-005	4.5000e-004	1.1000e-004	6.0000e-005	1.7000e-004	0.0000	1.1698	1.1698	1.0000e-005	0.0000	1.1700
Worker	1.5100e-003	2.2100e-003	0.0231	8.0000e-005	6.3200e-003	5.0000e-005	6.3700e-003	1.6800e-003	5.0000e-005	1.7200e-003	0.0000	4.9797	4.9797	2.3000e-004	0.0000	4.9846
Total	**1.9300e-003**	**5.5200e-003**	**0.0293**	**9.0000e-005**	**6.7100e-003**	**1.1000e-004**	**6.8200e-003**	**1.7900e-003**	**1.1000e-004**	**1.8900e-003**	**0.0000**	**6.1496**	**6.1496**	**2.4000e-004**	**0.0000**	**6.1546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6400e-003	0.0158	0.1639	3.0000e-004		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	25.9585	25.9585	8.4000e-003	0.0000	26.1348
Total	**3.6400e-003**	**0.0158**	**0.1639**	**3.0000e-004**	**0.0000**	**4.9000e-004**	**4.9000e-004**	**0.0000**	**4.9000e-004**	**4.9000e-004**	**0.0000**	**25.9585**	**25.9585**	**8.4000e-003**	**0.0000**	**26.1348**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2000e-004	3.3100e-003	6.1800e-003	1.0000e-005	3.9000e-004	6.0000e-005	4.5000e-004	1.1000e-004	6.0000e-005	1.7000e-004	0.0000	1.1698	1.1698	1.0000e-005	0.0000	1.1700
Worker	1.5100e-003	2.2100e-003	0.0231	8.0000e-005	6.3200e-003	5.0000e-005	6.3700e-003	1.6800e-003	5.0000e-005	1.7200e-003	0.0000	4.9797	4.9797	2.3000e-004	0.0000	4.9846
Total	**1.9300e-003**	**5.5200e-003**	**0.0293**	**9.0000e-005**	**6.7100e-003**	**1.1000e-004**	**6.8200e-003**	**1.7900e-003**	**1.1000e-004**	**1.8900e-003**	**0.0000**	**6.1496**	**6.1496**	**2.4000e-004**	**0.0000**	**6.1546**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0769	0.7835	0.6137	1.1200e-003		0.0399	0.0399		0.0372	0.0372	0.0000	97.8080	97.8080	0.0275	0.0000	98.3858
Total	**0.0769**	**0.7835**	**0.6137**	**1.1200e-003**		**0.0399**	**0.0399**		**0.0372**	**0.0372**	**0.0000**	**97.8080**	**97.8080**	**0.0275**	**0.0000**	**98.3858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0119	0.0935	0.1744	3.9000e-004	0.0111	1.7000e-003	0.0128	3.1700e-003	1.5600e-003	4.7300e-003	0.0000	32.9932	32.9932	2.4000e-004	0.0000	32.9983
Worker	0.0337	0.0492	0.5146	1.7300e-003	0.1407	1.1000e-003	0.1418	0.0374	1.0200e-003	0.0384	0.0000	110.8766	110.8766	5.1600e-003	0.0000	110.9850
Total	**0.0456**	**0.1426**	**0.6890**	**2.1200e-003**	**0.1518**	**2.8000e-003**	**0.1546**	**0.0405**	**2.5800e-003**	**0.0431**	**0.0000**	**143.8698**	**143.8698**	**5.4000e-003**	**0.0000**	**143.9832**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.0575	0.6746	1.1200e-003		1.7700e-003	1.7700e-003		1.7700e-003	1.7700e-003	0.0000	97.8079	97.8079	0.0275	0.0000	98.3856
Total	**0.0133**	**0.0575**	**0.6746**	**1.1200e-003**		**1.7700e-003**	**1.7700e-003**		**1.7700e-003**	**1.7700e-003**	**0.0000**	**97.8079**	**97.8079**	**0.0275**	**0.0000**	**98.3856**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0119	0.0935	0.1744	3.9000e-004	0.0111	1.7000e-003	0.0128	3.1700e-003	1.5600e-003	4.7300e-003	0.0000	32.9932	32.9932	2.4000e-004	0.0000	32.9983
Worker	0.0337	0.0492	0.5146	1.7300e-003	0.1407	1.1000e-003	0.1418	0.0374	1.0200e-003	0.0384	0.0000	110.8766	110.8766	5.1600e-003	0.0000	110.9850
Total	**0.0456**	**0.1426**	**0.6890**	**2.1200e-003**	**0.1518**	**2.8000e-003**	**0.1546**	**0.0405**	**2.5800e-003**	**0.0431**	**0.0000**	**143.8698**	**143.8698**	**5.4000e-003**	**0.0000**	**143.9832**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0428	0.4182	0.3554	6.3000e-004		0.0215	0.0215		0.0203	0.0203	0.0000	55.0904	55.0904	0.0140	0.0000	55.3844
Total	**0.0428**	**0.4182**	**0.3554**	**6.3000e-004**		**0.0215**	**0.0215**		**0.0203**	**0.0203**	**0.0000**	**55.0904**	**55.0904**	**0.0140**	**0.0000**	**55.3844**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0110	0.0866	0.1615	3.6000e-004	0.0103	1.5700e-003	0.0119	2.9400e-003	1.4500e-003	4.3900e-003	0.0000	30.5621	30.5621	2.2000e-004	0.0000	30.5668
Worker	0.0312	0.0455	0.4767	1.6000e-003	0.1303	1.0200e-003	0.1314	0.0346	9.4000e-004	0.0356	0.0000	102.7068	102.7068	4.7800e-003	0.0000	102.8071
Total	**0.0422**	**0.1321**	**0.6382**	**1.9600e-003**	**0.1406**	**2.5900e-003**	**0.1432**	**0.0376**	**2.3900e-003**	**0.0400**	**0.0000**	**133.2689**	**133.2689**	**5.0000e-003**	**0.0000**	**133.3739**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3400e-003	0.0318	0.3858	6.3000e-004		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	55.0903	55.0903	0.0140	0.0000	55.3843
Total	**7.3400e-003**	**0.0318**	**0.3858**	**6.3000e-004**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**55.0903**	**55.0903**	**0.0140**	**0.0000**	**55.3843**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0110	0.0866	0.1615	3.6000e-004	0.0103	1.5700e-003	0.0119	2.9400e-003	1.4500e-003	4.3900e-003	0.0000	30.5621	30.5621	2.2000e-004	0.0000	30.5668
Worker	0.0312	0.0455	0.4767	1.6000e-003	0.1303	1.0200e-003	0.1314	0.0346	9.4000e-004	0.0356	0.0000	102.7068	102.7068	4.7800e-003	0.0000	102.8071
Total	**0.0422**	**0.1321**	**0.6382**	**1.9600e-003**	**0.1406**	**2.5900e-003**	**0.1432**	**0.0376**	**2.3900e-003**	**0.0400**	**0.0000**	**133.2689**	**133.2689**	**5.0000e-003**	**0.0000**	**133.3739**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8000e-003	0.0839	0.0795	1.4000e-004		4.1500e-003	4.1500e-003		3.9100e-003	3.9100e-003	0.0000	12.5266	12.5266	3.1700e-003	0.0000	12.5932
Total	**8.8000e-003**	**0.0839**	**0.0795**	**1.4000e-004**		**4.1500e-003**	**4.1500e-003**		**3.9100e-003**	**3.9100e-003**	**0.0000**	**12.5266**	**12.5266**	**3.1700e-003**	**0.0000**	**12.5932**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4500e-003	0.0179	0.0358	8.0000e-005	2.3400e-003	3.5000e-004	2.6900e-003	6.7000e-004	3.3000e-004	9.9000e-004	0.0000	6.9397	6.9397	5.0000e-005	0.0000	6.9408
Worker	6.7100e-003	9.7100e-003	0.1019	3.6000e-004	0.0296	2.3000e-004	0.0299	7.8700e-003	2.1000e-004	8.0800e-003	0.0000	22.9547	22.9547	1.0400e-003	0.0000	22.9766
Total	**9.1600e-003**	**0.0276**	**0.1377**	**4.4000e-004**	**0.0320**	**5.8000e-004**	**0.0325**	**8.5400e-003**	**5.4000e-004**	**9.0700e-003**	**0.0000**	**29.8944**	**29.8944**	**1.0900e-003**	**0.0000**	**29.9173**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6700e-003	7.2300e-003	0.0877	1.4000e-004		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	12.5266	12.5266	3.1700e-003	0.0000	12.5932
Total	**1.6700e-003**	**7.2300e-003**	**0.0877**	**1.4000e-004**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**12.5266**	**12.5266**	**3.1700e-003**	**0.0000**	**12.5932**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4500e-003	0.0179	0.0358	8.0000e-005	2.3400e-003	3.5000e-004	2.6900e-003	6.7000e-004	3.3000e-004	9.9000e-004	0.0000	6.9397	6.9397	5.0000e-005	0.0000	6.9408
Worker	6.7100e-003	9.7100e-003	0.1019	3.6000e-004	0.0296	2.3000e-004	0.0299	7.8700e-003	2.1000e-004	8.0800e-003	0.0000	22.9547	22.9547	1.0400e-003	0.0000	22.9766
Total	**9.1600e-003**	**0.0276**	**0.1377**	**4.4000e-004**	**0.0320**	**5.8000e-004**	**0.0325**	**8.5400e-003**	**5.4000e-004**	**9.0700e-003**	**0.0000**	**29.8944**	**29.8944**	**1.0900e-003**	**0.0000**	**29.9173**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0764	0.6683	0.6892	1.1400e-003		0.0339	0.0339		0.0320	0.0320	0.0000	97.9719	97.9719	0.0249	0.0000	98.4941
Total	**0.0764**	**0.6683**	**0.6892**	**1.1400e-003**		**0.0339**	**0.0339**		**0.0320**	**0.0320**	**0.0000**	**97.9719**	**97.9719**	**0.0249**	**0.0000**	**98.4941**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0132	0.0964	0.1934	4.4000e-004	0.0126	1.9100e-003	0.0145	3.6100e-003	1.7600e-003	5.3600e-003	0.0000	37.4742	37.4742	2.8000e-004	0.0000	37.4801
Worker	0.0362	0.0524	0.5501	1.9600e-003	0.1600	1.2500e-003	0.1612	0.0425	1.1600e-003	0.0436	0.0000	123.9556	123.9556	5.6200e-003	0.0000	124.0735
Total	**0.0494**	**0.1489**	**0.7435**	**2.4000e-003**	**0.1726**	**3.1600e-003**	**0.1758**	**0.0461**	**2.9200e-003**	**0.0490**	**0.0000**	**161.4298**	**161.4298**	**5.9000e-003**	**0.0000**	**161.5536**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0268	0.1302	0.7384	1.1400e-003		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	97.9718	97.9718	0.0249	0.0000	98.4940
Total	**0.0268**	**0.1302**	**0.7384**	**1.1400e-003**		**5.0300e-003**	**5.0300e-003**		**5.0300e-003**	**5.0300e-003**	**0.0000**	**97.9718**	**97.9718**	**0.0249**	**0.0000**	**98.4940**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0132	0.0964	0.1934	4.4000e-004	0.0126	1.9100e-003	0.0145	3.6100e-003	1.7600e-003	5.3600e-003	0.0000	37.4742	37.4742	2.8000e-004	0.0000	37.4801
Worker	0.0362	0.0524	0.5501	1.9600e-003	0.1600	1.2500e-003	0.1612	0.0425	1.1600e-003	0.0436	0.0000	123.9556	123.9556	5.6200e-003	0.0000	124.0735
Total	**0.0494**	**0.1489**	**0.7435**	**2.4000e-003**	**0.1726**	**3.1600e-003**	**0.1758**	**0.0461**	**2.9200e-003**	**0.0490**	**0.0000**	**161.4298**	**161.4298**	**5.9000e-003**	**0.0000**	**161.5536**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1551	1.2576	1.3671	2.2700e-003		0.0598	0.0598		0.0567	0.0567	0.0000	191.7197	191.7197	0.0448	0.0000	192.6603
Total	**0.1551**	**1.2576**	**1.3671**	**2.2700e-003**		**0.0598**	**0.0598**		**0.0567**	**0.0567**	**0.0000**	**191.7197**	**191.7197**	**0.0448**	**0.0000**	**192.6603**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0241	0.1509	0.3663	8.6000e-004	0.0249	3.7100e-003	0.0286	7.1000e-003	3.4200e-003	0.0105	0.0000	73.4249	73.4249	5.0000e-004	0.0000	73.4354
Worker	0.1082	0.1555	1.6335	6.1800e-003	0.5042	3.9300e-003	0.5081	0.1339	3.6400e-003	0.1375	0.0000	384.6779	384.6779	0.0170	0.0000	385.0350
Total	**0.1323**	**0.3064**	**1.9998**	**7.0400e-003**	**0.5291**	**7.6400e-003**	**0.5367**	**0.1410**	**7.0600e-003**	**0.1481**	**0.0000**	**458.1028**	**458.1028**	**0.0175**	**0.0000**	**458.4704**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0721	0.3764	1.4590	2.2700e-003		0.0139	0.0139		0.0139	0.0139	0.0000	191.7194	191.7194	0.0448	0.0000	192.6601
Total	**0.0721**	**0.3764**	**1.4590**	**2.2700e-003**		**0.0139**	**0.0139**		**0.0139**	**0.0139**	**0.0000**	**191.7194**	**191.7194**	**0.0448**	**0.0000**	**192.6601**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0241	0.1509	0.3663	8.6000e-004	0.0249	3.7100e-003	0.0286	7.1000e-003	3.4200e-003	0.0105	0.0000	73.4249	73.4249	5.0000e-004	0.0000	73.4354
Worker	0.1082	0.1555	1.6335	6.1800e-003	0.5042	3.9300e-003	0.5081	0.1339	3.6400e-003	0.1375	0.0000	384.6779	384.6779	0.0170	0.0000	385.0350
Total	**0.1323**	**0.3064**	**1.9998**	**7.0400e-003**	**0.5291**	**7.6400e-003**	**0.5367**	**0.1410**	**7.0600e-003**	**0.1481**	**0.0000**	**458.1028**	**458.1028**	**0.0175**	**0.0000**	**458.4704**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0743	0.1032	1.7000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	14.5536	14.5536	8.7000e-004	0.0000	14.5718
Total	**2.6749**	**0.0743**	**0.1032**	**1.7000e-004**		**4.0400e-003**	**4.0400e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**14.5536**	**14.5536**	**8.7000e-004**	**0.0000**	**14.5718**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0123	0.0178	0.1864	7.1000e-004	0.0575	4.5000e-004	0.0580	0.0153	4.2000e-004	0.0157	0.0000	43.8962	43.8962	1.9400e-003	0.0000	43.9370
Total	**0.0123**	**0.0178**	**0.1864**	**7.1000e-004**	**0.0575**	**4.5000e-004**	**0.0580**	**0.0153**	**4.2000e-004**	**0.0157**	**0.0000**	**43.8962**	**43.8962**	**1.9400e-003**	**0.0000**	**43.9370**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6640					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6900e-003	7.3400e-003	0.1045	1.7000e-004		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	14.5535	14.5535	8.7000e-004	0.0000	14.5718
Total	**2.6657**	**7.3400e-003**	**0.1045**	**1.7000e-004**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**14.5535**	**14.5535**	**8.7000e-004**	**0.0000**	**14.5718**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0123	0.0178	0.1864	7.1000e-004	0.0575	4.5000e-004	0.0580	0.0153	4.2000e-004	0.0157	0.0000	43.8962	43.8962	1.9400e-003	0.0000	43.9370
Total	**0.0123**	**0.0178**	**0.1864**	**7.1000e-004**	**0.0575**	**4.5000e-004**	**0.0580**	**0.0153**	**4.2000e-004**	**0.0157**	**0.0000**	**43.8962**	**43.8962**	**1.9400e-003**	**0.0000**	**43.9370**

3.8 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0413	0.3910	0.4449	6.5000e-004		0.0226	0.0226		0.0208	0.0208	0.0000	56.1167	56.1167	0.0177	0.0000	56.4880
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0413**	**0.3910**	**0.4449**	**6.5000e-004**		**0.0226**	**0.0226**		**0.0208**	**0.0208**	**0.0000**	**56.1167**	**56.1167**	**0.0177**	**0.0000**	**56.4880**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7500e-003	0.0126	0.1322	5.0000e-004	0.0408	3.2000e-004	0.0411	0.0108	2.9000e-004	0.0111	0.0000	31.1392	31.1392	1.3800e-003	0.0000	31.1681
Total	**8.7500e-003**	**0.0126**	**0.1322**	**5.0000e-004**	**0.0408**	**3.2000e-004**	**0.0411**	**0.0108**	**2.9000e-004**	**0.0111**	**0.0000**	**31.1392**	**31.1392**	**1.3800e-003**	**0.0000**	**31.1681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.0498	0.4789	6.5000e-004		1.6700e-003	1.6700e-003		1.6700e-003	1.6700e-003	0.0000	56.1166	56.1166	0.0177	0.0000	56.4879
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.0498**	**0.4789**	**6.5000e-004**		**1.6700e-003**	**1.6700e-003**		**1.6700e-003**	**1.6700e-003**	**0.0000**	**56.1166**	**56.1166**	**0.0177**	**0.0000**	**56.4879**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7500e-003	0.0126	0.1322	5.0000e-004	0.0408	3.2000e-004	0.0411	0.0108	2.9000e-004	0.0111	0.0000	31.1392	31.1392	1.3800e-003	0.0000	31.1681
Total	**8.7500e-003**	**0.0126**	**0.1322**	**5.0000e-004**	**0.0408**	**3.2000e-004**	**0.0411**	**0.0108**	**2.9000e-004**	**0.0111**	**0.0000**	**31.1392**	**31.1392**	**1.3800e-003**	**0.0000**	**31.1681**

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

Phase 3 Construction Emissions

Harbor UCLA Master Plan- Phase 3

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.00	1000sqft	0.23	10,000.00	0
Unenclosed Parking with Elevator	580.00	Space	5.22	250,580.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Demolition -

Grading -

Architectural Coating - Parking Lot- 6% of square footage= Interior Area

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	62.00

tblConstructionPhase	NumDays	230.00	355.00
tblConstructionPhase	NumDays	20.00	221.00
tblConstructionPhase	NumDays	20.00	121.00
tblConstructionPhase	NumDays	20.00	62.00
tblConstructionPhase	PhaseEndDate	6/22/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	5/4/2022	11/16/2021
tblConstructionPhase	PhaseEndDate	6/22/2023	3/28/2023
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2023
tblConstructionPhase	PhaseStartDate	11/17/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	3/29/2023	1/1/2023
tblGrading	MaterialExported	0.00	18,052.00
tblGrading	MaterialImported	0.00	30,126.00
tblLandUse	LandUseSquareFeet	232,000.00	250,580.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblTripsAndVMT	HaulingTripNumber	201.00	3,859.00
tblTripsAndVMT	HaulingTripNumber	6,022.00	8,030.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	140.00
tblTripsAndVMT	WorkerTripNumber	10.00	280.00

tblTripsAndVMT	WorkerTripNumber	109.00	715.00
tblTripsAndVMT	WorkerTripNumber	13.00	48.00
tblTripsAndVMT	WorkerTripNumber	22.00	80.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.6579	5.5987	7.0961	0.0167	1.0143	0.2431	1.2574	0.3661	0.2269	0.5929	0.0000	1,313.9580	1,313.9580	0.1635	0.0000	1,317.3921
2022	0.4044	1.8189	5.1643	0.0157	1.0542	0.0722	1.1264	0.2807	0.0673	0.3480	0.0000	1,058.7982	1,058.7982	0.0841	0.0000	1,060.5645
2023	3.1531	0.7091	1.6693	4.8000e-003	0.2949	0.0330	0.3280	0.0785	0.0308	0.1093	0.0000	328.0196	328.0196	0.0334	0.0000	328.7205
Total	**4.2153**	**8.1267**	**13.9297**	**0.0372**	**2.3634**	**0.3484**	**2.7118**	**0.7252**	**0.3250**	**1.0502**	**0.0000**	**2,700.7758**	**2,700.7758**	**0.2810**	**0.0000**	**2,706.6772**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2937	1.6450	6.8365	0.0167	0.7576	0.0387	0.7963	0.2395	0.0366	0.2761	0.0000	1,313.9574	1,313.9574	0.1635	0.0000	1,317.3915
2022	0.3296	0.9172	5.2676	0.0157	1.0542	0.0258	1.0800	0.2807	0.0249	0.3055	0.0000	1,058.7980	1,058.7980	0.0841	0.0000	1,060.5643
2023	3.1112	0.2505	1.7194	4.8000e-003	0.2949	7.4500e-003	0.3024	0.0785	7.1900e-003	0.0857	0.0000	328.0195	328.0195	0.0334	0.0000	328.7204
Total	**3.7345**	**2.8126**	**13.8236**	**0.0372**	**2.1067**	**0.0720**	**2.1787**	**0.5987**	**0.0686**	**0.6673**	**0.0000**	**2,700.7749**	**2,700.7749**	**0.2810**	**0.0000**	**2,706.6762**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**11.41**	**65.39**	**0.76**	**0.00**	**10.86**	**79.32**	**19.66**	**17.45**	**78.89**	**36.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/12/2021	11/16/2021	5	221	
2	Grading	Grading	6/1/2021	11/16/2021	5	121	
3	Building Construction	Building Construction	11/17/2021	3/28/2023	5	355	
4	Paving	Paving	1/1/2023	3/28/2023	5	62	
5	Architectural Coating	Architectural Coating	1/1/2023	3/28/2023	5	62	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 60.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 390,870; Non-Residential Outdoor: 130,290 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	140.00	2.00	3,859.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	280.00	2.00	8,030.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	715.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	48.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0217	0.0000	0.0217	3.2900e-003	0.0000	3.2900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3081	2.9724	2.9084	4.6600e-003		0.1472	0.1472		0.1385	0.1385	0.0000	406.5762	406.5762	0.1000	0.0000	408.6755
Total	**0.3081**	**2.9724**	**2.9084**	**4.6600e-003**	**0.0217**	**0.1472**	**0.1690**	**3.2900e-003**	**0.1385**	**0.1418**	**0.0000**	**406.5762**	**406.5762**	**0.1000**	**0.0000**	**408.6755**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0301	0.3499	0.3837	1.4100e-003	0.0331	7.4400e-003	0.0405	9.0800e-003	6.8400e-003	0.0159	0.0000	120.5785	120.5785	9.5000e-004	0.0000	120.5984
Vendor	1.4600e-003	0.0114	0.0214	5.0000e-005	1.3600e-003	2.1000e-004	1.5700e-003	3.9000e-004	1.9000e-004	5.8000e-004	0.0000	4.0396	4.0396	3.0000e-005	0.0000	4.0402
Worker	0.0406	0.0593	0.6207	2.0800e-003	0.1697	1.3200e-003	0.1711	0.0451	1.2300e-003	0.0463	0.0000	133.7436	133.7436	6.2200e-003	0.0000	133.8743
Total	**0.0722**	**0.4206**	**1.0258**	**3.5400e-003**	**0.2042**	**8.9700e-003**	**0.2132**	**0.0546**	**8.2600e-003**	**0.0628**	**0.0000**	**258.3617**	**258.3617**	**7.2000e-003**	**0.0000**	**258.5129**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.4700e-003	0.0000	8.4700e-003	1.2800e-003	0.0000	1.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0539	0.2337	2.8175	4.6600e-003		7.1900e-003	7.1900e-003		7.1900e-003	7.1900e-003	0.0000	406.5757	406.5757	0.1000	0.0000	408.6750
Total	**0.0539**	**0.2337**	**2.8175**	**4.6600e-003**	**8.4700e-003**	**7.1900e-003**	**0.0157**	**1.2800e-003**	**7.1900e-003**	**8.4700e-003**	**0.0000**	**406.5757**	**406.5757**	**0.1000**	**0.0000**	**408.6750**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0301	0.3499	0.3837	1.4100e-003	0.0331	7.4400e-003	0.0405	9.0800e-003	6.8400e-003	0.0159	0.0000	120.5785	120.5785	9.5000e-004	0.0000	120.5984
Vendor	1.4600e-003	0.0114	0.0214	5.0000e-005	1.3600e-003	2.1000e-004	1.5700e-003	3.9000e-004	1.9000e-004	5.8000e-004	0.0000	4.0396	4.0396	3.0000e-005	0.0000	4.0402
Worker	0.0406	0.0593	0.6207	2.0800e-003	0.1697	1.3200e-003	0.1711	0.0451	1.2300e-003	0.0463	0.0000	133.7436	133.7436	6.2200e-003	0.0000	133.8743
Total	**0.0722**	**0.4206**	**1.0258**	**3.5400e-003**	**0.2042**	**8.9700e-003**	**0.2132**	**0.0546**	**8.2600e-003**	**0.0628**	**0.0000**	**258.3617**	**258.3617**	**7.2000e-003**	**0.0000**	**258.5129**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3991	0.0000	0.3991	0.2042	0.0000	0.2042	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1147	1.1508	0.9842	1.2900e-003		0.0593	0.0593		0.0546	0.0546	0.0000	113.3687	113.3687	0.0367	0.0000	114.1387
Total	**0.1147**	**1.1508**	**0.9842**	**1.2900e-003**	**0.3991**	**0.0593**	**0.4585**	**0.2042**	**0.0546**	**0.2587**	**0.0000**	**113.3687**	**113.3687**	**0.0367**	**0.0000**	**114.1387**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0626	0.7281	0.7984	2.9400e-003	0.0689	0.0155	0.0843	0.0189	0.0142	0.0331	0.0000	250.9058	250.9058	1.9700e-003	0.0000	250.9471
Vendor	8.0000e-004	6.2700e-003	0.0117	3.0000e-005	7.4000e-004	1.1000e-004	8.6000e-004	2.1000e-004	1.0000e-004	3.2000e-004	0.0000	2.2117	2.2117	2.0000e-005	0.0000	2.2121
Worker	0.0445	0.0649	0.6797	2.2800e-003	0.1859	1.4500e-003	0.1873	0.0494	1.3400e-003	0.0507	0.0000	146.4523	146.4523	6.8100e-003	0.0000	146.5953
Total	**0.1079**	**0.7993**	**1.4898**	**5.2500e-003**	**0.2555**	**0.0170**	**0.2725**	**0.0685**	**0.0157**	**0.0841**	**0.0000**	**399.5698**	**399.5698**	**8.8000e-003**	**0.0000**	**399.7545**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1557	0.0000	0.1557	0.0796	0.0000	0.0796	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0157	0.0680	0.8045	1.2900e-003		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003	0.0000	113.3685	113.3685	0.0367	0.0000	114.1385
Total	**0.0157**	**0.0680**	**0.8045**	**1.2900e-003**	**0.1557**	**2.0900e-003**	**0.1578**	**0.0796**	**2.0900e-003**	**0.0817**	**0.0000**	**113.3685**	**113.3685**	**0.0367**	**0.0000**	**114.1385**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0626	0.7281	0.7984	2.9400e-003	0.0689	0.0155	0.0843	0.0189	0.0142	0.0331	0.0000	250.9058	250.9058	1.9700e-003	0.0000	250.9471
Vendor	8.0000e-004	6.2700e-003	0.0117	3.0000e-005	7.4000e-004	1.1000e-004	8.6000e-004	2.1000e-004	1.0000e-004	3.2000e-004	0.0000	2.2117	2.2117	2.0000e-005	0.0000	2.2121
Worker	0.0445	0.0649	0.6797	2.2800e-003	0.1859	1.4500e-003	0.1873	0.0494	1.3400e-003	0.0507	0.0000	146.4523	146.4523	6.8100e-003	0.0000	146.5953
Total	**0.1079**	**0.7993**	**1.4898**	**5.2500e-003**	**0.2555**	**0.0170**	**0.2725**	**0.0685**	**0.0157**	**0.0841**	**0.0000**	**399.5698**	**399.5698**	**8.8000e-003**	**0.0000**	**399.7545**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0193	0.1737	0.1460	2.5000e-004		8.8500e-003	8.8500e-003		8.2600e-003	8.2600e-003	0.0000	21.1193	21.1193	6.0600e-003	0.0000	21.2467
Total	**0.0193**	**0.1737**	**0.1460**	**2.5000e-004**		**8.8500e-003**	**8.8500e-003**		**8.2600e-003**	**8.2600e-003**	**0.0000**	**21.1193**	**21.1193**	**6.0600e-003**	**0.0000**	**21.2467**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6700e-003	0.0367	0.0685	1.5000e-004	4.3700e-003	6.7000e-004	5.0400e-003	1.2500e-003	6.1000e-004	1.8600e-003	0.0000	12.9688	12.9688	1.0000e-004	0.0000	12.9708
Worker	0.0310	0.0452	0.4734	1.5900e-003	0.1294	1.0100e-003	0.1304	0.0344	9.4000e-004	0.0353	0.0000	101.9935	101.9935	4.7400e-003	0.0000	102.0932
Total	**0.0356**	**0.0820**	**0.5419**	**1.7400e-003**	**0.1338**	**1.6800e-003**	**0.1355**	**0.0356**	**1.5500e-003**	**0.0372**	**0.0000**	**114.9623**	**114.9623**	**4.8400e-003**	**0.0000**	**115.0640**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.3700e-003	0.0414	0.1570	2.5000e-004		1.7800e-003	1.7800e-003		1.7800e-003	1.7800e-003	0.0000	21.1193	21.1193	6.0600e-003	0.0000	21.2467
Total	**8.3700e-003**	**0.0414**	**0.1570**	**2.5000e-004**		**1.7800e-003**	**1.7800e-003**		**1.7800e-003**	**1.7800e-003**	**0.0000**	**21.1193**	**21.1193**	**6.0600e-003**	**0.0000**	**21.2467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.6700e-003	0.0367	0.0685	1.5000e-004	4.3700e-003	6.7000e-004	5.0400e-003	1.2500e-003	6.1000e-004	1.8600e-003	0.0000	12.9688	12.9688	1.0000e-004	0.0000	12.9708
Worker	0.0310	0.0452	0.4734	1.5900e-003	0.1294	1.0100e-003	0.1304	0.0344	9.4000e-004	0.0353	0.0000	101.9935	101.9935	4.7400e-003	0.0000	102.0932
Total	**0.0356**	**0.0820**	**0.5419**	**1.7400e-003**	**0.1338**	**1.6800e-003**	**0.1355**	**0.0356**	**1.5500e-003**	**0.0372**	**0.0000**	**114.9623**	**114.9623**	**4.8400e-003**	**0.0000**	**115.0640**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1374	1.2220	1.1303	1.9700e-003		0.0591	0.0591		0.0552	0.0552	0.0000	166.4740	166.4740	0.0476	0.0000	167.4725
Total	**0.1374**	**1.2220**	**1.1303**	**1.9700e-003**		**0.0591**	**0.0591**		**0.0552**	**0.0552**	**0.0000**	**166.4740**	**166.4740**	**0.0476**	**0.0000**	**167.4725**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0360	0.2627	0.5269	1.2000e-003	0.0344	5.2000e-003	0.0396	9.8200e-003	4.7900e-003	0.0146	0.0000	102.0861	102.0861	7.7000e-004	0.0000	102.1022
Worker	0.2310	0.3342	3.5071	0.0125	1.0198	7.9500e-003	1.0277	0.2708	7.3700e-003	0.2782	0.0000	790.2381	790.2381	0.0358	0.0000	790.9898
Total	**0.2670**	**0.5969**	**4.0340**	**0.0137**	**1.0542**	**0.0132**	**1.0674**	**0.2807**	**0.0122**	**0.2928**	**0.0000**	**892.3242**	**892.3242**	**0.0366**	**0.0000**	**893.0921**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0626	0.3203	1.2337	1.9700e-003		0.0127	0.0127		0.0127	0.0127	0.0000	166.4738	166.4738	0.0476	0.0000	167.4723
Total	**0.0626**	**0.3203**	**1.2337**	**1.9700e-003**		**0.0127**	**0.0127**		**0.0127**	**0.0127**	**0.0000**	**166.4738**	**166.4738**	**0.0476**	**0.0000**	**167.4723**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0360	0.2627	0.5269	1.2000e-003	0.0344	5.2000e-003	0.0396	9.8200e-003	4.7900e-003	0.0146	0.0000	102.0861	102.0861	7.7000e-004	0.0000	102.1022
Worker	0.2310	0.3342	3.5071	0.0125	1.0198	7.9500e-003	1.0277	0.2708	7.3700e-003	0.2782	0.0000	790.2381	790.2381	0.0358	0.0000	790.9898
Total	**0.2670**	**0.5969**	**4.0340**	**0.0137**	**1.0542**	**0.0132**	**1.0674**	**0.2807**	**0.0122**	**0.2928**	**0.0000**	**892.3242**	**892.3242**	**0.0366**	**0.0000**	**893.0921**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0304	0.2698	0.2668	4.7000e-004		0.0123	0.0123		0.0115	0.0115	0.0000	39.7140	39.7140	0.0113	0.0000	39.9509
Total	**0.0304**	**0.2698**	**0.2668**	**4.7000e-004**		**0.0123**	**0.0123**		**0.0115**	**0.0115**	**0.0000**	**39.7140**	**39.7140**	**0.0113**	**0.0000**	**39.9509**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9600e-003	0.0498	0.1209	2.9000e-004	8.2100e-003	1.2200e-003	9.4300e-003	2.3400e-003	1.1300e-003	3.4700e-003	0.0000	24.2266	24.2266	1.6000e-004	0.0000	24.2300
Worker	0.0522	0.0750	0.7879	2.9800e-003	0.2432	1.8900e-003	0.2451	0.0646	1.7600e-003	0.0663	0.0000	185.5377	185.5377	8.2000e-003	0.0000	185.7099
Total	**0.0601**	**0.1248**	**0.9087**	**3.2700e-003**	**0.2514**	**3.1100e-003**	**0.2545**	**0.0669**	**2.8900e-003**	**0.0698**	**0.0000**	**209.7643**	**209.7643**	**8.3600e-003**	**0.0000**	**209.9400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0142	0.0751	0.2936	4.7000e-004		2.7600e-003	2.7600e-003		2.7600e-003	2.7600e-003	0.0000	39.7139	39.7139	0.0113	0.0000	39.9509
Total	**0.0142**	**0.0751**	**0.2936**	**4.7000e-004**		**2.7600e-003**	**2.7600e-003**		**2.7600e-003**	**2.7600e-003**	**0.0000**	**39.7139**	**39.7139**	**0.0113**	**0.0000**	**39.9509**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9600e-003	0.0498	0.1209	2.9000e-004	8.2100e-003	1.2200e-003	9.4300e-003	2.3400e-003	1.1300e-003	3.4700e-003	0.0000	24.2266	24.2266	1.6000e-004	0.0000	24.2300
Worker	0.0522	0.0750	0.7879	2.9800e-003	0.2432	1.8900e-003	0.2451	0.0646	1.7600e-003	0.0663	0.0000	185.5377	185.5377	8.2000e-003	0.0000	185.7099
Total	**0.0601**	**0.1248**	**0.9087**	**3.2700e-003**	**0.2514**	**3.1100e-003**	**0.2545**	**0.0669**	**2.8900e-003**	**0.0698**	**0.0000**	**209.7643**	**209.7643**	**8.3600e-003**	**0.0000**	**209.9400**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0275	0.2607	0.2966	4.3000e-004		0.0151	0.0151		0.0139	0.0139	0.0000	37.4111	37.4111	0.0118	0.0000	37.6587
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0278**	**0.2607**	**0.2966**	**4.3000e-004**		**0.0151**	**0.0151**		**0.0139**	**0.0139**	**0.0000**	**37.4111**	**37.4111**	**0.0118**	**0.0000**	**37.6587**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-003	5.0400e-003	0.0529	2.0000e-004	0.0163	1.3000e-004	0.0165	4.3400e-003	1.2000e-004	4.4500e-003	0.0000	12.4557	12.4557	5.5000e-004	0.0000	12.4672
Total	**3.5000e-003**	**5.0400e-003**	**0.0529**	**2.0000e-004**	**0.0163**	**1.3000e-004**	**0.0165**	**4.3400e-003**	**1.2000e-004**	**4.4500e-003**	**0.0000**	**12.4557**	**12.4557**	**5.5000e-004**	**0.0000**	**12.4672**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8400e-003	0.0332	0.3193	4.3000e-004		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	37.4111	37.4111	0.0118	0.0000	37.6586
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1400e-003**	**0.0332**	**0.3193**	**4.3000e-004**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**37.4111**	**37.4111**	**0.0118**	**0.0000**	**37.6586**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-003	5.0400e-003	0.0529	2.0000e-004	0.0163	1.3000e-004	0.0165	4.3400e-003	1.2000e-004	4.4500e-003	0.0000	12.4557	12.4557	5.5000e-004	0.0000	12.4672
Total	**3.5000e-003**	**5.0400e-003**	**0.0529**	**2.0000e-004**	**0.0163**	**1.3000e-004**	**0.0165**	**4.3400e-003**	**1.2000e-004**	**4.4500e-003**	**0.0000**	**12.4557**	**12.4557**	**5.5000e-004**	**0.0000**	**12.4672**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0195					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9400e-003	0.0404	0.0561	9.0000e-005		2.2000e-003	2.2000e-003		2.2000e-003	2.2000e-003	0.0000	7.9151	7.9151	4.7000e-004	0.0000	7.9250
Total	**3.0254**	**0.0404**	**0.0561**	**9.0000e-005**		**2.2000e-003**	**2.2000e-003**		**2.2000e-003**	**2.2000e-003**	**0.0000**	**7.9151**	**7.9151**	**4.7000e-004**	**0.0000**	**7.9250**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8400e-003	8.3900e-003	0.0882	3.3000e-004	0.0272	2.1000e-004	0.0274	7.2300e-003	2.0000e-004	7.4200e-003	0.0000	20.7595	20.7595	9.2000e-004	0.0000	20.7787
Total	**5.8400e-003**	**8.3900e-003**	**0.0882**	**3.3000e-004**	**0.0272**	**2.1000e-004**	**0.0274**	**7.2300e-003**	**2.0000e-004**	**7.4200e-003**	**0.0000**	**20.7595**	**20.7595**	**9.2000e-004**	**0.0000**	**20.7787**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0195					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2000e-004	3.9900e-003	0.0568	9.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	7.9151	7.9151	4.7000e-004	0.0000	7.9250
Total	**3.0204**	**3.9900e-003**	**0.0568**	**9.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**7.9151**	**7.9151**	**4.7000e-004**	**0.0000**	**7.9250**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8400e-003	8.3900e-003	0.0882	3.3000e-004	0.0272	2.1000e-004	0.0274	7.2300e-003	2.0000e-004	7.4200e-003	0.0000	20.7595	20.7595	9.2000e-004	0.0000	20.7787
Total	**5.8400e-003**	**8.3900e-003**	**0.0882**	**3.3000e-004**	**0.0272**	**2.1000e-004**	**0.0274**	**7.2300e-003**	**2.0000e-004**	**7.4200e-003**	**0.0000**	**20.7595**	**20.7595**	**9.2000e-004**	**0.0000**	**20.7787**

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

Phase 4 Construction Emissions

Harbor UCLA Master Plan- Phase 4

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	450.00	1000sqft	10.33	450,000.00	0
Hospital	505.10	1000sqft	11.60	505,101.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating -

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	154.00
tblConstructionPhase	NumDays	370.00	283.00
tblConstructionPhase	NumDays	370.00	305.00
tblConstructionPhase	NumDays	35.00	154.00
tblConstructionPhase	NumDays	20.00	162.00
tblConstructionPhase	PhaseEndDate	9/3/2026	1/30/2026

tblConstructionPhase	PhaseEndDate	11/28/2024	11/30/2024
tblConstructionPhase	PhaseEndDate	9/15/2026	8/16/2027
tblConstructionPhase	PhaseStartDate	1/31/2026	7/1/2025
tblConstructionPhase	PhaseStartDate	10/31/2023	11/1/2023
tblConstructionPhase	PhaseStartDate	1/31/2026	1/1/2027
tblGrading	MaterialExported	0.00	22,675.00
tblGrading	MaterialImported	0.00	38,726.00
tblLandUse	LandUseSquareFeet	505,100.00	505,101.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblTripsAndVMT	HaulingTripNumber	7,675.00	12,067.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	536.00
tblTripsAndVMT	WorkerTripNumber	306.00	3,654.00
tblTripsAndVMT	WorkerTripNumber	306.00	3,654.00
tblTripsAndVMT	WorkerTripNumber	61.00	360.00
tblTripsAndVMT	WorkerTripNumber	20.00	118.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.5944	3.1949	7.7632	0.0244	1.9479	0.1301	2.0780	0.6436	0.1203	0.7639	0.0000	1,710.7944	1,710.7944	0.1281	0.0000	1,713.4840
2024	1.5905	5.7166	21.9964	0.0761	5.3783	0.2086	5.5869	1.4309	0.1953	1.6262	0.0000	4,944.9456	4,944.9456	0.3297	0.0000	4,951.8696
2025	10.8372	3.5654	19.4887	0.0748	5.6185	0.1127	5.7312	1.4946	0.1059	1.6005	0.0000	4,703.9823	4,703.9823	0.2237	0.0000	4,708.6805
2026	1.6956	0.3048	1.6530	6.5800e-003	0.4951	9.9100e-003	0.5050	0.1317	9.3200e-003	0.1410	0.0000	409.8643	409.8643	0.0192	0.0000	410.2669
2027	0.1186	0.9101	1.4615	3.0000e-003	0.1049	0.0448	0.1496	0.0279	0.0416	0.0694	0.0000	222.7583	222.7583	0.0461	0.0000	223.7266
Total	**14.8362**	**13.6918**	**52.3627**	**0.1849**	**13.5446**	**0.5060**	**14.0507**	**3.7286**	**0.4724**	**4.2010**	**0.0000**	**11,992.3449**	**11,992.3449**	**0.7468**	**0.0000**	**12,008.0277**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.4383	1.4956	7.6819	0.0244	1.6381	0.0447	1.6827	0.4851	0.0418	0.5269	0.0000	1,710.7941	1,710.7941	0.1281	0.0000	1,713.4837
2024	1.3540	3.1350	22.4354	0.0761	5.3783	0.0879	5.4662	1.4309	0.0834	1.5143	0.0000	4,944.9449	4,944.9449	0.3297	0.0000	4,951.8689
2025	10.7548	2.7344	19.6163	0.0748	5.6185	0.0761	5.6946	1.4946	0.0715	1.5661	0.0000	4,703.9820	4,703.9820	0.2237	0.0000	4,708.6803
2026	1.6879	0.2293	1.6638	6.5800e-003	0.4951	6.5600e-003	0.5016	0.1317	6.1600e-003	0.1379	0.0000	409.8643	409.8643	0.0192	0.0000	410.2669
2027	0.0590	0.2420	1.5353	3.0000e-003	0.1049	7.6700e-003	0.1125	0.0279	7.6100e-003	0.0355	0.0000	222.7582	222.7582	0.0461	0.0000	223.7264
Total	**14.2940**	**7.8363**	**52.9327**	**0.1849**	**13.2347**	**0.2229**	**13.4576**	**3.5701**	**0.2105**	**3.7806**	**0.0000**	**11,992.3434**	**11,992.3434**	**0.7468**	**0.0000**	**12,008.0262**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.66**	**42.77**	**-1.09**	**0.00**	**2.29**	**55.96**	**4.22**	**4.25**	**55.45**	**10.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/29/2023	10/30/2023	5	154	
2	Building Construction 2	Building Construction	11/1/2023	11/30/2024	5	283	
3	Building Construction 3	Building Construction	12/1/2024	1/30/2026	5	305	
4	Architectural Coating	Architectural Coating	7/1/2025	1/30/2026	5	154	
5	Paving	Paving	1/1/2027	8/16/2027	5	162	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 77

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,432,652; Non-Residential Outdoor: 477,551 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction 2	Air Compressors	2	8.00	78	0.48
Building Construction 2	Cranes	2	7.00	226	0.29
Building Construction 2	Forklifts	2	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Rubber Tired Loaders	1	8.00	199	0.36

Building Construction 2	Tractors/Loaders/Backhoes	8	7.00	97	0.37
Building Construction 2	Welders	3	8.00	46	0.45
Building Construction 3	Air Compressors	1	8.00	78	0.48
Building Construction 3	Cranes	1	7.00	226	0.29
Building Construction 3	Forklifts	0	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 3	Welders	2	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Forklifts	1	8.00	89	0.20
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Paving	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	536.00	2.00	12,067.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	18	3,654.00	157.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	6	3,654.00	157.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	360.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	118.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5080	0.0000	0.5080	0.2598	0.0000	0.2598	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1346	1.3091	1.3603	1.8800e-003		0.0644	0.0644		0.0592	0.0592	0.0000	165.5026	165.5026	0.0535	0.0000	166.6267
Total	**0.1346**	**1.3091**	**1.3603**	**1.8800e-003**	**0.5080**	**0.0644**	**0.5724**	**0.2598**	**0.0592**	**0.3190**	**0.0000**	**165.5026**	**165.5026**	**0.0535**	**0.0000**	**166.6267**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0835	0.7133	1.1270	4.3900e-003	0.1035	0.0229	0.1264	0.0284	0.0211	0.0495	0.0000	374.0851	374.0851	2.6100e-003	0.0000	374.1398
Vendor	9.2000e-004	5.7500e-003	0.0140	3.0000e-005	9.5000e-004	1.4000e-004	1.0900e-003	2.7000e-004	1.3000e-004	4.0000e-004	0.0000	2.7989	2.7989	2.0000e-005	0.0000	2.7993
Worker	0.0971	0.1397	1.4670	5.5500e-003	0.4528	3.5300e-003	0.4563	0.1203	3.2700e-003	0.1235	0.0000	345.4776	345.4776	0.0153	0.0000	345.7984
Total	**0.1815**	**0.8587**	**2.6080**	**9.9700e-003**	**0.5573**	**0.0266**	**0.5838**	**0.1489**	**0.0245**	**0.1734**	**0.0000**	**722.3616**	**722.3616**	**0.0179**	**0.0000**	**722.7374**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1981	0.0000	0.1981	0.1013	0.0000	0.1013	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.0992	1.2042	1.8800e-003		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	165.5024	165.5024	0.0535	0.0000	166.6265
Total	**0.0229**	**0.0992**	**1.2042**	**1.8800e-003**	**0.1981**	**3.0500e-003**	**0.2012**	**0.1013**	**3.0500e-003**	**0.1044**	**0.0000**	**165.5024**	**165.5024**	**0.0535**	**0.0000**	**166.6265**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0835	0.7133	1.1270	4.3900e-003	0.1035	0.0229	0.1264	0.0284	0.0211	0.0495	0.0000	374.0851	374.0851	2.6100e-003	0.0000	374.1398
Vendor	9.2000e-004	5.7500e-003	0.0140	3.0000e-005	9.5000e-004	1.4000e-004	1.0900e-003	2.7000e-004	1.3000e-004	4.0000e-004	0.0000	2.7989	2.7989	2.0000e-005	0.0000	2.7993
Worker	0.0971	0.1397	1.4670	5.5500e-003	0.4528	3.5300e-003	0.4563	0.1203	3.2700e-003	0.1235	0.0000	345.4776	345.4776	0.0153	0.0000	345.7984
Total	**0.1815**	**0.8587**	**2.6080**	**9.9700e-003**	**0.5573**	**0.0266**	**0.5838**	**0.1489**	**0.0245**	**0.1734**	**0.0000**	**722.3616**	**722.3616**	**0.0179**	**0.0000**	**722.7374**

3.3 Building Construction 2 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0732	0.6351	0.6965	1.2100e-003		0.0293	0.0293		0.0276	0.0276	0.0000	103.9677	103.9677	0.0272	0.0000	104.5381
Total	**0.0732**	**0.6351**	**0.6965**	**1.2100e-003**		**0.0293**	**0.0293**		**0.0276**	**0.0276**	**0.0000**	**103.9677**	**103.9677**	**0.0272**	**0.0000**	**104.5381**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.1261	0.3060	7.2000e-004	0.0208	3.1000e-003	0.0239	5.9300e-003	2.8500e-003	8.7900e-003	0.0000	61.3480	61.3480	4.2000e-004	0.0000	61.3567
Worker	0.1849	0.2658	2.7925	0.0106	0.8619	6.7100e-003	0.8686	0.2289	6.2300e-003	0.2351	0.0000	657.6146	657.6146	0.0291	0.0000	658.2251
Total	**0.2050**	**0.3919**	**3.0985**	**0.0113**	**0.8827**	**9.8100e-003**	**0.8925**	**0.2348**	**9.0800e-003**	**0.2439**	**0.0000**	**718.9626**	**718.9626**	**0.0295**	**0.0000**	**719.5818**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0289	0.1457	0.7712	1.2100e-003		5.2200e-003	5.2200e-003		5.2200e-003	5.2200e-003	0.0000	103.9676	103.9676	0.0272	0.0000	104.5380
Total	**0.0289**	**0.1457**	**0.7712**	**1.2100e-003**		**5.2200e-003**	**5.2200e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**103.9676**	**103.9676**	**0.0272**	**0.0000**	**104.5380**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.1261	0.3060	7.2000e-004	0.0208	3.1000e-003	0.0239	5.9300e-003	2.8500e-003	8.7900e-003	0.0000	61.3480	61.3480	4.2000e-004	0.0000	61.3567
Worker	0.1849	0.2658	2.7925	0.0106	0.8619	6.7100e-003	0.8686	0.2289	6.2300e-003	0.2351	0.0000	657.6146	657.6146	0.0291	0.0000	658.2251
Total	**0.2050**	**0.3919**	**3.0985**	**0.0113**	**0.8827**	**9.8100e-003**	**0.8925**	**0.2348**	**9.0800e-003**	**0.2439**	**0.0000**	**718.9626**	**718.9626**	**0.0295**	**0.0000**	**719.5818**

3.3 Building Construction 2 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3843	3.3095	3.8701	6.7800e-003		0.1438	0.1438		0.1352	0.1352	0.0000	580.4225	580.4225	0.1509	0.0000	583.5913
Total	**0.3843**	**3.3095**	**3.8701**	**6.7800e-003**		**0.1438**	**0.1438**		**0.1352**	**0.1352**	**0.0000**	**580.4225**	**580.4225**	**0.1509**	**0.0000**	**583.5913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1106	0.7001	1.6738	4.0400e-003	0.1160	0.0173	0.1333	0.0331	0.0159	0.0490	0.0000	343.3339	343.3339	2.3600e-003	0.0000	343.3834
Worker	0.9818	1.4049	14.8178	0.0593	4.8107	0.0379	4.8486	1.2776	0.0351	1.3127	0.0000	3,638.2789	3,638.2789	0.1579	0.0000	3,641.5945
Total	**1.0924**	**2.1051**	**16.4916**	**0.0633**	**4.9267**	**0.0552**	**4.9819**	**1.3107**	**0.0511**	**1.3618**	**0.0000**	**3,981.6128**	**3,981.6128**	**0.1603**	**0.0000**	**3,984.9780**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1545	0.7987	4.2990	6.7800e-003		0.0264	0.0264		0.0264	0.0264	0.0000	580.4218	580.4218	0.1509	0.0000	583.5906
Total	**0.1545**	**0.7987**	**4.2990**	**6.7800e-003**		**0.0264**	**0.0264**		**0.0264**	**0.0264**	**0.0000**	**580.4218**	**580.4218**	**0.1509**	**0.0000**	**583.5906**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1106	0.7001	1.6738	4.0400e-003	0.1160	0.0173	0.1333	0.0331	0.0159	0.0490	0.0000	343.3339	343.3339	2.3600e-003	0.0000	343.3834
Worker	0.9818	1.4049	14.8178	0.0593	4.8107	0.0379	4.8486	1.2776	0.0351	1.3127	0.0000	3,638.2789	3,638.2789	0.1579	0.0000	3,641.5945
Total	**1.0924**	**2.1051**	**16.4916**	**0.0633**	**4.9267**	**0.0552**	**4.9819**	**1.3107**	**0.0511**	**1.3618**	**0.0000**	**3,981.6128**	**3,981.6128**	**0.1603**	**0.0000**	**3,984.9780**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0137	0.1091	0.1229	2.1000e-004		4.5900e-003	4.5900e-003		4.3800e-003	4.3800e-003	0.0000	17.9292	17.9292	3.8800e-003	0.0000	18.0107
Total	**0.0137**	**0.1091**	**0.1229**	**2.1000e-004**		**4.5900e-003**	**4.5900e-003**		**4.3800e-003**	**4.3800e-003**	**0.0000**	**17.9292**	**17.9292**	**3.8800e-003**	**0.0000**	**18.0107**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.0642	0.1534	3.7000e-004	0.0106	1.5900e-003	0.0122	3.0300e-003	1.4600e-003	4.5000e-003	0.0000	31.4723	31.4723	2.2000e-004	0.0000	31.4768
Worker	0.0900	0.1288	1.3583	5.4400e-003	0.4410	3.4700e-003	0.4445	0.1171	3.2200e-003	0.1203	0.0000	333.5089	333.5089	0.0145	0.0000	333.8128
Total	**0.1001**	**0.1930**	**1.5117**	**5.8100e-003**	**0.4516**	**5.0600e-003**	**0.4567**	**0.1201**	**4.6800e-003**	**0.1248**	**0.0000**	**364.9812**	**364.9812**	**0.0147**	**0.0000**	**365.2896**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.0200e-003	0.0383	0.1330	2.1000e-004		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	17.9292	17.9292	3.8800e-003	0.0000	18.0107
Total	**7.0200e-003**	**0.0383**	**0.1330**	**2.1000e-004**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**17.9292**	**17.9292**	**3.8800e-003**	**0.0000**	**18.0107**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.0642	0.1534	3.7000e-004	0.0106	1.5900e-003	0.0122	3.0300e-003	1.4600e-003	4.5000e-003	0.0000	31.4723	31.4723	2.2000e-004	0.0000	31.4768
Worker	0.0900	0.1288	1.3583	5.4400e-003	0.4410	3.4700e-003	0.4445	0.1171	3.2200e-003	0.1203	0.0000	333.5089	333.5089	0.0145	0.0000	333.8128
Total	**0.1001**	**0.1930**	**1.5117**	**5.8100e-003**	**0.4516**	**5.0600e-003**	**0.4567**	**0.1201**	**4.6800e-003**	**0.1248**	**0.0000**	**364.9812**	**364.9812**	**0.0147**	**0.0000**	**365.2896**

3.4 Building Construction 3 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1522	1.2084	1.4491	2.5400e-003		0.0470	0.0470		0.0448	0.0448	0.0000	212.7670	212.7670	0.0457	0.0000	213.7256
Total	**0.1522**	**1.2084**	**1.4491**	**2.5400e-003**		**0.0470**	**0.0470**		**0.0448**	**0.0448**	**0.0000**	**212.7670**	**212.7670**	**0.0457**	**0.0000**	**213.7256**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1180	0.7561	1.7875	4.4000e-003	0.1261	0.0189	0.1451	0.0360	0.0174	0.0534	0.0000	373.3852	373.3852	2.5700e-003	0.0000	373.4393
Worker	1.0187	1.4529	15.3670	0.0645	5.2316	0.0413	5.2729	1.3894	0.0383	1.4277	0.0000	3,906.3364	3,906.3364	0.1663	0.0000	3,909.8287
Total	**1.1367**	**2.2090**	**17.1545**	**0.0689**	**5.3578**	**0.0602**	**5.4180**	**1.4254**	**0.0557**	**1.4811**	**0.0000**	**4,279.7216**	**4,279.7216**	**0.1689**	**0.0000**	**4,283.2680**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0791	0.4446	1.5752	2.5400e-003		0.0136	0.0136		0.0136	0.0136	0.0000	212.7667	212.7667	0.0457	0.0000	213.7253
Total	**0.0791**	**0.4446**	**1.5752**	**2.5400e-003**		**0.0136**	**0.0136**		**0.0136**	**0.0136**	**0.0000**	**212.7667**	**212.7667**	**0.0457**	**0.0000**	**213.7253**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1180	0.7561	1.7875	4.4000e-003	0.1261	0.0189	0.1451	0.0360	0.0174	0.0534	0.0000	373.3852	373.3852	2.5700e-003	0.0000	373.4393
Worker	1.0187	1.4529	15.3670	0.0645	5.2316	0.0413	5.2729	1.3894	0.0383	1.4277	0.0000	3,906.3364	3,906.3364	0.1663	0.0000	3,909.8287
Total	**1.1367**	**2.2090**	**17.1545**	**0.0689**	**5.3578**	**0.0602**	**5.4180**	**1.4254**	**0.0557**	**1.4811**	**0.0000**	**4,279.7216**	**4,279.7216**	**0.1689**	**0.0000**	**4,283.2680**

3.4 Building Construction 3 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0128	0.1019	0.1221	2.1000e-004		3.9600e-003	3.9600e-003		3.7800e-003	3.7800e-003	0.0000	17.9344	17.9344	3.8500e-003	0.0000	18.0152
Total	**0.0128**	**0.1019**	**0.1221**	**2.1000e-004**		**3.9600e-003**	**3.9600e-003**		**3.7800e-003**	**3.7800e-003**	**0.0000**	**17.9344**	**17.9344**	**3.8500e-003**	**0.0000**	**18.0152**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6300e-003	0.0618	0.1479	3.7000e-004	0.0106	1.5300e-003	0.0122	3.0400e-003	1.4100e-003	4.4400e-003	0.0000	31.4660	31.4660	2.1000e-004	0.0000	31.4704
Worker	0.0821	0.1170	1.2408	5.4300e-003	0.4410	3.5000e-003	0.4445	0.1171	3.2500e-003	0.1204	0.0000	325.5787	325.5787	0.0136	0.0000	325.8647
Total	**0.0918**	**0.1788**	**1.3887**	**5.8000e-003**	**0.4516**	**5.0300e-003**	**0.4566**	**0.1202**	**4.6600e-003**	**0.1248**	**0.0000**	**357.0446**	**357.0446**	**0.0138**	**0.0000**	**357.3350**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6700e-003	0.0375	0.1328	2.1000e-004		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	17.9344	17.9344	3.8500e-003	0.0000	18.0152
Total	**6.6700e-003**	**0.0375**	**0.1328**	**2.1000e-004**		**1.1400e-003**	**1.1400e-003**		**1.1400e-003**	**1.1400e-003**	**0.0000**	**17.9344**	**17.9344**	**3.8500e-003**	**0.0000**	**18.0152**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6300e-003	0.0618	0.1479	3.7000e-004	0.0106	1.5300e-003	0.0122	3.0400e-003	1.4100e-003	4.4400e-003	0.0000	31.4660	31.4660	2.1000e-004	0.0000	31.4704
Worker	0.0821	0.1170	1.2408	5.4300e-003	0.4410	3.5000e-003	0.4445	0.1171	3.2500e-003	0.1204	0.0000	325.5787	325.5787	0.0136	0.0000	325.8647
Total	**0.0918**	**0.1788**	**1.3887**	**5.8000e-003**	**0.4516**	**5.0300e-003**	**0.4566**	**0.1202**	**4.6600e-003**	**0.1248**	**0.0000**	**357.0446**	**357.0446**	**0.0138**	**0.0000**	**357.3350**

3.5 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	9.4862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.0756	0.1194	2.0000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003	0.0000	16.8515	16.8515	9.2000e-004	0.0000	16.8708
Total	**9.4975**	**0.0756**	**0.1194**	**2.0000e-004**		**3.4000e-003**	**3.4000e-003**		**3.4000e-003**	**3.4000e-003**	**0.0000**	**16.8515**	**16.8515**	**9.2000e-004**	**0.0000**	**16.8708**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0508	0.0724	0.7657	3.2100e-003	0.2607	2.0600e-003	0.2627	0.0692	1.9100e-003	0.0711	0.0000	194.6422	194.6422	8.2900e-003	0.0000	194.8162
Total	**0.0508**	**0.0724**	**0.7657**	**3.2100e-003**	**0.2607**	**2.0600e-003**	**0.2627**	**0.0692**	**1.9100e-003**	**0.0711**	**0.0000**	**194.6422**	**194.6422**	**8.2900e-003**	**0.0000**	**194.8162**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	9.4862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9600e-003	8.5000e-003	0.1209	2.0000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	16.8515	16.8515	9.2000e-004	0.0000	16.8708
Total	**9.4882**	**8.5000e-003**	**0.1209**	**2.0000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**16.8515**	**16.8515**	**9.2000e-004**	**0.0000**	**16.8708**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0508	0.0724	0.7657	3.2100e-003	0.2607	2.0600e-003	0.2627	0.0692	1.9100e-003	0.0711	0.0000	194.6422	194.6422	8.2900e-003	0.0000	194.8162
Total	**0.0508**	**0.0724**	**0.7657**	**3.2100e-003**	**0.2607**	**2.0600e-003**	**0.2627**	**0.0692**	**1.9100e-003**	**0.0711**	**0.0000**	**194.6422**	**194.6422**	**8.2900e-003**	**0.0000**	**194.8162**

3.5 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5810					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8800e-003	0.0126	0.0199	3.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	2.8086	2.8086	1.5000e-004	0.0000	2.8118
Total	**1.5829**	**0.0126**	**0.0199**	**3.0000e-005**		**5.7000e-004**	**5.7000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**2.8086**	**2.8086**	**1.5000e-004**	**0.0000**	**2.8118**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0900e-003	0.0115	0.1222	5.4000e-004	0.0435	3.4000e-004	0.0438	0.0115	3.2000e-004	0.0119	0.0000	32.0767	32.0767	1.3400e-003	0.0000	32.1049
Total	**8.0900e-003**	**0.0115**	**0.1222**	**5.4000e-004**	**0.0435**	**3.4000e-004**	**0.0438**	**0.0115**	**3.2000e-004**	**0.0119**	**0.0000**	**32.0767**	**32.0767**	**1.3400e-003**	**0.0000**	**32.1049**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5810					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3000e-004	1.4200e-003	0.0202	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.8086	2.8086	1.5000e-004	0.0000	2.8118
Total	**1.5814**	**1.4200e-003**	**0.0202**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.8086**	**2.8086**	**1.5000e-004**	**0.0000**	**2.8118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0900e-003	0.0115	0.1222	5.4000e-004	0.0435	3.4000e-004	0.0438	0.0115	3.2000e-004	0.0119	0.0000	32.0767	32.0767	1.3400e-003	0.0000	32.1049
Total	**8.0900e-003**	**0.0115**	**0.1222**	**5.4000e-004**	**0.0435**	**3.4000e-004**	**0.0438**	**0.0115**	**3.2000e-004**	**0.0119**	**0.0000**	**32.0767**	**32.0767**	**1.3400e-003**	**0.0000**	**32.1049**

3.6 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0999	0.8834	1.1779	1.7100e-003		0.0439	0.0439		0.0408	0.0408	0.0000	146.1027	146.1027	0.0430	0.0000	147.0048
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0999**	**0.8834**	**1.1779**	**1.7100e-003**		**0.0439**	**0.0439**		**0.0408**	**0.0408**	**0.0000**	**146.1027**	**146.1027**	**0.0430**	**0.0000**	**147.0048**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0187	0.0267	0.2836	1.2900e-003	0.1049	8.4000e-004	0.1057	0.0279	7.8000e-004	0.0286	0.0000	76.6556	76.6556	3.1500e-003	0.0000	76.7218
Total	**0.0187**	**0.0267**	**0.2836**	**1.2900e-003**	**0.1049**	**8.4000e-004**	**0.1057**	**0.0279**	**7.8000e-004**	**0.0286**	**0.0000**	**76.6556**	**76.6556**	**3.1500e-003**	**0.0000**	**76.7218**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0403	0.2153	1.2518	1.7100e-003		6.8300e-003	6.8300e-003		6.8300e-003	6.8300e-003	0.0000	146.1025	146.1025	0.0430	0.0000	147.0046
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0403**	**0.2153**	**1.2518**	**1.7100e-003**		**6.8300e-003**	**6.8300e-003**		**6.8300e-003**	**6.8300e-003**	**0.0000**	**146.1025**	**146.1025**	**0.0430**	**0.0000**	**147.0046**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0187	0.0267	0.2836	1.2900e-003	0.1049	8.4000e-004	0.1057	0.0279	7.8000e-004	0.0286	0.0000	76.6556	76.6556	3.1500e-003	0.0000	76.7218
Total	**0.0187**	**0.0267**	**0.2836**	**1.2900e-003**	**0.1049**	**8.4000e-004**	**0.1057**	**0.0279**	**7.8000e-004**	**0.0286**	**0.0000**	**76.6556**	**76.6556**	**3.1500e-003**	**0.0000**	**76.7218**

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

Phase 5 Construction Emissions

Harbor UCLA Master Plan- Phase V

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	234.00	1000sqft	5.37	234,000.00	0
Parking Lot	570.00	Space	5.13	104,005.00	0
Unenclosed Parking with Elevator	1,220.00	Space	10.98	551,150.00	0
User Defined Retail	35,000.00	User Defined Unit	0.00	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client Provided Information

Grading -

Architectural Coating - See Input Summary

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	411,635.00	298,289.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,234,905.00	442,809.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	276.00

tblConstructionPhase	NumDays	370.00	173.00
tblConstructionPhase	NumDays	370.00	107.00
tblConstructionPhase	NumDays	370.00	455.00
tblConstructionPhase	NumDays	370.00	260.00
tblConstructionPhase	NumDays	370.00	86.00
tblConstructionPhase	NumDays	370.00	146.00
tblConstructionPhase	NumDays	35.00	173.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	PhaseEndDate	6/20/2030	4/22/2030
tblConstructionPhase	PhaseEndDate	12/1/2025	4/2/2025
tblConstructionPhase	PhaseEndDate	8/29/2025	8/30/2025
tblConstructionPhase	PhaseEndDate	5/28/2027	5/30/2027
tblConstructionPhase	PhaseEndDate	5/26/2028	5/30/2029
tblConstructionPhase	PhaseEndDate	8/20/2030	9/30/2029
tblConstructionPhase	PhaseEndDate	8/12/2030	4/22/2030
tblConstructionPhase	PhaseStartDate	5/31/2029	4/1/2029
tblConstructionPhase	PhaseStartDate	4/3/2025	8/5/2024
tblConstructionPhase	PhaseStartDate	8/31/2025	9/1/2025
tblConstructionPhase	PhaseStartDate	5/31/2027	6/1/2028
tblConstructionPhase	PhaseStartDate	4/23/2030	6/1/2029
tblConstructionPhase	PhaseStartDate	4/23/2030	1/1/2030
tblGrading	MaterialExported	0.00	10,675.00
tblGrading	MaterialImported	0.00	73,803.00
tblLandUse	LandUseSquareFeet	228,000.00	104,005.00
tblLandUse	LandUseSquareFeet	488,000.00	551,150.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	10,560.00	14,080.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	VendorTripNumber	151.00	153.00
tblTripsAndVMT	WorkerTripNumber	18.00	486.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	361.00	1,770.00
tblTripsAndVMT	WorkerTripNumber	72.00	92.00
tblTripsAndVMT	WorkerTripNumber	361.00	465.00
tblTripsAndVMT	WorkerTripNumber	361.00	465.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.5264	2.5285	7.2277	0.0241	1.4895	0.0929	1.5823	0.3960	0.0864	0.4824	0.0000	1,672.2767	1,672.2767	0.1150	0.0000	1,674.6916
2025	0.7968	2.8739	11.7214	0.0422	2.9407	0.0944	3.0351	0.7822	0.0875	0.8697	0.0000	2,774.8027	2,774.8027	0.1533	0.0000	2,778.0213
2026	0.6248	1.7989	9.4974	0.0364	2.6571	0.0559	2.7130	0.7081	0.0516	0.7597	0.0000	2,314.9146	2,314.9146	0.1066	0.0000	2,317.1533
2027	0.2452	0.7169	3.7374	0.0148	1.0792	0.0228	1.1019	0.2876	0.0210	0.3086	0.0000	932.6472	932.6472	0.0425	0.0000	933.5390
2028	0.4192	1.6780	5.8030	0.0229	1.5465	0.0572	1.6038	0.4121	0.0530	0.4651	0.0000	1,472.6960	1,472.6960	0.1042	0.0000	1,474.8845
2029	3.5549	2.3512	6.8957	0.0261	1.6567	0.0835	1.7401	0.4424	0.0777	0.5201	0.0000	1,721.0970	1,721.0970	0.1167	0.0000	1,723.5484
2030	1.4096	0.7576	2.0614	6.1600e-003	0.2930	0.0241	0.3172	0.0786	0.0236	0.1021	0.0000	440.0121	440.0121	0.0148	0.0000	440.3230

Total	**7.5770**	**12.7049**	**46.9441**	**0.1726**	**11.6627**	**0.4307**	**12.0934**	**3.1069**	**0.4007**	**3.5077**	**0.0000**	**11,328.4463**	**11,328.4463**	**0.6531**	**0.0000**	**11,342.1611**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.4244	1.4244	7.4507	0.0241	1.4866	0.0414	1.5280	0.3956	0.0388	0.4343	0.0000	1,672.2765	1,672.2765	0.1150	0.0000	1,674.6913
2025	0.7164	1.9792	11.8894	0.0422	2.9378	0.0554	2.9932	0.7817	0.0515	0.8333	0.0000	2,774.8024	2,774.8024	0.1533	0.0000	2,778.0211
2026	0.5945	1.4354	9.5267	0.0364	2.6571	0.0393	2.6964	0.7081	0.0364	0.7445	0.0000	2,314.9145	2,314.9145	0.1066	0.0000	2,317.1532
2027	0.2328	0.5693	3.7493	0.0148	1.0792	0.0160	1.0952	0.2876	0.0148	0.3024	0.0000	932.6472	932.6472	0.0425	0.0000	933.5390
2028	0.3570	0.9753	6.0870	0.0229	1.5465	0.0284	1.5749	0.4121	0.0267	0.4389	0.0000	1,472.6958	1,472.6958	0.1042	0.0000	1,474.8843
2029	3.4527	1.2687	7.1986	0.0261	1.6567	0.0364	1.6931	0.4424	0.0341	0.4765	0.0000	1,721.0967	1,721.0967	0.1167	0.0000	1,723.5481
2030	1.3429	0.3562	2.1155	6.1600e-003	0.2930	0.0102	0.3033	0.0786	9.6500e-003	0.0882	0.0000	440.0119	440.0119	0.0148	0.0000	440.3229
Total	**7.1208**	**8.0086**	**48.0171**	**0.1726**	**11.6569**	**0.2272**	**11.8840**	**3.1061**	**0.2121**	**3.3181**	**0.0000**	**11,328.4449**	**11,328.4449**	**0.6531**	**0.0000**	**11,342.1597**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.02**	**36.96**	**-2.29**	**0.00**	**0.05**	**47.26**	**1.73**	**0.03**	**47.08**	**5.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/5/2024	4/2/2025	5	173	
2	Building Construction	Building Construction	8/5/2024	4/2/2025	5	173	
3	Building Construction 2	Building Construction	4/3/2025	8/30/2025	5	107	
4	Building Construction 3	Building Construction	9/1/2025	5/30/2027	5	455	

5	Building Construction 4	Building Construction	6/1/2028	5/30/2029	5	260	
6	Architectural Coating	Architectural Coating	4/1/2029	4/22/2030	5	276	
7	Building Construction 5	Building Construction	6/1/2029	9/30/2029	5	86	
8	Building Construction 6	Building Construction	10/1/2029	4/22/2030	5	146	
9	Paving	Paving	1/1/2030	4/22/2030	5	80	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,809; Non-Residential Outdoor: 298,289 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Air Compressors	2	8.00	78	0.48
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Scrapers	0	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	2	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Building Construction 2	Cranes	0	7.00	226	0.29
Building Construction 2	Forklifts	0	8.00	89	0.20
Building Construction 2	Generator Sets	0	8.00	84	0.74
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	0	8.00	46	0.45

Building Construction 3	Cranes	0	7.00	226	0.29
Building Construction 3	Forklifts	1	8.00	89	0.20
Building Construction 3	Generator Sets	0	8.00	84	0.74
Building Construction 3	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction 3	Welders	0	8.00	46	0.45
Building Construction 4	Cranes	1	7.00	226	0.29
Building Construction 4	Forklifts	1	8.00	89	0.20
Building Construction 4	Generator Sets	0	8.00	84	0.74
Building Construction 4	Rubber Tired Loaders	2	8.00	199	0.36
Building Construction 4	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 4	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction 5	Air Compressors	1	8.00	78	0.48
Building Construction 5	Cranes	2	7.00	226	0.29
Building Construction 5	Forklifts	1	8.00	89	0.20
Building Construction 5	Generator Sets	0	8.00	84	0.74
Building Construction 5	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction 5	Welders	0	8.00	46	0.45
Building Construction 6	Cranes	1	7.00	226	0.29
Building Construction 6	Forklifts	1	8.00	89	0.20
Building Construction 6	Generator Sets	0	8.00	84	0.74
Building Construction 6	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction 6	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Trenchers	2	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	486.00	4.00	14,080.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	1,770.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	3	1,770.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	3	1,770.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	8	1,770.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	92.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 5	5	465.00	153.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 6	3	465.00	151.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7800e-003	0.0000	4.7800e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0721	0.6054	0.8746	1.5400e-003		0.0272	0.0272		0.0258	0.0258	0.0000	134.0685	134.0685	0.0336	0.0000	134.7748
Total	**0.0721**	**0.6054**	**0.8746**	**1.5400e-003**	**4.7800e-003**	**0.0272**	**0.0320**	**7.2000e-004**	**0.0258**	**0.0265**	**0.0000**	**134.0685**	**134.0685**	**0.0336**	**0.0000**	**134.7748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0604	0.5149	0.8064	3.1700e-003	0.1094	0.0165	0.1260	0.0290	0.0152	0.0442	0.0000	270.6652	270.6652	1.9100e-003	0.0000	270.7053
Vendor	1.2600e-003	7.9500e-003	0.0190	5.0000e-005	1.3200e-003	2.0000e-004	1.5100e-003	3.8000e-004	1.8000e-004	5.6000e-004	0.0000	3.8999	3.8999	3.0000e-005	0.0000	3.9004
Worker	0.0582	0.0833	0.8787	3.5200e-003	0.2853	2.2400e-003	0.2875	0.0758	2.0800e-003	0.0778	0.0000	215.7428	215.7428	9.3600e-003	0.0000	215.9394
Total	**0.1199**	**0.6062**	**1.7041**	**6.7400e-003**	**0.3960**	**0.0190**	**0.4150**	**0.1052**	**0.0175**	**0.1226**	**0.0000**	**490.3078**	**490.3078**	**0.0113**	**0.0000**	**490.5452**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8600e-003	0.0000	1.8600e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0179	0.0775	1.0010	1.5400e-003		2.3800e-003	2.3800e-003		2.3800e-003	2.3800e-003	0.0000	134.0684	134.0684	0.0336	0.0000	134.7746
Total	**0.0179**	**0.0775**	**1.0010**	**1.5400e-003**	**1.8600e-003**	**2.3800e-003**	**4.2400e-003**	**2.8000e-004**	**2.3800e-003**	**2.6600e-003**	**0.0000**	**134.0684**	**134.0684**	**0.0336**	**0.0000**	**134.7746**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0604	0.5149	0.8064	3.1700e-003	0.1094	0.0165	0.1260	0.0290	0.0152	0.0442	0.0000	270.6652	270.6652	1.9100e-003	0.0000	270.7053
Vendor	1.2600e-003	7.9500e-003	0.0190	5.0000e-005	1.3200e-003	2.0000e-004	1.5100e-003	3.8000e-004	1.8000e-004	5.6000e-004	0.0000	3.8999	3.8999	3.0000e-005	0.0000	3.9004
Worker	0.0582	0.0833	0.8787	3.5200e-003	0.2853	2.2400e-003	0.2875	0.0758	2.0800e-003	0.0778	0.0000	215.7428	215.7428	9.3600e-003	0.0000	215.9394
Total	**0.1199**	**0.6062**	**1.7041**	**6.7400e-003**	**0.3960**	**0.0190**	**0.4150**	**0.1052**	**0.0175**	**0.1226**	**0.0000**	**490.3078**	**490.3078**	**0.0113**	**0.0000**	**490.5452**

3.2 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7800e-003	0.0000	4.7800e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0412	0.3344	0.5378	9.5000e-004		0.0139	0.0139		0.0132	0.0132	0.0000	82.7278	82.7278	0.0207	0.0000	83.1628
Total	**0.0412**	**0.3344**	**0.5378**	**9.5000e-004**	**4.7800e-003**	**0.0139**	**0.0187**	**7.2000e-004**	**0.0132**	**0.0139**	**0.0000**	**82.7278**	**82.7278**	**0.0207**	**0.0000**	**83.1628**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0370	0.3168	0.4930	1.9600e-003	0.1024	0.0103	0.1127	0.0265	9.4300e-003	0.0359	0.0000	166.9578	166.9578	1.1900e-003	0.0000	166.9828
Vendor	7.6000e-004	4.8700e-003	0.0115	3.0000e-005	8.1000e-004	1.2000e-004	9.3000e-004	2.3000e-004	1.1000e-004	3.4000e-004	0.0000	2.4056	2.4056	2.0000e-005	0.0000	2.4059
Worker	0.0343	0.0489	0.5169	2.1700e-003	0.1760	1.3900e-003	0.1774	0.0467	1.2900e-003	0.0480	0.0000	131.3835	131.3835	5.5900e-003	0.0000	131.5010
Total	**0.0720**	**0.3705**	**1.0214**	**4.1600e-003**	**0.2792**	**0.0118**	**0.2910**	**0.0734**	**0.0108**	**0.0843**	**0.0000**	**300.7469**	**300.7469**	**6.8000e-003**	**0.0000**	**300.8896**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8600e-003	0.0000	1.8600e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0478	0.6174	9.5000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	82.7277	82.7277	0.0207	0.0000	83.1628
Total	**0.0110**	**0.0478**	**0.6174**	**9.5000e-004**	**1.8600e-003**	**1.4700e-003**	**3.3300e-003**	**2.8000e-004**	**1.4700e-003**	**1.7500e-003**	**0.0000**	**82.7277**	**82.7277**	**0.0207**	**0.0000**	**83.1628**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0370	0.3168	0.4930	1.9600e-003	0.1024	0.0103	0.1127	0.0265	9.4300e-003	0.0359	0.0000	166.9578	166.9578	1.1900e-003	0.0000	166.9828
Vendor	7.6000e-004	4.8700e-003	0.0115	3.0000e-005	8.1000e-004	1.2000e-004	9.3000e-004	2.3000e-004	1.1000e-004	3.4000e-004	0.0000	2.4056	2.4056	2.0000e-005	0.0000	2.4059
Worker	0.0343	0.0489	0.5169	2.1700e-003	0.1760	1.3900e-003	0.1774	0.0467	1.2900e-003	0.0480	0.0000	131.3835	131.3835	5.5900e-003	0.0000	131.5010
Total	**0.0720**	**0.3705**	**1.0214**	**4.1600e-003**	**0.2792**	**0.0118**	**0.2910**	**0.0734**	**0.0108**	**0.0843**	**0.0000**	**300.7469**	**300.7469**	**6.8000e-003**	**0.0000**	**300.8896**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0750	0.7133	0.7311	1.3300e-003		0.0311	0.0311		0.0288	0.0288	0.0000	114.9507	114.9507	0.0350	0.0000	115.6846
Total	**0.0750**	**0.7133**	**0.7311**	**1.3300e-003**		**0.0311**	**0.0311**		**0.0288**	**0.0288**	**0.0000**	**114.9507**	**114.9507**	**0.0350**	**0.0000**	**115.6846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0474	0.3002	0.7177	1.7300e-003	0.0497	7.4300e-003	0.0572	0.0142	6.8300e-003	0.0210	0.0000	147.2199	147.2199	1.0100e-003	0.0000	147.2411
Worker	0.2120	0.3034	3.2001	0.0128	1.0389	8.1700e-003	1.0471	0.2759	7.5800e-003	0.2835	0.0000	785.7298	785.7298	0.0341	0.0000	786.4459
Total	**0.2594**	**0.6036**	**3.9178**	**0.0145**	**1.0887**	**0.0156**	**1.1043**	**0.2901**	**0.0144**	**0.3045**	**0.0000**	**932.9497**	**932.9497**	**0.0351**	**0.0000**	**933.6870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0272	0.1372	0.8278	1.3300e-003		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003	0.0000	114.9505	114.9505	0.0350	0.0000	115.6845
Total	**0.0272**	**0.1372**	**0.8278**	**1.3300e-003**		**4.4900e-003**	**4.4900e-003**		**4.4900e-003**	**4.4900e-003**	**0.0000**	**114.9505**	**114.9505**	**0.0350**	**0.0000**	**115.6845**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0474	0.3002	0.7177	1.7300e-003	0.0497	7.4300e-003	0.0572	0.0142	6.8300e-003	0.0210	0.0000	147.2199	147.2199	1.0100e-003	0.0000	147.2411
Worker	0.2120	0.3034	3.2001	0.0128	1.0389	8.1700e-003	1.0471	0.2759	7.5800e-003	0.2835	0.0000	785.7298	785.7298	0.0341	0.0000	786.4459
Total	**0.2594**	**0.6036**	**3.9178**	**0.0145**	**1.0887**	**0.0156**	**1.1043**	**0.2901**	**0.0144**	**0.3045**	**0.0000**	**932.9497**	**932.9497**	**0.0351**	**0.0000**	**933.6870**

3.3 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0431	0.4045	0.4476	8.2000e-004		0.0167	0.0167		0.0154	0.0154	0.0000	70.9354	70.9354	0.0215	0.0000	71.3874
Total	**0.0431**	**0.4045**	**0.4476**	**8.2000e-004**		**0.0167**	**0.0167**		**0.0154**	**0.0154**	**0.0000**	**70.9354**	**70.9354**	**0.0215**	**0.0000**	**71.3874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0287	0.1839	0.4347	1.0700e-003	0.0307	4.6000e-003	0.0353	8.7600e-003	4.2400e-003	0.0130	0.0000	90.8109	90.8109	6.3000e-004	0.0000	90.8240
Worker	0.1248	0.1780	1.8823	7.9000e-003	0.6408	5.0600e-003	0.6459	0.1702	4.6900e-003	0.1749	0.0000	478.4954	478.4954	0.0204	0.0000	478.9232
Total	**0.1535**	**0.3619**	**2.3171**	**8.9700e-003**	**0.6715**	**9.6600e-003**	**0.6812**	**0.1790**	**8.9300e-003**	**0.1879**	**0.0000**	**569.3063**	**569.3063**	**0.0210**	**0.0000**	**569.7472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0163	0.0834	0.5102	8.2000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	70.9353	70.9353	0.0215	0.0000	71.3873
Total	**0.0163**	**0.0834**	**0.5102**	**8.2000e-004**		**2.5500e-003**	**2.5500e-003**		**2.5500e-003**	**2.5500e-003**	**0.0000**	**70.9353**	**70.9353**	**0.0215**	**0.0000**	**71.3873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0287	0.1839	0.4347	1.0700e-003	0.0307	4.6000e-003	0.0353	8.7600e-003	4.2400e-003	0.0130	0.0000	90.8109	90.8109	6.3000e-004	0.0000	90.8240
Worker	0.1248	0.1780	1.8823	7.9000e-003	0.6408	5.0600e-003	0.6459	0.1702	4.6900e-003	0.1749	0.0000	478.4954	478.4954	0.0204	0.0000	478.9232
Total	**0.1535**	**0.3619**	**2.3171**	**8.9700e-003**	**0.6715**	**9.6600e-003**	**0.6812**	**0.1790**	**8.9300e-003**	**0.1879**	**0.0000**	**569.3063**	**569.3063**	**0.0210**	**0.0000**	**569.7472**

3.4 Building Construction 2 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0186	0.1875	0.3131	4.4000e-004		7.6000e-003	7.6000e-003		6.9900e-003	6.9900e-003	0.0000	38.4828	38.4828	0.0125	0.0000	38.7441
Total	**0.0186**	**0.1875**	**0.3131**	**4.4000e-004**		**7.6000e-003**	**7.6000e-003**		**6.9900e-003**	**6.9900e-003**	**0.0000**	**38.4828**	**38.4828**	**0.0125**	**0.0000**	**38.7441**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0471	0.3021	0.7141	1.7600e-003	0.0504	7.5600e-003	0.0580	0.0144	6.9600e-003	0.0213	0.0000	149.1737	149.1737	1.0300e-003	0.0000	149.1953
Worker	0.2023	0.2885	3.0517	0.0128	1.0389	8.2000e-003	1.0471	0.2759	7.6100e-003	0.2835	0.0000	775.7426	775.7426	0.0330	0.0000	776.4361
Total	**0.2494**	**0.5906**	**3.7658**	**0.0146**	**1.0893**	**0.0158**	**1.1051**	**0.2903**	**0.0146**	**0.3049**	**0.0000**	**924.9163**	**924.9163**	**0.0341**	**0.0000**	**925.6314**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3300e-003	0.0231	0.3289	4.4000e-004		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	38.4827	38.4827	0.0125	0.0000	38.7441
Total	**5.3300e-003**	**0.0231**	**0.3289**	**4.4000e-004**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**38.4827**	**38.4827**	**0.0125**	**0.0000**	**38.7441**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0471	0.3021	0.7141	1.7600e-003	0.0504	7.5600e-003	0.0580	0.0144	6.9600e-003	0.0213	0.0000	149.1737	149.1737	1.0300e-003	0.0000	149.1953
Worker	0.2023	0.2885	3.0517	0.0128	1.0389	8.2000e-003	1.0471	0.2759	7.6100e-003	0.2835	0.0000	775.7426	775.7426	0.0330	0.0000	776.4361
Total	**0.2494**	**0.5906**	**3.7658**	**0.0146**	**1.0893**	**0.0158**	**1.1051**	**0.2903**	**0.0146**	**0.3049**	**0.0000**	**924.9163**	**924.9163**	**0.0341**	**0.0000**	**925.6314**

3.5 Building Construction 3 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0140	0.1388	0.2216	3.1000e-004		6.0900e-003	6.0900e-003		5.6100e-003	5.6100e-003	0.0000	27.0084	27.0084	8.7400e-003	0.0000	27.1918
Total	**0.0140**	**0.1388**	**0.2216**	**3.1000e-004**		**6.0900e-003**	**6.0900e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**27.0084**	**27.0084**	**8.7400e-003**	**0.0000**	**27.1918**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0388	0.2484	0.5873	1.4400e-003	0.0415	6.2200e-003	0.0477	0.0118	5.7200e-003	0.0176	0.0000	122.6849	122.6849	8.5000e-004	0.0000	122.7026
Worker	0.1664	0.2373	2.5098	0.0105	0.8545	6.7400e-003	0.8612	0.2269	6.2600e-003	0.2332	0.0000	637.9939	637.9939	0.0272	0.0000	638.5643
Total	**0.2051**	**0.4857**	**3.0971**	**0.0120**	**0.8959**	**0.0130**	**0.9089**	**0.2388**	**0.0120**	**0.2507**	**0.0000**	**760.6788**	**760.6788**	**0.0280**	**0.0000**	**761.2669**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7500e-003	0.0163	0.2315	3.1000e-004		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	27.0084	27.0084	8.7400e-003	0.0000	27.1918
Total	**3.7500e-003**	**0.0163**	**0.2315**	**3.1000e-004**		**5.0000e-004**	**5.0000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**27.0084**	**27.0084**	**8.7400e-003**	**0.0000**	**27.1918**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0388	0.2484	0.5873	1.4400e-003	0.0415	6.2200e-003	0.0477	0.0118	5.7200e-003	0.0176	0.0000	122.6849	122.6849	8.5000e-004	0.0000	122.7026
Worker	0.1664	0.2373	2.5098	0.0105	0.8545	6.7400e-003	0.8612	0.2269	6.2600e-003	0.2332	0.0000	637.9939	637.9939	0.0272	0.0000	638.5643
Total	**0.2051**	**0.4857**	**3.0971**	**0.0120**	**0.8959**	**0.0130**	**0.9089**	**0.2388**	**0.0120**	**0.2507**	**0.0000**	**760.6788**	**760.6788**	**0.0280**	**0.0000**	**761.2669**

3.5 Building Construction 3 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0415	0.4117	0.6572	9.1000e-004		0.0181	0.0181		0.0166	0.0166	0.0000	80.1044	80.1044	0.0259	0.0000	80.6485
Total	**0.0415**	**0.4117**	**0.6572**	**9.1000e-004**		**0.0181**	**0.0181**		**0.0166**	**0.0166**	**0.0000**	**80.1044**	**80.1044**	**0.0259**	**0.0000**	**80.6485**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1113	0.7147	1.7098	4.2800e-003	0.1229	0.0177	0.1406	0.0351	0.0163	0.0514	0.0000	363.7899	363.7899	2.4300e-003	0.0000	363.8410
Worker	0.4720	0.6725	7.1304	0.0312	2.5342	0.0201	2.5543	0.6730	0.0187	0.6917	0.0000	1,871.0202	1,871.0202	0.0783	0.0000	1,872.6638
Total	**0.5833**	**1.3872**	**8.8402**	**0.0355**	**2.6571**	**0.0378**	**2.6949**	**0.7081**	**0.0349**	**0.7430**	**0.0000**	**2,234.8101**	**2,234.8101**	**0.0807**	**0.0000**	**2,236.5048**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0111	0.0482	0.6865	9.1000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	80.1043	80.1043	0.0259	0.0000	80.6484
Total	**0.0111**	**0.0482**	**0.6865**	**9.1000e-004**		**1.4800e-003**	**1.4800e-003**		**1.4800e-003**	**1.4800e-003**	**0.0000**	**80.1043**	**80.1043**	**0.0259**	**0.0000**	**80.6484**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1113	0.7147	1.7098	4.2800e-003	0.1229	0.0177	0.1406	0.0351	0.0163	0.0514	0.0000	363.7899	363.7899	2.4300e-003	0.0000	363.8410
Worker	0.4720	0.6725	7.1304	0.0312	2.5342	0.0201	2.5543	0.6730	0.0187	0.6917	0.0000	1,871.0202	1,871.0202	0.0783	0.0000	1,872.6638
Total	**0.5833**	**1.3872**	**8.8402**	**0.0355**	**2.6571**	**0.0378**	**2.6949**	**0.7081**	**0.0349**	**0.7430**	**0.0000**	**2,234.8101**	**2,234.8101**	**0.0807**	**0.0000**	**2,236.5048**

3.5 Building Construction 3 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0169	0.1672	0.2669	3.7000e-004		7.3400e-003	7.3400e-003		6.7500e-003	6.7500e-003	0.0000	32.5328	32.5328	0.0105	0.0000	32.7538
Total	**0.0169**	**0.1672**	**0.2669**	**3.7000e-004**		**7.3400e-003**	**7.3400e-003**		**6.7500e-003**	**6.7500e-003**	**0.0000**	**32.5328**	**32.5328**	**0.0105**	**0.0000**	**32.7538**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0447	0.2880	0.6876	1.7400e-003	0.0499	7.2000e-003	0.0571	0.0143	6.6200e-003	0.0209	0.0000	147.7538	147.7538	9.9000e-004	0.0000	147.7746
Worker	0.1836	0.2617	2.7830	0.0127	1.0292	8.2100e-003	1.0374	0.2733	7.6200e-003	0.2810	0.0000	752.3606	752.3606	0.0310	0.0000	753.0106
Total	**0.2283**	**0.5497**	**3.4706**	**0.0144**	**1.0792**	**0.0154**	**1.0946**	**0.2876**	**0.0142**	**0.3018**	**0.0000**	**900.1144**	**900.1144**	**0.0320**	**0.0000**	**900.7852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5200e-003	0.0196	0.2788	3.7000e-004		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	32.5328	32.5328	0.0105	0.0000	32.7538
Total	**4.5200e-003**	**0.0196**	**0.2788**	**3.7000e-004**		**6.0000e-004**	**6.0000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**32.5328**	**32.5328**	**0.0105**	**0.0000**	**32.7538**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0447	0.2880	0.6876	1.7400e-003	0.0499	7.2000e-003	0.0571	0.0143	6.6200e-003	0.0209	0.0000	147.7538	147.7538	9.9000e-004	0.0000	147.7746
Worker	0.1836	0.2617	2.7830	0.0127	1.0292	8.2100e-003	1.0374	0.2733	7.6200e-003	0.2810	0.0000	752.3606	752.3606	0.0310	0.0000	753.0106
Total	**0.2283**	**0.5497**	**3.4706**	**0.0144**	**1.0792**	**0.0154**	**1.0946**	**0.2876**	**0.0142**	**0.3018**	**0.0000**	**900.1144**	**900.1144**	**0.0320**	**0.0000**	**900.7852**

3.6 Building Construction 4 - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1041	0.9136	0.9888	2.2400e-003		0.0353	0.0353		0.0327	0.0327	0.0000	194.0260	194.0260	0.0595	0.0000	195.2751
Total	**0.1041**	**0.9136**	**0.9888**	**2.2400e-003**		**0.0353**	**0.0353**		**0.0327**	**0.0327**	**0.0000**	**194.0260**	**194.0260**	**0.0595**	**0.0000**	**195.2751**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0625	0.4037	0.9643	2.4600e-003	0.0707	0.0101	0.0808	0.0202	9.3100e-003	0.0295	0.0000	209.1014	209.1014	1.3900e-003	0.0000	209.1307
Worker	0.2526	0.3607	3.8500	0.0182	1.4759	0.0118	1.4877	0.3920	0.0110	0.4029	0.0000	1,069.5686	1,069.5686	0.0433	0.0000	1,070.4786
Total	**0.3152**	**0.7644**	**4.8143**	**0.0206**	**1.5465**	**0.0219**	**1.5685**	**0.4121**	**0.0203**	**0.4324**	**0.0000**	**1,278.6701**	**1,278.6701**	**0.0447**	**0.0000**	**1,279.6094**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0419	0.2110	1.2727	2.2400e-003		6.4600e-003	6.4600e-003		6.4600e-003	6.4600e-003	0.0000	194.0257	194.0257	0.0595	0.0000	195.2749
Total	**0.0419**	**0.2110**	**1.2727**	**2.2400e-003**		**6.4600e-003**	**6.4600e-003**		**6.4600e-003**	**6.4600e-003**	**0.0000**	**194.0257**	**194.0257**	**0.0595**	**0.0000**	**195.2749**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0625	0.4037	0.9643	2.4600e-003	0.0707	0.0101	0.0808	0.0202	9.3100e-003	0.0295	0.0000	209.1014	209.1014	1.3900e-003	0.0000	209.1307
Worker	0.2526	0.3607	3.8500	0.0182	1.4759	0.0118	1.4877	0.3920	0.0110	0.4029	0.0000	1,069.5686	1,069.5686	0.0433	0.0000	1,070.4786
Total	**0.3152**	**0.7644**	**4.8143**	**0.0206**	**1.5465**	**0.0219**	**1.5685**	**0.4121**	**0.0203**	**0.4324**	**0.0000**	**1,278.6701**	**1,278.6701**	**0.0447**	**0.0000**	**1,279.6094**

3.6 Building Construction 4 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0740	0.6492	0.7025	1.5900e-003		0.0251	0.0251		0.0233	0.0233	0.0000	137.8606	137.8606	0.0423	0.0000	138.7481
Total	**0.0740**	**0.6492**	**0.7025**	**1.5900e-003**		**0.0251**	**0.0251**		**0.0233**	**0.0233**	**0.0000**	**137.8606**	**137.8606**	**0.0423**	**0.0000**	**138.7481**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0439	0.2854	0.6782	1.7500e-003	0.0502	7.2000e-003	0.0574	0.0143	6.6300e-003	0.0210	0.0000	148.5745	148.5745	9.9000e-004	0.0000	148.5953
Worker	0.1720	0.2461	2.6372	0.0129	1.0486	8.4100e-003	1.0571	0.2785	7.8100e-003	0.2863	0.0000	754.2366	754.2366	0.0301	0.0000	754.8678
Total	**0.2159**	**0.5315**	**3.3154**	**0.0147**	**1.0989**	**0.0156**	**1.1145**	**0.2928**	**0.0144**	**0.3073**	**0.0000**	**902.8111**	**902.8111**	**0.0311**	**0.0000**	**903.4631**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0297	0.1499	0.9043	1.5900e-003		4.5900e-003	4.5900e-003		4.5900e-003	4.5900e-003	0.0000	137.8604	137.8604	0.0423	0.0000	138.7480
Total	**0.0297**	**0.1499**	**0.9043**	**1.5900e-003**		**4.5900e-003**	**4.5900e-003**		**4.5900e-003**	**4.5900e-003**	**0.0000**	**137.8604**	**137.8604**	**0.0423**	**0.0000**	**138.7480**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0439	0.2854	0.6782	1.7500e-003	0.0502	7.2000e-003	0.0574	0.0143	6.6300e-003	0.0210	0.0000	148.5745	148.5745	9.9000e-004	0.0000	148.5953
Worker	0.1720	0.2461	2.6372	0.0129	1.0486	8.4100e-003	1.0571	0.2785	7.8100e-003	0.2863	0.0000	754.2366	754.2366	0.0301	0.0000	754.8678
Total	**0.2159**	**0.5315**	**3.3154**	**0.0147**	**1.0989**	**0.0156**	**1.1145**	**0.2928**	**0.0144**	**0.3073**	**0.0000**	**902.8111**	**902.8111**	**0.0311**	**0.0000**	**903.4631**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0492					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0167	0.1123	0.1773	2.9000e-004		5.0500e-003	5.0500e-003		5.0500e-003	5.0500e-003	0.0000	25.0219	25.0219	1.3600e-003	0.0000	25.0506
Total	**3.0659**	**0.1123**	**0.1773**	**2.9000e-004**		**5.0500e-003**	**5.0500e-003**		**5.0500e-003**	**5.0500e-003**	**0.0000**	**25.0219**	**25.0219**	**1.3600e-003**	**0.0000**	**25.0506**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0162	0.0232	0.2488	1.2200e-003	0.0989	7.9000e-004	0.0997	0.0263	7.4000e-004	0.0270	0.0000	71.1467	71.1467	2.8400e-003	0.0000	71.2062
Total	**0.0162**	**0.0232**	**0.2488**	**1.2200e-003**	**0.0989**	**7.9000e-004**	**0.0997**	**0.0263**	**7.4000e-004**	**0.0270**	**0.0000**	**71.1467**	**71.1467**	**2.8400e-003**	**0.0000**	**71.2062**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.0492					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9100e-003	0.0126	0.1796	2.9000e-004		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	25.0219	25.0219	1.3600e-003	0.0000	25.0505
Total	**3.0521**	**0.0126**	**0.1796**	**2.9000e-004**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**25.0219**	**25.0219**	**1.3600e-003**	**0.0000**	**25.0505**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0162	0.0232	0.2488	1.2200e-003	0.0989	7.9000e-004	0.0997	0.0263	7.4000e-004	0.0270	0.0000	71.1467	71.1467	2.8400e-003	0.0000	71.2062
Total	**0.0162**	**0.0232**	**0.2488**	**1.2200e-003**	**0.0989**	**7.9000e-004**	**0.0997**	**0.0263**	**7.4000e-004**	**0.0270**	**0.0000**	**71.1467**	**71.1467**	**2.8400e-003**	**0.0000**	**71.2062**

3.7 Architectural Coating - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2446					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2300e-003	0.0343	0.0719	1.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2217
Total	**1.2498**	**0.0343**	**0.0719**	**1.2000e-004**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**10.2130**	**10.2130**	**4.1000e-004**	**0.0000**	**10.2217**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3400e-003	9.1000e-003	0.0982	5.0000e-004	0.0404	3.2000e-004	0.0407	0.0107	3.0000e-004	0.0110	0.0000	28.8500	28.8500	1.1300e-003	0.0000	28.8737
Total	**6.3400e-003**	**9.1000e-003**	**0.0982**	**5.0000e-004**	**0.0404**	**3.2000e-004**	**0.0407**	**0.0107**	**3.0000e-004**	**0.0110**	**0.0000**	**28.8500**	**28.8500**	**1.1300e-003**	**0.0000**	**28.8737**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2446					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1900e-003	5.1500e-003	0.0733	1.2000e-004		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2217
Total	**1.2458**	**5.1500e-003**	**0.0733**	**1.2000e-004**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**10.2130**	**10.2130**	**4.1000e-004**	**0.0000**	**10.2217**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3400e-003	9.1000e-003	0.0982	5.0000e-004	0.0404	3.2000e-004	0.0407	0.0107	3.0000e-004	0.0110	0.0000	28.8500	28.8500	1.1300e-003	0.0000	28.8737
Total	**6.3400e-003**	**9.1000e-003**	**0.0982**	**5.0000e-004**	**0.0404**	**3.2000e-004**	**0.0407**	**0.0107**	**3.0000e-004**	**0.0110**	**0.0000**	**28.8500**	**28.8500**	**1.1300e-003**	**0.0000**	**28.8737**

3.8 Building Construction 5 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0415	0.3843	0.3642	7.8000e-004		0.0168	0.0168		0.0157	0.0157	0.0000	68.0461	68.0461	0.0181	0.0000	68.4256
Total	**0.0415**	**0.3843**	**0.3642**	**7.8000e-004**		**0.0168**	**0.0168**		**0.0157**	**0.0157**	**0.0000**	**68.0461**	**68.0461**	**0.0181**	**0.0000**	**68.4256**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0354	0.2303	0.5472	1.4100e-003	0.0405	5.8100e-003	0.0463	0.0116	5.3500e-003	0.0169	0.0000	119.8763	119.8763	8.0000e-004	0.0000	119.8931
Worker	0.0360	0.0515	0.5517	2.7000e-003	0.2194	1.7600e-003	0.2211	0.0583	1.6300e-003	0.0599	0.0000	157.7836	157.7836	6.2900e-003	0.0000	157.9157
Total	**0.0714**	**0.2818**	**1.0989**	**4.1100e-003**	**0.2599**	**7.5700e-003**	**0.2675**	**0.0698**	**6.9800e-003**	**0.0768**	**0.0000**	**277.6600**	**277.6600**	**7.0900e-003**	**0.0000**	**277.8088**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1600e-003	0.0397	0.4345	7.8000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	68.0460	68.0460	0.0181	0.0000	68.4255
Total	**9.1600e-003**	**0.0397**	**0.4345**	**7.8000e-004**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**	**0.0000**	**68.0460**	**68.0460**	**0.0181**	**0.0000**	**68.4255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0354	0.2303	0.5472	1.4100e-003	0.0405	5.8100e-003	0.0463	0.0116	5.3500e-003	0.0169	0.0000	119.8763	119.8763	8.0000e-004	0.0000	119.8931
Worker	0.0360	0.0515	0.5517	2.7000e-003	0.2194	1.7600e-003	0.2211	0.0583	1.6300e-003	0.0599	0.0000	157.7836	157.7836	6.2900e-003	0.0000	157.9157
Total	**0.0714**	**0.2818**	**1.0989**	**4.1100e-003**	**0.2599**	**7.5700e-003**	**0.2675**	**0.0698**	**6.9800e-003**	**0.0768**	**0.0000**	**277.6600**	**277.6600**	**7.0900e-003**	**0.0000**	**277.8088**

3.9 Building Construction 6 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1551	0.1509	3.0000e-004		6.8100e-003	6.8100e-003		6.2700e-003	6.2700e-003	0.0000	26.6655	26.6655	8.6200e-003	0.0000	26.8466
Total	**0.0155**	**0.1551**	**0.1509**	**3.0000e-004**		**6.8100e-003**	**6.8100e-003**		**6.2700e-003**	**6.2700e-003**	**0.0000**	**26.6655**	**26.6655**	**8.6200e-003**	**0.0000**	**26.8466**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0269	0.1744	0.4145	1.0700e-003	0.0307	4.4000e-003	0.0351	8.7600e-003	4.0500e-003	0.0128	0.0000	90.7955	90.7955	6.1000e-004	0.0000	90.8082
Worker	0.0276	0.0395	0.4234	2.0700e-003	0.1684	1.3500e-003	0.1697	0.0447	1.2500e-003	0.0460	0.0000	121.0898	121.0898	4.8300e-003	0.0000	121.1911
Total	**0.0545**	**0.2139**	**0.8378**	**3.1400e-003**	**0.1990**	**5.7500e-003**	**0.2048**	**0.0535**	**5.3000e-003**	**0.0588**	**0.0000**	**211.8853**	**211.8853**	**5.4400e-003**	**0.0000**	**211.9994**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7200e-003	0.0161	0.1794	3.0000e-004		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	26.6655	26.6655	8.6200e-003	0.0000	26.8466
Total	**3.7200e-003**	**0.0161**	**0.1794**	**3.0000e-004**		**5.0000e-004**	**5.0000e-004**		**5.0000e-004**	**5.0000e-004**	**0.0000**	**26.6655**	**26.6655**	**8.6200e-003**	**0.0000**	**26.8466**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0269	0.1744	0.4145	1.0700e-003	0.0307	4.4000e-003	0.0351	8.7600e-003	4.0500e-003	0.0128	0.0000	90.7955	90.7955	6.1000e-004	0.0000	90.8082
Worker	0.0276	0.0395	0.4234	2.0700e-003	0.1684	1.3500e-003	0.1697	0.0447	1.2500e-003	0.0460	0.0000	121.0898	121.0898	4.8300e-003	0.0000	121.1911
Total	**0.0545**	**0.2139**	**0.8378**	**3.1400e-003**	**0.1990**	**5.7500e-003**	**0.2048**	**0.0535**	**5.3000e-003**	**0.0588**	**0.0000**	**211.8853**	**211.8853**	**5.4400e-003**	**0.0000**	**211.9994**

3.9 Building Construction 6 - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0186	0.0858	0.1762	4.5000e-004		1.9000e-003	1.9000e-003		1.9000e-003	1.9000e-003	0.0000	38.7539	38.7539	1.5000e-003	0.0000	38.7854
Total	**0.0186**	**0.0858**	**0.1762**	**4.5000e-004**		**1.9000e-003**	**1.9000e-003**		**1.9000e-003**	**1.9000e-003**	**0.0000**	**38.7539**	**38.7539**	**1.5000e-003**	**0.0000**	**38.7854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0322	0.2105	0.4989	1.3000e-003	0.0372	5.3400e-003	0.0425	0.0106	4.9200e-003	0.0155	0.0000	110.0548	110.0548	7.4000e-004	0.0000	110.0702
Worker	0.0321	0.0460	0.4962	2.5100e-003	0.2041	1.6400e-003	0.2057	0.0542	1.5200e-003	0.0557	0.0000	145.8178	145.8178	5.7200e-003	0.0000	145.9378
Total	**0.0643**	**0.2565**	**0.9952**	**3.8100e-003**	**0.2413**	**6.9800e-003**	**0.2482**	**0.0648**	**6.4400e-003**	**0.0712**	**0.0000**	**255.8726**	**255.8726**	**6.4600e-003**	**0.0000**	**256.0081**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5100e-003	0.0195	0.2174	4.5000e-004		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	38.7539	38.7539	1.5000e-003	0.0000	38.7854
Total	**4.5100e-003**	**0.0195**	**0.2174**	**4.5000e-004**		**6.0000e-004**	**6.0000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**38.7539**	**38.7539**	**1.5000e-003**	**0.0000**	**38.7854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0322	0.2105	0.4989	1.3000e-003	0.0372	5.3400e-003	0.0425	0.0106	4.9200e-003	0.0155	0.0000	110.0548	110.0548	7.4000e-004	0.0000	110.0702
Worker	0.0321	0.0460	0.4962	2.5100e-003	0.2041	1.6400e-003	0.2057	0.0542	1.5200e-003	0.0557	0.0000	145.8178	145.8178	5.7200e-003	0.0000	145.9378
Total	**0.0643**	**0.2565**	**0.9952**	**3.8100e-003**	**0.2413**	**6.9800e-003**	**0.2482**	**0.0648**	**6.4400e-003**	**0.0712**	**0.0000**	**255.8726**	**255.8726**	**6.4600e-003**	**0.0000**	**256.0081**

3.10 Paving - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0621	0.3693	0.6922	1.1500e-003		0.0140	0.0140		0.0140	0.0140	0.0000	98.1693	98.1693	4.9900e-003	0.0000	98.2742
Paving	6.7200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0688**	**0.3693**	**0.6922**	**1.1500e-003**		**0.0140**	**0.0140**		**0.0140**	**0.0140**	**0.0000**	**98.1693**	**98.1693**	**4.9900e-003**	**0.0000**	**98.2742**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7900e-003	2.5700e-003	0.0277	1.4000e-004	0.0114	9.0000e-005	0.0115	3.0300e-003	8.0000e-005	3.1200e-003	0.0000	8.1533	8.1533	3.2000e-004	0.0000	8.1600
Total	**1.7900e-003**	**2.5700e-003**	**0.0277**	**1.4000e-004**	**0.0114**	**9.0000e-005**	**0.0115**	**3.0300e-003**	**8.0000e-005**	**3.1200e-003**	**0.0000**	**8.1533**	**8.1533**	**3.2000e-004**	**0.0000**	**8.1600**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0136	0.0633	0.7037	1.1500e-003		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	98.1692	98.1692	4.9900e-003	0.0000	98.2740
Paving	6.7200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0203**	**0.0633**	**0.7037**	**1.1500e-003**		**2.0700e-003**	**2.0700e-003**		**2.0700e-003**	**2.0700e-003**	**0.0000**	**98.1692**	**98.1692**	**4.9900e-003**	**0.0000**	**98.2740**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7900e-003	2.5700e-003	0.0277	1.4000e-004	0.0114	9.0000e-005	0.0115	3.0300e-003	8.0000e-005	3.1200e-003	0.0000	8.1533	8.1533	3.2000e-004	0.0000	8.1600
Total	**1.7900e-003**	**2.5700e-003**	**0.0277**	**1.4000e-004**	**0.0114**	**9.0000e-005**	**0.0115**	**3.0300e-003**	**8.0000e-005**	**3.1200e-003**	**0.0000**	**8.1533**	**8.1533**	**3.2000e-004**	**0.0000**	**8.1600**

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

Phase 6 Construction Emissions

Harbor UCLA Master Plan- Phase 6

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	250.00	1000sqft	5.74	250,000.00	0
Medical Office Building	97.00	1000sqft	2.23	97,000.00	0
Other Asphalt Surfaces	75.00	1000sqft	1.72	75,000.00	0
Other Asphalt Surfaces	13.50	1000sqft	0.31	13,500.00	0
Unenclosed Parking with Elevator	1,000.00	Space	9.00	400,000.00	0
City Park	22.00	Acre	22.00	958,320.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Client Provided Information

Construction Phase - Client Provided Information

Off-road Equipment -

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Off-road Equipment - Client Provided Information

Trips and VMT - Client PRovided Info

Demolition -

Grading -

Architectural Coating - See Input Summary

Construction Off-road Equipment Mitigation - Tier 4 Final, Watering 3x per day

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	792,743.00	169,333.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,378,228.00	231,998.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	55.00	93.00
tblConstructionPhase	NumDays	740.00	374.00
tblConstructionPhase	NumDays	50.00	85.00
tblConstructionPhase	NumDays	75.00	675.00
tblConstructionPhase	NumDays	55.00	93.00
tblConstructionPhase	PhaseEndDate	9/16/2024	5/8/2024
tblConstructionPhase	PhaseEndDate	3/23/2026	5/8/2024
tblConstructionPhase	PhaseEndDate	9/16/2024	5/8/2024
tblConstructionPhase	PhaseStartDate	5/9/2024	1/1/2024
tblConstructionPhase	PhaseStartDate	10/16/2024	12/2/2022
tblConstructionPhase	PhaseStartDate	5/9/2024	1/1/2024
tblGrading	MaterialExported	0.00	31,953.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblTripsAndVMT	HaulingTripNumber	1,453.00	10,229.00
tblTripsAndVMT	HaulingTripNumber	3,159.00	5,325.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	28.00	466.00
tblTripsAndVMT	WorkerTripNumber	15.00	72.00

tblTripsAndVMT	WorkerTripNumber	652.00	2,688.00
tblTripsAndVMT	WorkerTripNumber	13.00	540.00
tblTripsAndVMT	WorkerTripNumber	130.00	52.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1200	1.0605	1.3747	3.5200e-003	0.2203	0.0408	0.2611	0.0510	0.0380	0.0890	0.0000	280.7287	280.7287	0.0281	0.0000	281.3196
2022	0.4815	3.6104	5.5953	0.0145	0.9359	0.1533	1.0891	0.2093	0.1427	0.3520	0.0000	1,101.5502	1,101.5502	0.1299	0.0000	1,104.2772
2023	1.4228	5.8352	19.6206	0.0624	4.3639	0.2217	4.5856	1.1346	0.2068	1.3414	0.0000	4,213.9575	4,213.9575	0.2796	0.0000	4,219.8286
2024	3.0220	3.3157	9.3980	0.0294	2.0477	0.1370	2.1846	0.5168	0.1275	0.6442	0.0000	1,997.7336	1,997.7336	0.1687	0.0000	2,001.2757
Total	**5.0462**	**13.8218**	**35.9886**	**0.1098**	**7.5678**	**0.5527**	**8.1205**	**1.9118**	**0.5149**	**2.4267**	**0.0000**	**7,593.9700**	**7,593.9700**	**0.6063**	**0.0000**	**7,606.7011**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0742	0.5362	1.3223	3.5200e-003	0.1831	0.0154	0.1985	0.0454	0.0147	0.0601	0.0000	280.7286	280.7286	0.0281	0.0000	281.3195
2022	0.2712	1.3449	5.7359	0.0145	0.7680	0.0371	0.8051	0.1887	0.0354	0.2240	0.0000	1,101.5497	1,101.5497	0.1299	0.0000	1,104.2767
2023	1.1630	3.0875	20.0061	0.0624	4.2548	0.0821	4.3368	1.1229	0.0771	1.1999	0.0000	4,213.9569	4,213.9569	0.2796	0.0000	4,219.8280
2024	2.8329	1.3574	9.6924	0.0294	1.9385	0.0374	1.9759	0.5050	0.0353	0.5402	0.0000	1,997.7331	1,997.7331	0.1687	0.0000	2,001.2752
Total	**4.3414**	**6.3260**	**36.7566**	**0.1098**	**7.1444**	**0.1720**	**7.3164**	**1.8619**	**0.1624**	**2.0243**	**0.0000**	**7,593.9683**	**7,593.9683**	**0.6063**	**0.0000**	**7,606.6994**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.97**	**54.23**	**-2.13**	**0.00**	**5.59**	**68.88**	**9.90**	**2.61**	**68.46**	**16.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/17/2021	3/15/2022	5	85	
2	Grading	Grading	3/16/2022	10/15/2024	5	675	
3	Building Construction	Building Construction	12/2/2022	5/8/2024	5	374	
4	Paving	Paving	1/1/2024	5/8/2024	5	93	
5	Architectural Coating	Architectural Coating	1/1/2024	5/8/2024	5	93	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 337.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 231,998; Non-Residential Outdoor: 169,333 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Air Compressors	1	8.00	78	0.48
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40

Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Scrapers	0	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Air Compressors	1	8.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	466.00	4.00	10,229.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	72.00	2.00	5,325.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	2,688.00	260.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	540.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0610	0.0000	0.0610	9.2400e-003	0.0000	9.2400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0684	0.6675	0.6649	1.0200e-003		0.0324	0.0324		0.0303	0.0303	0.0000	88.9620	88.9620	0.0241	0.0000	89.4674
Total	**0.0684**	**0.6675**	**0.6649**	**1.0200e-003**	**0.0610**	**0.0324**	**0.0934**	**9.2400e-003**	**0.0303**	**0.0395**	**0.0000**	**88.9620**	**88.9620**	**0.0241**	**0.0000**	**89.4674**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0310	0.3601	0.3949	1.4500e-003	0.0745	7.6500e-003	0.0822	0.0193	7.0400e-003	0.0263	0.0000	124.0862	124.0862	9.7000e-004	0.0000	124.1066
Vendor	4.3000e-004	3.4200e-003	6.3800e-003	1.0000e-005	4.1000e-004	6.0000e-005	4.7000e-004	1.2000e-004	6.0000e-005	1.7000e-004	0.0000	1.2064	1.2064	1.0000e-005	0.0000	1.2066
Worker	0.0202	0.0295	0.3085	1.0300e-003	0.0844	6.6000e-004	0.0850	0.0224	6.1000e-004	0.0230	0.0000	66.4741	66.4741	3.0900e-003	0.0000	66.5391
Total	**0.0516**	**0.3930**	**0.7098**	**2.4900e-003**	**0.1593**	**8.3700e-003**	**0.1677**	**0.0418**	**7.7100e-003**	**0.0495**	**0.0000**	**191.7667**	**191.7667**	**4.0700e-003**	**0.0000**	**191.8522**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0238	0.0000	0.0238	3.6000e-003	0.0000	3.6000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0226	0.1432	0.6125	1.0200e-003		7.0400e-003	7.0400e-003		7.0400e-003	7.0400e-003	0.0000	88.9619	88.9619	0.0241	0.0000	89.4673
Total	**0.0226**	**0.1432**	**0.6125**	**1.0200e-003**	**0.0238**	**7.0400e-003**	**0.0308**	**3.6000e-003**	**7.0400e-003**	**0.0106**	**0.0000**	**88.9619**	**88.9619**	**0.0241**	**0.0000**	**89.4673**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0310	0.3601	0.3949	1.4500e-003	0.0745	7.6500e-003	0.0822	0.0193	7.0400e-003	0.0263	0.0000	124.0862	124.0862	9.7000e-004	0.0000	124.1066
Vendor	4.3000e-004	3.4200e-003	6.3800e-003	1.0000e-005	4.1000e-004	6.0000e-005	4.7000e-004	1.2000e-004	6.0000e-005	1.7000e-004	0.0000	1.2064	1.2064	1.0000e-005	0.0000	1.2066
Worker	0.0202	0.0295	0.3085	1.0300e-003	0.0844	6.6000e-004	0.0850	0.0224	6.1000e-004	0.0230	0.0000	66.4741	66.4741	3.0900e-003	0.0000	66.5391
Total	**0.0516**	**0.3930**	**0.7098**	**2.4900e-003**	**0.1593**	**8.3700e-003**	**0.1677**	**0.0418**	**7.7100e-003**	**0.0495**	**0.0000**	**191.7667**	**191.7667**	**4.0700e-003**	**0.0000**	**191.8522**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0962	0.0000	0.0962	0.0146	0.0000	0.0146	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0995	0.9453	1.0288	1.6000e-003		0.0449	0.0449		0.0419	0.0419	0.0000	140.2314	140.2314	0.0378	0.0000	141.0259
Total	**0.0995**	**0.9453**	**1.0288**	**1.6000e-003**	**0.0962**	**0.0449**	**0.1410**	**0.0146**	**0.0419**	**0.0565**	**0.0000**	**140.2314**	**140.2314**	**0.0378**	**0.0000**	**141.0259**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0488	0.5181	0.6166	2.2900e-003	0.0794	0.0120	0.0913	0.0210	0.0110	0.0320	0.0000	195.3684	195.3684	1.5700e-003	0.0000	195.4013
Vendor	6.7000e-004	4.8900e-003	9.8000e-003	2.0000e-005	6.4000e-004	1.0000e-004	7.4000e-004	1.8000e-004	9.0000e-005	2.7000e-004	0.0000	1.8993	1.8993	1.0000e-005	0.0000	1.8996
Worker	0.0301	0.0436	0.4572	1.6300e-003	0.1329	1.0400e-003	0.1340	0.0353	9.6000e-004	0.0363	0.0000	103.0073	103.0073	4.6700e-003	0.0000	103.1053
Total	**0.0796**	**0.5665**	**1.0835**	**3.9400e-003**	**0.2129**	**0.0131**	**0.2260**	**0.0565**	**0.0120**	**0.0686**	**0.0000**	**300.2750**	**300.2750**	**6.2500e-003**	**0.0000**	**300.4061**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0375	0.0000	0.0375	5.6800e-003	0.0000	5.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0342	0.2134	0.9647	1.6000e-003		9.8900e-003	9.8900e-003		9.8900e-003	9.8900e-003	0.0000	140.2312	140.2312	0.0378	0.0000	141.0258
Total	**0.0342**	**0.2134**	**0.9647**	**1.6000e-003**	**0.0375**	**9.8900e-003**	**0.0474**	**5.6800e-003**	**9.8900e-003**	**0.0156**	**0.0000**	**140.2312**	**140.2312**	**0.0378**	**0.0000**	**141.0258**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0488	0.5181	0.6166	2.2900e-003	0.0794	0.0120	0.0913	0.0210	0.0110	0.0320	0.0000	195.3684	195.3684	1.5700e-003	0.0000	195.4013
Vendor	6.7000e-004	4.8900e-003	9.8000e-003	2.0000e-005	6.4000e-004	1.0000e-004	7.4000e-004	1.8000e-004	9.0000e-005	2.7000e-004	0.0000	1.8993	1.8993	1.0000e-005	0.0000	1.8996
Worker	0.0301	0.0436	0.4572	1.6300e-003	0.1329	1.0400e-003	0.1340	0.0353	9.6000e-004	0.0363	0.0000	103.0073	103.0073	4.6700e-003	0.0000	103.1053
Total	**0.0796**	**0.5665**	**1.0835**	**3.9400e-003**	**0.2129**	**0.0131**	**0.2260**	**0.0565**	**0.0120**	**0.0686**	**0.0000**	**300.2750**	**300.2750**	**6.2500e-003**	**0.0000**	**300.4061**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1790	0.0000	0.1790	0.0193	0.0000	0.0193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1671	1.5663	1.5629	2.6700e-003		0.0798	0.0798		0.0743	0.0743	0.0000	233.4956	233.4956	0.0664	0.0000	234.8894
Total	**0.1671**	**1.5663**	**1.5629**	**2.6700e-003**	**0.1790**	**0.0798**	**0.2588**	**0.0193**	**0.0743**	**0.0936**	**0.0000**	**233.4956**	**233.4956**	**0.0664**	**0.0000**	**234.8894**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0128	0.1359	0.1617	6.0000e-004	0.0379	3.1300e-003	0.0410	9.7100e-003	2.8800e-003	0.0126	0.0000	51.2290	51.2290	4.1000e-004	0.0000	51.2376
Vendor	1.3400e-003	9.7700e-003	0.0196	4.0000e-005	1.2800e-003	1.9000e-004	1.4700e-003	3.7000e-004	1.8000e-004	5.4000e-004	0.0000	3.7986	3.7986	3.0000e-005	0.0000	3.7992
Worker	0.0186	0.0269	0.2825	1.0100e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224	0.0000	63.6611	63.6611	2.8800e-003	0.0000	63.7217
Total	**0.0328**	**0.1725**	**0.4638**	**1.6500e-003**	**0.1213**	**3.9600e-003**	**0.1253**	**0.0319**	**3.6500e-003**	**0.0355**	**0.0000**	**118.6887**	**118.6887**	**3.3200e-003**	**0.0000**	**118.7585**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0698	0.0000	0.0698	7.5400e-003	0.0000	7.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.1374	1.7581	2.6700e-003		4.2300e-003	4.2300e-003		4.2300e-003	4.2300e-003	0.0000	233.4953	233.4953	0.0664	0.0000	234.8891
Total	**0.0317**	**0.1374**	**1.7581**	**2.6700e-003**	**0.0698**	**4.2300e-003**	**0.0740**	**7.5400e-003**	**4.2300e-003**	**0.0118**	**0.0000**	**233.4953**	**233.4953**	**0.0664**	**0.0000**	**234.8891**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0128	0.1359	0.1617	6.0000e-004	0.0379	3.1300e-003	0.0410	9.7100e-003	2.8800e-003	0.0126	0.0000	51.2290	51.2290	4.1000e-004	0.0000	51.2376
Vendor	1.3400e-003	9.7700e-003	0.0196	4.0000e-005	1.2800e-003	1.9000e-004	1.4700e-003	3.7000e-004	1.8000e-004	5.4000e-004	0.0000	3.7986	3.7986	3.0000e-005	0.0000	3.7992
Worker	0.0186	0.0269	0.2825	1.0100e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224	0.0000	63.6611	63.6611	2.8800e-003	0.0000	63.7217
Total	**0.0328**	**0.1725**	**0.4638**	**1.6500e-003**	**0.1213**	**3.9600e-003**	**0.1253**	**0.0319**	**3.6500e-003**	**0.0355**	**0.0000**	**118.6887**	**118.6887**	**3.3200e-003**	**0.0000**	**118.7585**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1790	0.0000	0.1790	0.0193	0.0000	0.0193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1905	1.7434	1.9409	3.3300e-003		0.0851	0.0851		0.0793	0.0793	0.0000	291.9616	291.9616	0.0828	0.0000	293.6996
Total	**0.1905**	**1.7434**	**1.9409**	**3.3300e-003**	**0.1790**	**0.0851**	**0.2641**	**0.0193**	**0.0793**	**0.0986**	**0.0000**	**291.9616**	**291.9616**	**0.0828**	**0.0000**	**293.6996**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0142	0.1213	0.1916	7.5000e-004	0.0388	3.8900e-003	0.0427	0.0100	3.5800e-003	0.0136	0.0000	63.5858	63.5858	4.4000e-004	0.0000	63.5951
Vendor	1.5500e-003	9.7100e-003	0.0236	6.0000e-005	1.6000e-003	2.4000e-004	1.8400e-003	4.6000e-004	2.2000e-004	6.8000e-004	0.0000	4.7254	4.7254	3.0000e-005	0.0000	4.7260
Worker	0.0220	0.0317	0.3327	1.2600e-003	0.1027	8.0000e-004	0.1035	0.0273	7.4000e-004	0.0280	0.0000	78.3502	78.3502	3.4600e-003	0.0000	78.4230
Total	**0.0378**	**0.1626**	**0.5478**	**2.0700e-003**	**0.1431**	**4.9300e-003**	**0.1480**	**0.0378**	**4.5400e-003**	**0.0423**	**0.0000**	**146.6614**	**146.6614**	**3.9300e-003**	**0.0000**	**146.7441**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0698	0.0000	0.0698	7.5400e-003	0.0000	7.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0396	0.1717	2.1976	3.3300e-003		5.2800e-003	5.2800e-003		5.2800e-003	5.2800e-003	0.0000	291.9612	291.9612	0.0828	0.0000	293.6992
Total	**0.0396**	**0.1717**	**2.1976**	**3.3300e-003**	**0.0698**	**5.2800e-003**	**0.0751**	**7.5400e-003**	**5.2800e-003**	**0.0128**	**0.0000**	**291.9612**	**291.9612**	**0.0828**	**0.0000**	**293.6992**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0142	0.1213	0.1916	7.5000e-004	0.0388	3.8900e-003	0.0427	0.0100	3.5800e-003	0.0136	0.0000	63.5858	63.5858	4.4000e-004	0.0000	63.5951
Vendor	1.5500e-003	9.7100e-003	0.0236	6.0000e-005	1.6000e-003	2.4000e-004	1.8400e-003	4.6000e-004	2.2000e-004	6.8000e-004	0.0000	4.7254	4.7254	3.0000e-005	0.0000	4.7260
Worker	0.0220	0.0317	0.3327	1.2600e-003	0.1027	8.0000e-004	0.1035	0.0273	7.4000e-004	0.0280	0.0000	78.3502	78.3502	3.4600e-003	0.0000	78.4230
Total	**0.0378**	**0.1626**	**0.5478**	**2.0700e-003**	**0.1431**	**4.9300e-003**	**0.1480**	**0.0378**	**4.5400e-003**	**0.0423**	**0.0000**	**146.6614**	**146.6614**	**3.9300e-003**	**0.0000**	**146.7441**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1790	0.0000	0.1790	0.0193	0.0000	0.0193	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1428	1.2711	1.5427	2.6600e-003		0.0600	0.0600		0.0558	0.0558	0.0000	232.4996	232.4996	0.0658	0.0000	233.8810
Total	**0.1428**	**1.2711**	**1.5427**	**2.6600e-003**	**0.1790**	**0.0600**	**0.2389**	**0.0193**	**0.0558**	**0.0752**	**0.0000**	**232.4996**	**232.4996**	**0.0658**	**0.0000**	**233.8810**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0113	0.0966	0.1512	6.0000e-004	0.0379	3.1000e-003	0.0410	9.7100e-003	2.8500e-003	0.0126	0.0000	50.7549	50.7549	3.6000e-004	0.0000	50.7625
Vendor	1.2200e-003	7.6900e-003	0.0184	4.0000e-005	1.2700e-003	1.9000e-004	1.4600e-003	3.6000e-004	1.8000e-004	5.4000e-004	0.0000	3.7723	3.7723	3.0000e-005	0.0000	3.7728
Worker	0.0167	0.0239	0.2518	1.0100e-003	0.0818	6.4000e-004	0.0824	0.0217	6.0000e-004	0.0223	0.0000	61.8328	61.8328	2.6800e-003	0.0000	61.8892
Total	**0.0292**	**0.1281**	**0.4214**	**1.6500e-003**	**0.1209**	**3.9300e-003**	**0.1249**	**0.0318**	**3.6300e-003**	**0.0354**	**0.0000**	**116.3601**	**116.3601**	**3.0700e-003**	**0.0000**	**116.4245**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0698	0.0000	0.0698	7.5400e-003	0.0000	7.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0316	0.1367	1.7496	2.6600e-003		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	232.4993	232.4993	0.0658	0.0000	233.8808
Total	**0.0316**	**0.1367**	**1.7496**	**2.6600e-003**	**0.0698**	**4.2100e-003**	**0.0740**	**7.5400e-003**	**4.2100e-003**	**0.0118**	**0.0000**	**232.4993**	**232.4993**	**0.0658**	**0.0000**	**233.8808**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0113	0.0966	0.1512	6.0000e-004	0.0379	3.1000e-003	0.0410	9.7100e-003	2.8500e-003	0.0126	0.0000	50.7549	50.7549	3.6000e-004	0.0000	50.7625
Vendor	1.2200e-003	7.6900e-003	0.0184	4.0000e-005	1.2700e-003	1.9000e-004	1.4600e-003	3.6000e-004	1.8000e-004	5.4000e-004	0.0000	3.7723	3.7723	3.0000e-005	0.0000	3.7728
Worker	0.0167	0.0239	0.2518	1.0100e-003	0.0818	6.4000e-004	0.0824	0.0217	6.0000e-004	0.0223	0.0000	61.8328	61.8328	2.6800e-003	0.0000	61.8892
Total	**0.0292**	**0.1281**	**0.4214**	**1.6500e-003**	**0.1209**	**3.9300e-003**	**0.1249**	**0.0318**	**3.6300e-003**	**0.0354**	**0.0000**	**116.3601**	**116.3601**	**3.0700e-003**	**0.0000**	**116.4245**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1300	0.1340	2.2000e-004		6.5900e-003	6.5900e-003		6.2100e-003	6.2100e-003	0.0000	19.0501	19.0501	4.8400e-003	0.0000	19.1516
Total	**0.0149**	**0.1300**	**0.1340**	**2.2000e-004**		**6.5900e-003**	**6.5900e-003**		**6.2100e-003**	**6.2100e-003**	**0.0000**	**19.0501**	**19.0501**	**4.8400e-003**	**0.0000**	**19.1516**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0176	0.1283	0.2573	5.9000e-004	0.0168	2.5400e-003	0.0194	4.8000e-003	2.3400e-003	7.1400e-003	0.0000	49.8560	49.8560	3.7000e-004	0.0000	49.8639
Worker	0.0701	0.1015	1.0649	3.8000e-003	0.3097	2.4100e-003	0.3121	0.0822	2.2400e-003	0.0845	0.0000	239.9535	239.9535	0.0109	0.0000	240.1818
Total	**0.0877**	**0.2298**	**1.3222**	**4.3900e-003**	**0.3265**	**4.9500e-003**	**0.3314**	**0.0870**	**4.5800e-003**	**0.0916**	**0.0000**	**289.8095**	**289.8095**	**0.0112**	**0.0000**	**290.0457**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.2000e-003	0.0253	0.1436	2.2000e-004		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	19.0501	19.0501	4.8400e-003	0.0000	19.1516
Total	**5.2000e-003**	**0.0253**	**0.1436**	**2.2000e-004**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**19.0501**	**19.0501**	**4.8400e-003**	**0.0000**	**19.1516**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0176	0.1283	0.2573	5.9000e-004	0.0168	2.5400e-003	0.0194	4.8000e-003	2.3400e-003	7.1400e-003	0.0000	49.8560	49.8560	3.7000e-004	0.0000	49.8639
Worker	0.0701	0.1015	1.0649	3.8000e-003	0.3097	2.4100e-003	0.3121	0.0822	2.2400e-003	0.0845	0.0000	239.9535	239.9535	0.0109	0.0000	240.1818
Total	**0.0877**	**0.2298**	**1.3222**	**4.3900e-003**	**0.3265**	**4.9500e-003**	**0.3314**	**0.0870**	**4.5800e-003**	**0.0916**	**0.0000**	**289.8095**	**289.8095**	**0.0112**	**0.0000**	**290.0457**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1704	1.4840	1.6465	2.7500e-003		0.0708	0.0708		0.0667	0.0667	0.0000	235.9617	235.9617	0.0594	0.0000	237.2092
Total	**0.1704**	**1.4840**	**1.6465**	**2.7500e-003**		**0.0708**	**0.0708**		**0.0667**	**0.0667**	**0.0000**	**235.9617**	**235.9617**	**0.0594**	**0.0000**	**237.2092**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2017	1.2627	3.0645	7.2400e-003	0.2081	0.0311	0.2391	0.0594	0.0286	0.0880	0.0000	614.2975	614.2975	4.1700e-003	0.0000	614.3851
Worker	0.8224	1.1825	12.4209	0.0470	3.8338	0.0299	3.8637	1.0182	0.0277	1.0459	0.0000	2,925.0753	2,925.0753	0.1293	0.0000	2,927.7907
Total	**1.0241**	**2.4452**	**15.4854**	**0.0543**	**4.0419**	**0.0609**	**4.1028**	**1.0776**	**0.0563**	**1.1338**	**0.0000**	**3,539.3728**	**3,539.3728**	**0.1335**	**0.0000**	**3,542.1757**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0615	0.3080	1.7753	2.7500e-003		0.0110	0.0110		0.0110	0.0110	0.0000	235.9614	235.9614	0.0594	0.0000	237.2089
Total	**0.0615**	**0.3080**	**1.7753**	**2.7500e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**235.9614**	**235.9614**	**0.0594**	**0.0000**	**237.2089**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2017	1.2627	3.0645	7.2400e-003	0.2081	0.0311	0.2391	0.0594	0.0286	0.0880	0.0000	614.2975	614.2975	4.1700e-003	0.0000	614.3851
Worker	0.8224	1.1825	12.4209	0.0470	3.8338	0.0299	3.8637	1.0182	0.0277	1.0459	0.0000	2,925.0753	2,925.0753	0.1293	0.0000	2,927.7907
Total	**1.0241**	**2.4452**	**15.4854**	**0.0543**	**4.0419**	**0.0609**	**4.1028**	**1.0776**	**0.0563**	**1.1338**	**0.0000**	**3,539.3728**	**3,539.3728**	**0.1335**	**0.0000**	**3,542.1757**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0573	0.4971	0.5861	9.8000e-004		0.0223	0.0223		0.0210	0.0210	0.0000	84.4223	84.4223	0.0211	0.0000	84.8662
Total	**0.0573**	**0.4971**	**0.5861**	**9.8000e-004**		**0.0223**	**0.0223**		**0.0210**	**0.0210**	**0.0000**	**84.4223**	**84.4223**	**0.0211**	**0.0000**	**84.8662**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0710	0.4493	1.0741	2.5900e-003	0.0744	0.0111	0.0855	0.0213	0.0102	0.0315	0.0000	220.3241	220.3241	1.5100e-003	0.0000	220.3559
Worker	0.2799	0.4005	4.2239	0.0169	1.3713	0.0108	1.3821	0.3642	0.0100	0.3742	0.0000	1,037.1186	1,037.1186	0.0450	0.0000	1,038.0637
Total	**0.3508**	**0.8498**	**5.2981**	**0.0195**	**1.4458**	**0.0219**	**1.4677**	**0.3854**	**0.0202**	**0.4057**	**0.0000**	**1,257.4427**	**1,257.4427**	**0.0465**	**0.0000**	**1,258.4197**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0211	0.1083	0.6343	9.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003	0.0000	84.4222	84.4222	0.0211	0.0000	84.8661
Total	**0.0211**	**0.1083**	**0.6343**	**9.8000e-004**		**3.5600e-003**	**3.5600e-003**		**3.5600e-003**	**3.5600e-003**	**0.0000**	**84.4222**	**84.4222**	**0.0211**	**0.0000**	**84.8661**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0710	0.4493	1.0741	2.5900e-003	0.0744	0.0111	0.0855	0.0213	0.0102	0.0315	0.0000	220.3241	220.3241	1.5100e-003	0.0000	220.3559
Worker	0.2799	0.4005	4.2239	0.0169	1.3713	0.0108	1.3821	0.3642	0.0100	0.3742	0.0000	1,037.1186	1,037.1186	0.0450	0.0000	1,038.0637
Total	**0.3508**	**0.8498**	**5.2981**	**0.0195**	**1.4458**	**0.0219**	**1.4677**	**0.3854**	**0.0202**	**0.4057**	**0.0000**	**1,257.4427**	**1,257.4427**	**0.0465**	**0.0000**	**1,258.4197**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0439	0.4248	0.5353	7.6000e-004		0.0237	0.0237		0.0218	0.0218	0.0000	66.7233	66.7233	0.0216	0.0000	67.1765
Paving	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0466**	**0.4248**	**0.5353**	**7.6000e-004**		**0.0237**	**0.0237**		**0.0218**	**0.0218**	**0.0000**	**66.7233**	**66.7233**	**0.0216**	**0.0000**	**67.1765**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0562	0.0805	0.8486	3.4000e-003	0.2755	2.1700e-003	0.2777	0.0732	2.0100e-003	0.0752	0.0000	208.3497	208.3497	9.0400e-003	0.0000	208.5396
Total	**0.0562**	**0.0805**	**0.8486**	**3.4000e-003**	**0.2755**	**2.1700e-003**	**0.2777**	**0.0732**	**2.0100e-003**	**0.0752**	**0.0000**	**208.3497**	**208.3497**	**9.0400e-003**	**0.0000**	**208.5396**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.3000e-003	0.0403	0.5735	7.6000e-004		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	66.7232	66.7232	0.0216	0.0000	67.1764
Paving	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0120**	**0.0403**	**0.5735**	**7.6000e-004**		**1.2400e-003**	**1.2400e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**66.7232**	**66.7232**	**0.0216**	**0.0000**	**67.1764**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0562	0.0805	0.8486	3.4000e-003	0.2755	2.1700e-003	0.2777	0.0732	2.0100e-003	0.0752	0.0000	208.3497	208.3497	9.0400e-003	0.0000	208.5396
Total	**0.0562**	**0.0805**	**0.8486**	**3.4000e-003**	**0.2755**	**2.1700e-003**	**0.2777**	**0.0732**	**2.0100e-003**	**0.0752**	**0.0000**	**208.3497**	**208.3497**	**9.0400e-003**	**0.0000**	**208.5396**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.3252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4100e-003	0.0567	0.0842	1.4000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	11.8726	11.8726	6.7000e-004	0.0000	11.8867
Total	**2.3336**	**0.0567**	**0.0842**	**1.4000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**11.8726**	**11.8726**	**6.7000e-004**	**0.0000**	**11.8867**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4100e-003	7.7500e-003	0.0817	3.3000e-004	0.0265	2.1000e-004	0.0267	7.0500e-003	1.9000e-004	7.2400e-003	0.0000	20.0633	20.0633	8.7000e-004	0.0000	20.0816
Total	**5.4100e-003**	**7.7500e-003**	**0.0817**	**3.3000e-004**	**0.0265**	**2.1000e-004**	**0.0267**	**7.0500e-003**	**1.9000e-004**	**7.2400e-003**	**0.0000**	**20.0633**	**20.0633**	**8.7000e-004**	**0.0000**	**20.0816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.3252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3800e-003	5.9900e-003	0.0852	1.4000e-004		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	11.8726	11.8726	6.7000e-004	0.0000	11.8867
Total	**2.3266**	**5.9900e-003**	**0.0852**	**1.4000e-004**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**11.8726**	**11.8726**	**6.7000e-004**	**0.0000**	**11.8867**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4100e-003	7.7500e-003	0.0817	3.3000e-004	0.0265	2.1000e-004	0.0267	7.0500e-003	1.9000e-004	7.2400e-003	0.0000	20.0633	20.0633	8.7000e-004	0.0000	20.0816
Total	**5.4100e-003**	**7.7500e-003**	**0.0817**	**3.3000e-004**	**0.0265**	**2.1000e-004**	**0.0267**	**7.0500e-003**	**1.9000e-004**	**7.2400e-003**	**0.0000**	**20.0633**	**20.0633**	**8.7000e-004**	**0.0000**	**20.0816**

Appendix D. 1

Construction Emissions – CalEEMod Output (Annual)

LA Biomed Construction Emissions

Harbor UCLA Master Plan- LA BIOMED

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	225.00	1000sqft	5.17	225,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2030
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

See AQ Construction Modal Inputs

Construction Off-road Equipment Mitigation - Tier 4 Equipment

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	NumDays	230.00	183.00
tblConstructionPhase	NumDays	20.00	77.00
tblConstructionPhase	NumDays	20.00	108.00
tblConstructionPhase	PhaseEndDate	6/30/2023	12/30/2029
tblConstructionPhase	PhaseEndDate	5/29/2030	12/30/2029
tblConstructionPhase	PhaseStartDate	12/31/2022	7/1/2029

tblConstructionPhase	PhaseStartDate	12/31/2029	8/1/2029
tblGrading	AcresOfGrading	38.50	10.00
tblProjectCharacteristics	OperationalYear	2014	2030

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2763	2.4029	2.9094	5.2900e-003	0.3366	0.1176	0.4542	0.1548	0.1098	0.2646	0.0000	434.5129	434.5129	0.0863	0.0000	436.3247
2029	2.6707	0.5406	0.9466	1.6500e-003	0.0194	0.0260	0.0454	5.1500e-003	0.0242	0.0293	0.0000	137.7490	137.7490	0.0360	0.0000	138.5039
2030	0.1861	1.0747	2.4169	5.5500e-003	0.1165	0.0214	0.1379	0.0315	0.0210	0.0525	0.0000	441.4784	441.4784	0.0151	0.0000	441.7950
Total	**3.1331**	**4.0182**	**6.2729**	**0.0125**	**0.4725**	**0.1650**	**0.6375**	**0.1915**	**0.1550**	**0.3464**	**0.0000**	**1,013.7403**	**1,013.7403**	**0.1373**	**0.0000**	**1,016.6237**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0941	0.4703	2.9484	5.2900e-003	0.1920	0.0121	0.2041	0.0768	0.0118	0.0886	0.0000	434.5125	434.5125	0.0863	0.0000	436.3243
2029	2.6274	0.0790	1.0919	1.6500e-003	0.0194	2.4300e-003	0.0218	5.1500e-003	2.4200e-003	7.5700e-003	0.0000	137.7488	137.7488	0.0360	0.0000	138.5038
2030	0.0811	0.4342	2.5695	5.5500e-003	0.1165	9.9000e-003	0.1264	0.0315	9.5400e-003	0.0410	0.0000	441.4780	441.4780	0.0151	0.0000	441.7947
Total	**2.8026**	**0.9834**	**6.6098**	**0.0125**	**0.3279**	**0.0245**	**0.3523**	**0.1134**	**0.0238**	**0.1372**	**0.0000**	**1,013.7394**	**1,013.7394**	**0.1373**	**0.0000**	**1,016.6228**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.55**	**75.53**	**-5.37**	**0.00**	**30.61**	**85.17**	**44.73**	**40.79**	**84.65**	**60.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/2/2022	4/19/2022	5	77	
2	Building Construction	Building Construction	4/20/2022	12/30/2022	5	183	
3	Architectural Coating	Architectural Coating	7/1/2029	12/30/2029	5	130	
4	Paving	Paving	8/1/2029	12/30/2029	5	108	
5	Building Construction 2	Building Construction	12/31/2029	11/15/2030	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 337,500; Non-Residential Outdoor: 112,500 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction 2	Cranes	1	7.00	226	0.29
Building Construction 2	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38

Building Construction 2	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Building Construction 2	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction 2	Welders	1	8.00	46	0.45
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction 2	9	72.00	37.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	37.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2372	0.0000	0.2372	0.1280	0.0000	0.1280	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0812	0.7965	0.8259	1.1400e-003		0.0401	0.0401		0.0369	0.0369	0.0000	100.6166	100.6166	0.0325	0.0000	101.3000
Total	**0.0812**	**0.7965**	**0.8259**	**1.1400e-003**	**0.2372**	**0.0401**	**0.2773**	**0.1280**	**0.0369**	**0.1650**	**0.0000**	**100.6166**	**100.6166**	**0.0325**	**0.0000**	**101.3000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	2.0800e-003	0.0218	8.0000e-005	6.3400e-003	5.0000e-005	6.3900e-003	1.6800e-003	5.0000e-005	1.7300e-003	0.0000	4.9098	4.9098	2.2000e-004	0.0000	4.9144
Total	**1.4400e-003**	**2.0800e-003**	**0.0218**	**8.0000e-005**	**6.3400e-003**	**5.0000e-005**	**6.3900e-003**	**1.6800e-003**	**5.0000e-005**	**1.7300e-003**	**0.0000**	**4.9098**	**4.9098**	**2.2000e-004**	**0.0000**	**4.9144**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0925	0.0000	0.0925	0.0499	0.0000	0.0499	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.0605	0.7568	1.1400e-003		1.8600e-003	1.8600e-003		1.8600e-003	1.8600e-003	0.0000	100.6165	100.6165	0.0325	0.0000	101.2998
Total	**0.0140**	**0.0605**	**0.7568**	**1.1400e-003**	**0.0925**	**1.8600e-003**	**0.0944**	**0.0499**	**1.8600e-003**	**0.0518**	**0.0000**	**100.6165**	**100.6165**	**0.0325**	**0.0000**	**101.2998**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4400e-003	2.0800e-003	0.0218	8.0000e-005	6.3400e-003	5.0000e-005	6.3900e-003	1.6800e-003	5.0000e-005	1.7300e-003	0.0000	4.9098	4.9098	2.2000e-004	0.0000	4.9144
Total	**1.4400e-003**	**2.0800e-003**	**0.0218**	**8.0000e-005**	**6.3400e-003**	**5.0000e-005**	**6.3900e-003**	**1.6800e-003**	**5.0000e-005**	**1.7300e-003**	**0.0000**	**4.9098**	**4.9098**	**2.2000e-004**	**0.0000**	**4.9144**

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1555	1.4216	1.4940	2.4500e-003		0.0737	0.0737		0.0694	0.0694	0.0000	211.1501	211.1501	0.0505	0.0000	212.2108
Total	**0.1555**	**1.4216**	**1.4940**	**2.4500e-003**		**0.0737**	**0.0737**		**0.0694**	**0.0694**	**0.0000**	**211.1501**	**211.1501**	**0.0505**	**0.0000**	**212.2108**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0218	0.1591	0.3191	7.3000e-004	0.0208	3.1500e-003	0.0240	5.9500e-003	2.9000e-003	8.8500e-003	0.0000	61.8269	61.8269	4.6000e-004	0.0000	61.8367
Worker	0.0164	0.0237	0.2486	8.9000e-004	0.0723	5.6000e-004	0.0728	0.0192	5.2000e-004	0.0197	0.0000	56.0096	56.0096	2.5400e-003	0.0000	56.0628
Total	**0.0382**	**0.1828**	**0.5677**	**1.6200e-003**	**0.0931**	**3.7100e-003**	**0.0968**	**0.0252**	**3.4200e-003**	**0.0286**	**0.0000**	**117.8365**	**117.8365**	**3.0000e-003**	**0.0000**	**117.8995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0405	0.2249	1.6022	2.4500e-003		6.5100e-003	6.5100e-003		6.5100e-003	6.5100e-003	0.0000	211.1498	211.1498	0.0505	0.0000	212.2106
Total	**0.0405**	**0.2249**	**1.6022**	**2.4500e-003**		**6.5100e-003**	**6.5100e-003**		**6.5100e-003**	**6.5100e-003**	**0.0000**	**211.1498**	**211.1498**	**0.0505**	**0.0000**	**212.2106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0218	0.1591	0.3191	7.3000e-004	0.0208	3.1500e-003	0.0240	5.9500e-003	2.9000e-003	8.8500e-003	0.0000	61.8269	61.8269	4.6000e-004	0.0000	61.8367
Worker	0.0164	0.0237	0.2486	8.9000e-004	0.0723	5.6000e-004	0.0728	0.0192	5.2000e-004	0.0197	0.0000	56.0096	56.0096	2.5400e-003	0.0000	56.0628
Total	**0.0382**	**0.1828**	**0.5677**	**1.6200e-003**	**0.0931**	**3.7100e-003**	**0.0968**	**0.0252**	**3.4200e-003**	**0.0286**	**0.0000**	**117.8365**	**117.8365**	**3.0000e-003**	**0.0000**	**117.8995**

3.4 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.0745	0.1176	1.9000e-004		3.3500e-003	3.3500e-003		3.3500e-003	3.3500e-003	0.0000	16.5962	16.5962	9.1000e-004	0.0000	16.6152
Total	**2.6183**	**0.0745**	**0.1176**	**1.9000e-004**		**3.3500e-003**	**3.3500e-003**		**3.3500e-003**	**3.3500e-003**	**0.0000**	**16.5962**	**16.5962**	**9.1000e-004**	**0.0000**	**16.6152**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	2.3400e-003	0.0251	1.2000e-004	9.9800e-003	8.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7300e-003	0.0000	7.1810	7.1810	2.9000e-004	0.0000	7.1870
Total	**1.6400e-003**	**2.3400e-003**	**0.0251**	**1.2000e-004**	**9.9800e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**7.0000e-005**	**2.7300e-003**	**0.0000**	**7.1810**	**7.1810**	**2.9000e-004**	**0.0000**	**7.1870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.6072					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9300e-003	8.3700e-003	0.1191	1.9000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	16.5961	16.5961	9.1000e-004	0.0000	16.6151
Total	**2.6091**	**8.3700e-003**	**0.1191**	**1.9000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**16.5961**	**16.5961**	**9.1000e-004**	**0.0000**	**16.6151**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	2.3400e-003	0.0251	1.2000e-004	9.9800e-003	8.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7300e-003	0.0000	7.1810	7.1810	2.9000e-004	0.0000	7.1870
Total	**1.6400e-003**	**2.3400e-003**	**0.0251**	**1.2000e-004**	**9.9800e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**7.0000e-005**	**2.7300e-003**	**0.0000**	**7.1810**	**7.1810**	**2.9000e-004**	**0.0000**	**7.1870**

3.5 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0485	0.4548	0.7710	1.2000e-003		0.0222	0.0222		0.0204	0.0204	0.0000	105.8041	105.8041	0.0342	0.0000	106.5227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0485**	**0.4548**	**0.7710**	**1.2000e-003**		**0.0222**	**0.0222**		**0.0204**	**0.0204**	**0.0000**	**105.8041**	**105.8041**	**0.0342**	**0.0000**	**106.5227**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4600e-003	2.0900e-003	0.0224	1.1000e-004	8.8900e-003	7.0000e-005	8.9600e-003	2.3600e-003	7.0000e-005	2.4300e-003	0.0000	6.3918	6.3918	2.5000e-004	0.0000	6.3972
Total	**1.4600e-003**	**2.0900e-003**	**0.0224**	**1.1000e-004**	**8.8900e-003**	**7.0000e-005**	**8.9600e-003**	**2.3600e-003**	**7.0000e-005**	**2.4300e-003**	**0.0000**	**6.3918**	**6.3918**	**2.5000e-004**	**0.0000**	**6.3972**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0148	0.0642	0.9141	1.2000e-003		1.9800e-003	1.9800e-003		1.9800e-003	1.9800e-003	0.0000	105.8039	105.8039	0.0342	0.0000	106.5225
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0148**	**0.0642**	**0.9141**	**1.2000e-003**		**1.9800e-003**	**1.9800e-003**		**1.9800e-003**	**1.9800e-003**	**0.0000**	**105.8039**	**105.8039**	**0.0342**	**0.0000**	**106.5225**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4600e-003	2.0900e-003	0.0224	1.1000e-004	8.8900e-003	7.0000e-005	8.9600e-003	2.3600e-003	7.0000e-005	2.4300e-003	0.0000	6.3918	6.3918	2.5000e-004	0.0000	6.3972
Total	**1.4600e-003**	**2.0900e-003**	**0.0224**	**1.1000e-004**	**8.8900e-003**	**7.0000e-005**	**8.9600e-003**	**2.3600e-003**	**7.0000e-005**	**2.4300e-003**	**0.0000**	**6.3918**	**6.3918**	**2.5000e-004**	**0.0000**	**6.3972**

3.6 Building Construction 2 - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8000e-004	6.2000e-003	8.0300e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.5000e-004	2.5000e-004	0.0000	1.1548	1.1548	2.7000e-004	0.0000	1.1605
Total	**6.8000e-004**	**6.2000e-003**	**8.0300e-003**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**1.1548**	**1.1548**	**2.7000e-004**	**0.0000**	**1.1605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	6.5000e-004	1.5400e-003	0.0000	1.1000e-004	2.0000e-005	1.3000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.3371	0.3371	0.0000	0.0000	0.3371
Worker	6.0000e-005	9.0000e-005	9.9000e-004	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.2841	0.2841	1.0000e-005	0.0000	0.2843
Total	**1.6000e-004**	**7.4000e-004**	**2.5300e-003**	**0.0000**	**5.0000e-004**	**2.0000e-005**	**5.3000e-004**	**1.3000e-004**	**2.0000e-005**	**1.6000e-004**	**0.0000**	**0.6212**	**0.6212**	**1.0000e-005**	**0.0000**	**0.6215**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.1000e-004	1.2000e-003	8.7400e-003	1.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1548	1.1548	2.7000e-004	0.0000	1.1605
Total	**2.1000e-004**	**1.2000e-003**	**8.7400e-003**	**1.0000e-005**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**1.1548**	**1.1548**	**2.7000e-004**	**0.0000**	**1.1605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	6.5000e-004	1.5400e-003	0.0000	1.1000e-004	2.0000e-005	1.3000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.3371	0.3371	0.0000	0.0000	0.3371
Worker	6.0000e-005	9.0000e-005	9.9000e-004	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.2841	0.2841	1.0000e-005	0.0000	0.2843
Total	**1.6000e-004**	**7.4000e-004**	**2.5300e-003**	**0.0000**	**5.0000e-004**	**2.0000e-005**	**5.3000e-004**	**1.3000e-004**	**2.0000e-005**	**1.6000e-004**	**0.0000**	**0.6212**	**0.6212**	**1.0000e-005**	**0.0000**	**0.6215**

3.6 Building Construction 2 - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1493	0.9066	1.8470	3.5300e-003		0.0169	0.0169		0.0169	0.0169	0.0000	299.6549	299.6549	0.0120	0.0000	299.9075
Total	**0.1493**	**0.9066**	**1.8470**	**3.5300e-003**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**299.6549**	**299.6549**	**0.0120**	**0.0000**	**299.9075**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0226	0.1477	0.3500	9.1000e-004	0.0261	3.7500e-003	0.0298	7.4500e-003	3.4500e-003	0.0109	0.0000	77.1932	77.1932	5.2000e-004	0.0000	77.2041
Worker	0.0142	0.0204	0.2199	1.1100e-003	0.0905	7.3000e-004	0.0912	0.0240	6.7000e-004	0.0247	0.0000	64.6302	64.6302	2.5300e-003	0.0000	64.6834
Total	**0.0368**	**0.1681**	**0.5699**	**2.0200e-003**	**0.1165**	**4.4800e-003**	**0.1210**	**0.0315**	**4.1200e-003**	**0.0356**	**0.0000**	**141.8234**	**141.8234**	**3.0500e-003**	**0.0000**	**141.8875**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0443	0.2661	1.9996	3.5300e-003		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	299.6546	299.6546	0.0120	0.0000	299.9072
Total	**0.0443**	**0.2661**	**1.9996**	**3.5300e-003**		**5.4200e-003**	**5.4200e-003**		**5.4200e-003**	**5.4200e-003**	**0.0000**	**299.6546**	**299.6546**	**0.0120**	**0.0000**	**299.9072**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0226	0.1477	0.3500	9.1000e-004	0.0261	3.7500e-003	0.0298	7.4500e-003	3.4500e-003	0.0109	0.0000	77.1932	77.1932	5.2000e-004	0.0000	77.2041
Worker	0.0142	0.0204	0.2199	1.1100e-003	0.0905	7.3000e-004	0.0912	0.0240	6.7000e-004	0.0247	0.0000	64.6302	64.6302	2.5300e-003	0.0000	64.6834
Total	**0.0368**	**0.1681**	**0.5699**	**2.0200e-003**	**0.1165**	**4.4800e-003**	**0.1210**	**0.0315**	**4.1200e-003**	**0.0356**	**0.0000**	**141.8234**	**141.8234**	**3.0500e-003**	**0.0000**	**141.8875**

Appendix D. 2
Operational Emissions – CalEEMod Output (Annual)

- Existing Operations
- Interim Operations
- Full Build-Out Operations

Appendix D. 2

Operational Emissions – CalEEMod Output (Annual)

Existing Operations

Harbor-UCLA Medical Center (Existing Operations)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	23.43	1000sqft	0.54	23,435.00	0
Hospital	373.00	Bed	6.13	266,977.58	0
Medical Office Building	327.30	1000sqft	7.51	327,304.00	0
Research & Development	94.75	1000sqft	2.18	94,754.00	0
Library	22.50	1000sqft	0.52	22,500.00	0
General Light Industry	112.72	1000sqft	2.59	112,719.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Energy Use - See "Existing and Project Operational Inputs (Existing Elec Existing NG)

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	4.29	4.63
tblEnergyUse	LightingElect	5.60	5.99
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	4.29	4.63
tblEnergyUse	LightingElect	3.55	3.85
tblEnergyUse	LightingElect	2.23	2.38
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	5.62	6.30
tblEnergyUse	T24E	10.44	11.85
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	5.62	6.30
tblEnergyUse	T24E	2.75	3.09
tblEnergyUse	T24E	0.79	0.89
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	10.54	12.44
tblEnergyUse	T24NG	55.22	63.57
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	10.54	12.44
tblEnergyUse	T24NG	14.36	15.84
tblEnergyUse	T24NG	0.88	1.04
tblLandUse	LandUseSquareFeet	23,430.00	23,435.00
tblLandUse	LandUseSquareFeet	327,300.00	327,304.00
tblLandUse	LandUseSquareFeet	94,750.00	94,754.00
tblLandUse	LandUseSquareFeet	112,720.00	112,719.00
tblLandUse	LandUseSquareFeet	45,400.00	45,402.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	18.60

tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	10.14
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	18.60
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	10.14
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	18.60
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	10.14
tblVehicleTrips	WD_TR	2.59	3.56

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.2633	1.3000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0248	0.0248	7.0000e-005	0.0000	0.0263
Energy	0.1553	1.4122	1.1862	8.4700e-003		0.1073	0.1073		0.1073	0.1073	0.0000	5,932.8995	5,932.8995	0.2315	0.0700	5,959.4576
Mobile	13.3533	39.0984	152.4257	0.3343	22.2313	0.5299	22.7612	5.9537	0.4871	6.4409	0.0000	26,742.2471	26,742.2471	1.1521	0.0000	26,766.4411
Waste						0.0000	0.0000		0.0000	0.0000	985.7566	0.0000	985.7566	58.2566	0.0000	2,209.1441

Water						0.0000	0.0000		0.0000	0.0000	51.5829	662.6202	714.2031	5.3276	0.1312	866.7538
Total	**17.7720**	**40.5107**	**153.6250**	**0.3427**	**22.2313**	**0.6373**	**22.8685**	**5.9537**	**0.5945**	**6.5482**	**1,037.3395**	**33,337.7916**	**34,375.1311**	**64.9678**	**0.2012**	**35,801.8228**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	13.3533	39.0984	152.4257	0.3343	22.2313	0.5299	22.7612	5.9537	0.4871	6.4409	0.0000	26,742.2471	26,742.2471	1.1521	0.0000	26,766.4411
Unmitigated	13.3533	39.0984	152.4257	0.3343	22.2313	0.5299	22.7612	5.9537	0.4871	6.4409	0.0000	26,742.2471	26,742.2471	1.1521	0.0000	26,766.4411

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	169.08	169.08	169.08	748,733	748,733
General Office Building	435.80	435.80	435.80	1,403,906	1,403,906
Hospital	4,826.62	4,826.62	4826.62	18,712,042	18,712,042
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	11,825.35	11,825.35	11825.35	30,673,282	30,673,282
Research & Development	960.77	960.77	960.77	3,246,089	3,246,089
Unrefrigerated Warehouse-No Rail	161.62	161.62	161.62	692,675	692,675
Total	19,644.64	19,644.64	19,644.64	58,671,465	58,671,465

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10

Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.533598	0.058434	0.178244	0.125508	0.038944	0.006283	0.016425	0.031066	0.002453	0.003157	0.003691	0.000543	0.001655

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,395.5843	4,395.5843	0.2021	0.0418	4,412.7865
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,395.5843	4,395.5843	0.2021	0.0418	4,412.7865
NaturalGas Mitigated	0.1553	1.4122	1.1862	8.4700e-003		0.1073	0.1073		0.1073	0.1073	0.0000	1,537.3152	1,537.3152	0.0295	0.0282	1,546.6710
NaturalGas Unmitigated	0.1553	1.4122	1.1862	8.4700e-003		0.1073	0.1073		0.1073	0.1073	0.0000	1,537.3152	1,537.3152	0.0295	0.0282	1,546.6710

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	300671	1.6200e-003	0.0147	0.0124	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0450	16.0450	3.1000e-004	2.9000e-004	16.1426
Hospital	1.95935e+007	0.1057	0.9605	0.8068	5.7600e-003		0.0730	0.0730		0.0730	0.0730	0.0000	1,045.5830	1,045.5830	0.0200	0.0192	1,051.9462

Library	456525	2.4600e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003	0.0000	24.3619	24.3619	4.7000e-004	4.5000e-004	24.5102
Medical Office Building	4.19931e+006	0.0226	0.2059	0.1729	1.2400e-003		0.0156	0.0156		0.0156	0.0156	0.0000	224.0912	224.0912	4.3000e-003	4.1100e-003	225.4550
Research & Development	1.92256e+006	0.0104	0.0942	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	102.5951	102.5951	1.9700e-003	1.8800e-003	103.2194
Unrefrigerated Warehouse-No Rail	48580.1	2.6000e-004	2.3800e-003	2.0000e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.5924	2.5924	5.0000e-005	5.0000e-005	2.6082
General Light Industry	2.28707e+006	0.0123	0.1121	0.0942	6.7000e-004		8.5200e-003	8.5200e-003		8.5200e-003	8.5200e-003	0.0000	122.0467	122.0467	2.3400e-003	2.2400e-003	122.7894
Total		**0.1553**	**1.4122**	**1.1862**	**8.4700e-003**		**0.1073**	**0.1073**		**0.1073**	**0.1073**	**0.0000**	**1,537.3152**	**1,537.3152**	**0.0295**	**0.0282**	**1,546.6710**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.4304e+006	409.3343	0.0188	3.8900e-003	410.9362
General Office Building	364414	104.2833	4.7900e-003	9.9000e-004	104.6914
Hospital	6.77856e+006	1,939.7997	0.0892	0.0185	1,947.3911
Library	285525	81.7078	3.7600e-003	7.8000e-004	82.0276
Medical Office Building	5.08958e+006	1,456.4685	0.0670	0.0139	1,462.1684
Research & Development	1.20243e+006	344.0952	0.0158	3.2700e-003	345.4418
Unrefrigerated Warehouse-No Rail	209303	59.8957	2.7500e-003	5.7000e-004	60.1301
Total		**4,395.5843**	**0.2021**	**0.0418**	**4,412.7865**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.2633	1.3000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0248	0.0248	7.0000e-005	0.0000	0.0263
Unmitigated	4.2633	1.3000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0248	0.0248	7.0000e-005	0.0000	0.0263

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0349					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2272					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2800e-003	1.3000e-004	0.0131	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0248	0.0248	7.0000e-005	0.0000	0.0263
Total	**4.2633**	**1.3000e-004**	**0.0131**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0248**	**0.0248**	**7.0000e-005**	**0.0000**	**0.0263**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	714.2031	5.3276	0.1312	866.7538
Unmitigated	714.2031	5.3285	0.1314	866.8361

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	26.0665 / 0	105.3981	0.8537	0.0210	129.8192
General Office Building	4.1643 / 2.55231	24.9527	0.1368	3.4200e-003	28.8859
Hospital	33.5005 / 6.38105	155.7443	1.0981	0.0271	187.2096
Library	0.704 / 1.10113	6.3474	0.0232	6.0000e-004	7.0207
Medical Office Building	41.0698 / 7.82282	190.9341	1.3462	0.0332	229.5087
Research & Development	46.588 / 0	188.3755	1.5258	0.0374	232.0227
Unrefrigerated Warehouse-No Rail	10.4987 / 0	42.4510	0.3438	8.4400e-003	52.2870
Total		**714.2031**	**5.3276**	**0.1312**	**866.7538**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	985.7566	58.2566	0.0000	2,209.1441
Unmitigated	985.7566	58.2566	0.0000	2,209.1441

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	139.77	28.3721	1.6767	0.0000	63.5836
General Office Building	21.79	4.4232	0.2614	0.0000	9.9126
Hospital	1089.16	221.0896	13.0660	0.0000	495.4761
Library	20.72	4.2060	0.2486	0.0000	9.4259
Medical Office Building	3534.84	717.5406	42.4054	0.0000	1,608.0547
Research & Development	7.2	1.4615	0.0864	0.0000	3.2754
Unrefrigerated Warehouse-No Rail	42.68	8.6637	0.5120	0.0000	19.4158
Total		**985.7566**	**58.2565**	**0.0000**	**2,209.1441**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix D. 2

Operational Emissions – CalEEMod Output (Annual)

Interim Operations

Harbor-UCLA Medical Center (Interim Operations)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	52.64	1000sqft	1.21	52,635.00	0
General Light Industry	129.21	1000sqft	2.97	129,205.00	0
Hospital	379.00	Bed	6.23	271,272.12	0
Library	22.50	1000sqft	0.52	22,500.00	0
Medical Office Building	338.70	1000sqft	7.78	338,700.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0
Research & Development	237.50	1000sqft	5.45	237,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2023
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	15.31
tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	9.76
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	15.31
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	9.76
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	15.31
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	9.76
tblVehicleTrips	WD_TR	2.59	3.56

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.2376	1.4000e-004	0.0154	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0299	0.0299	8.0000e-005	0.0000	0.0316
Energy	0.1246	1.1323	0.9512	6.7900e-003		0.0861	0.0861		0.0861	0.0861	0.0000	5,650.7909	5,650.7909	0.2267	0.0646	5,675.5832
Mobile	10.0021	24.4586	111.1388	0.3802	25.0115	0.5190	25.5305	6.7012	0.4789	7.1800	0.0000	25,945.8081	25,945.8081	0.8744	0.0000	25,964.1703
Waste						0.0000	0.0000		0.0000	0.0000	1,026.1721	0.0000	1,026.1721	60.6450	0.0000	2,299.7178
Water						0.0000	0.0000		0.0000	0.0000	77.3318	976.3492	1,053.6810	7.9862	0.1965	1,282.3145
Total	**15.3643**	**25.5911**	**112.1053**	**0.3870**	**25.0115**	**0.6051**	**25.6166**	**6.7012**	**0.5650**	**7.2661**	**1,103.5039**	**32,572.9781**	**33,676.4820**	**69.7324**	**0.2612**	**35,221.8173**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	10.0021	24.4586	111.1388	0.3802	25.0115	0.5190	25.5305	6.7012	0.4789	7.1800	0.0000	25,945.8081	25,945.8081	0.8744	0.0000	25,964.1703
Unmitigated	10.0021	24.4586	111.1388	0.3802	25.0115	0.5190	25.5305	6.7012	0.4789	7.1800	0.0000	25,945.8081	25,945.8081	0.8744	0.0000	25,964.1703

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	193.81	193.81	193.81	858,233	858,233
General Office Building	805.84	805.84	805.84	2,595,988	2,595,988
Hospital	4,904.26	4,904.26	4904.26	19,013,040	19,013,040
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	12,237.23	12,237.23	12237.23	31,741,646	31,741,646
Research & Development	2,318.00	2,318.00	2318.00	7,831,712	7,831,712
Unrefrigerated Warehouse-No Rail	161.63	161.63	161.63	692,705	692,705
Total	21,886.17	21,886.17	21,886.17	65,928,062	65,928,062

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.522550	0.057918	0.180146	0.126595	0.040312	0.006532	0.017397	0.036650	0.002593	0.003201	0.003751	0.000525	0.001830

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,418.0987	4,418.0987	0.2031	0.0420	4,435.3891
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,857.1907	4,857.1907	0.2233	0.0462	4,876.1994
NaturalGas Mitigated	0.1246	1.1323	0.9512	6.7900e-003		0.0861	0.0861		0.0861	0.0861	0.0000	1,232.6921	1,232.6921	0.0236	0.0226	1,240.1941
NaturalGas Unmitigated	0.1579	1.4355	1.2058	8.6100e-003		0.1091	0.1091		0.1091	0.1091	0.0000	1,562.6573	1,562.6573	0.0300	0.0287	1,572.1674

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	342450	1.8500e-003	0.0168	0.0141	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	18.2744	18.2744	3.5000e-004	3.4000e-004	18.3857
Medical Office Building	2.80952e+006	0.0152	0.1377	0.1157	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.9265	149.9265	2.8700e-003	2.7500e-003	150.8389
Research & Development	3.61475e+006	0.0195	0.1772	0.1488	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	192.8968	192.8968	3.7000e-003	3.5400e-003	194.0708
Unrefrigerated Warehouse-No Rail	31327.4	1.7000e-004	1.5400e-003	1.2900e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6718	1.6718	3.0000e-005	3.0000e-005	1.6819
General Light Industry	1.9665e+006	0.0106	0.0964	0.0810	5.8000e-004		7.3300e-003	7.3300e-003		7.3300e-003	7.3300e-003	0.0000	104.9399	104.9399	2.0100e-003	1.9200e-003	105.5786
General Office Building	436607	2.3500e-003	0.0214	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.2990	23.2990	4.5000e-004	4.3000e-004	23.4408
Hospital	1.38986e+007	0.0749	0.6813	0.5723	4.0900e-003		0.0518	0.0518		0.0518	0.0518	0.0000	741.6837	741.6837	0.0142	0.0136	746.1974
Total		**0.1246**	**1.1324**	**0.9512**	**6.8000e-003**		**0.0861**	**0.0861**		**0.0861**	**0.0861**	**0.0000**	**1,232.6922**	**1,232.6922**	**0.0236**	**0.0226**	**1,240.1941**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.46809e+006	420.1193	0.0193	4.0000e-003	421.7634
General Office Building	690834	197.6939	9.0900e-003	1.8800e-003	198.4676
Hospital	5.69129e+006	1,628.6585	0.0749	0.0155	1,635.0323
Library	255656	73.1604	3.3600e-003	7.0000e-004	73.4467
Medical Office Building	4.44544e+006	1,272.1370	0.0585	0.0121	1,277.1156
Research & Development	2.69859e+006	772.2482	0.0355	7.3400e-003	775.2704
Unrefrigerated Warehouse-No Rail	188986	54.0815	2.4900e-003	5.1000e-004	54.2931
Total		**4,418.0987**	**0.2031**	**0.0420**	**4,435.3890**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.2376	1.4000e-004	0.0154	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0299	0.0299	8.0000e-005	0.0000	0.0316
Unmitigated	5.2376	1.4000e-004	0.0154	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0299	0.0299	8.0000e-005	0.0000	0.0316

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2714					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9648					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4200e-003	1.4000e-004	0.0154	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0299	0.0299	8.0000e-005	0.0000	0.0316
Total	**5.2376**	**1.4000e-004**	**0.0154**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0299**	**0.0299**	**8.0000e-005**	**0.0000**	**0.0316**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,053.6810	7.9862	0.1965	1,282.3145
Unmitigated	1,053.6810	7.9876	0.1968	1,282.4379

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	29.8798 / 0	120.8170	0.9786	0.0240	148.8107
General Office Building	9.35413 / 5.73317	56.0504	0.3072	7.6900e-003	64.8854
Hospital	34.0394 / 6.48369	158.2496	1.1158	0.0276	190.2210
Library	0.704 / 1.10113	6.3474	0.0232	6.0000e-004	7.0207
Medical Office Building	42.5003 / 8.09529	197.5844	1.3931	0.0344	237.5026
Research & Development	116.777 / 0	472.1812	3.8245	0.0938	581.5872
Unrefrigerated Warehouse-No Rail	10.4987 / 0	42.4510	0.3438	8.4400e-003	52.2870
Total		**1,053.6810**	**7.9862**	**0.1965**	**1,282.3145**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,026.1721	60.6450	0.0000	2,299.7178
Unmitigated	1,026.1721	60.6450	0.0000	2,299.7178

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	160.22	32.5232	1.9221	0.0000	72.8866
General Office Building	48.95	9.9364	0.5872	0.0000	22.2681
Hospital	1106.68	224.6460	13.2762	0.0000	503.4463
Library	20.72	4.2060	0.2486	0.0000	9.4259
Medical Office Building	3657.96	742.5328	43.8824	0.0000	1,664.0639
Research & Development	18.05	3.6640	0.2165	0.0000	8.2112
Unrefrigerated Warehouse-No Rail	42.68	8.6637	0.5120	0.0000	19.4158
Total		**1,026.1721**	**60.6450**	**0.0000**	**2,299.7178**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix D. 2

Operational Emissions – CalEEMod Output (Annual)

Full Build-Out Operations

Harbor-UCLA Medical Center (Full Build-Out Operations)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	130.64	1000sqft	3.00	130,635.00	0
General Light Industry	129.21	1000sqft	2.97	129,205.00	0
Hospital	379.00	Bed	6.23	271,272.12	0
Library	22.50	1000sqft	0.52	22,500.00	0
Medical Office Building	412.60	1000sqft	9.47	412,598.00	0
Unrefrigerated Warehouse-No Rail	45.40	1000sqft	1.04	45,402.00	0
Research & Development	475.00	1000sqft	10.90	475,000.00	0
Strip Mall	35.00	1000sqft	0.80	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - See Traffic Study

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	129,210.00	129,205.00
tblLandUse	LandUseSquareFeet	45,400.00	45,402.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	ST_TR	1.32	1.50
tblVehicleTrips	ST_TR	2.37	12.31
tblVehicleTrips	ST_TR	8.14	12.94
tblVehicleTrips	ST_TR	46.55	56.24
tblVehicleTrips	ST_TR	8.96	36.13
tblVehicleTrips	ST_TR	1.90	8.67
tblVehicleTrips	ST_TR	2.59	3.56
tblVehicleTrips	ST_TR	42.04	42.70
tblVehicleTrips	SU_TR	0.68	1.50
tblVehicleTrips	SU_TR	0.98	12.31
tblVehicleTrips	SU_TR	7.19	12.94
tblVehicleTrips	SU_TR	25.49	56.24
tblVehicleTrips	SU_TR	1.55	36.13
tblVehicleTrips	SU_TR	1.11	8.67
tblVehicleTrips	SU_TR	2.59	3.56
tblVehicleTrips	SU_TR	20.43	42.70
tblVehicleTrips	WD_TR	6.97	1.50
tblVehicleTrips	WD_TR	11.01	12.31
tblVehicleTrips	WD_TR	11.81	12.94
tblVehicleTrips	WD_TR	8.11	8.67
tblVehicleTrips	WD_TR	2.59	3.56
tblVehicleTrips	WD_TR	44.32	42.70

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.2634	1.9000e-004	0.0207	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0404	0.0404	1.0000e-004	0.0000	0.0426
Energy	0.1511	1.3737	1.1539	8.2400e-003		0.1044	0.1044		0.1044	0.1044	0.0000	7,395.9749	7,395.9749	0.2999	0.0835	7,428.1677
Mobile	10.8974	27.3852	120.7752	0.4977	32.0449	0.6929	32.7379	8.5895	0.6395	9.2290	0.0000	32,623.5315	32,623.5315	0.9512	0.0000	32,643.5069
Waste						0.0000	0.0000		0.0000	0.0000	1,214.0321	0.0000	1,214.0321	71.7472	0.0000	2,720.7242
Water						0.0000	0.0000		0.0000	0.0000	122.5424	1,545.0340	1,667.5764	12.6550	0.3114	2,029.8679
Total	**18.3119**	**28.7591**	**121.9498**	**0.5060**	**32.0449**	**0.7974**	**32.8423**	**8.5895**	**0.7440**	**9.3335**	**1,336.5745**	**41,564.5808**	**42,901.1553**	**85.6534**	**0.3949**	**44,822.3093**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	10.8974	27.3852	120.7752	0.4977	32.0449	0.6929	32.7379	8.5895	0.6395	9.2290	0.0000	32,623.5315	32,623.5315	0.9512	0.0000	32,643.5069
Unmitigated	10.8974	27.3852	120.7752	0.4977	32.0449	0.6929	32.7379	8.5895	0.6395	9.2290	0.0000	32,623.5315	32,623.5315	0.9512	0.0000	32,643.5069

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	193.82	193.82	193.82	858,267	858,267
General Office Building	1,608.12	1,608.12	1608.12	5,180,486	5,180,486
Hospital	4,904.26	4,904.26	4904.26	19,013,040	19,013,040
Library	1,265.40	1,265.40	1265.40	3,194,737	3,194,737
Medical Office Building	14,907.17	14,907.17	14907.17	38,667,079	38,667,079
Research & Development	4,118.25	4,118.25	4118.25	13,914,128	13,914,128
Unrefrigerated Warehouse-No Rail	161.62	161.62	161.62	692,675	692,675
Strip Mall	1,494.50	1,494.50	1494.50	2,843,429	2,843,429
Total	28,653.13	28,653.13	28,653.13	84,363,840	84,363,840

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12
Medical Office Building	16.60	8.40	6.90	29.60	51.40	19.00	60	30	10
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.508453	0.058534	0.182003	0.128323	0.043028	0.007073	0.018375	0.041612	0.002788	0.003272	0.003888	0.000508	0.002143

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5,900.5377	5,900.5377	0.2712	0.0561	5,923.6295
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,459.6975	6,459.6975	0.2969	0.0614	6,484.9777
NaturalGas Mitigated	0.1511	1.3737	1.1539	8.2400e-003		0.1044	0.1044		0.1044	0.1044	0.0000	1,495.4372	1,495.4372	0.0287	0.0274	1,504.5382
NaturalGas Unmitigated	0.1913	1.7387	1.4605	0.0104		0.1321	0.1321		0.1321	0.1321	0.0000	1,892.8256	1,892.8256	0.0363	0.0347	1,904.3450

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	1.38986e+007	0.0749	0.6813	0.5723	4.0900e-003		0.0518	0.0518		0.0518	0.0518	0.0000	741.6837	741.6837	0.0142	0.0136	746.1974
Library	342450	1.8500e-003	0.0168	0.0141	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	18.2744	18.2744	3.5000e-004	3.4000e-004	18.3857
Medical Office Building	3.4225e+006	0.0185	0.1678	0.1409	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.6377	182.6377	3.5000e-003	3.3500e-003	183.7492
Research & Development	7.2295e+006	0.0390	0.3544	0.2977	2.1300e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.7937	385.7937	7.3900e-003	7.0700e-003	388.1415
Strip Mall	48912.5	2.6000e-004	2.4000e-003	2.0100e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6102	2.6102	5.0000e-005	5.0000e-005	2.6260
Unrefrigerated Warehouse-No Rail	31327.4	1.7000e-004	1.5400e-003	1.2900e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6718	1.6718	3.0000e-005	3.0000e-005	1.6819
General Light Industry	1.9665e+006	0.0106	0.0964	0.0810	5.8000e-004		7.3300e-003	7.3300e-003		7.3300e-003	7.3300e-003	0.0000	104.9399	104.9399	2.0100e-003	1.9200e-003	105.5786
General Office Building	1.08362e+006	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.8260	57.8260	1.1100e-003	1.0600e-003	58.1779
Total		**0.1511**	**1.3737**	**1.1539**	**8.2500e-003**		**0.1044**	**0.1044**		**0.1044**	**0.1044**	**0.0000**	**1,495.4372**	**1,495.4372**	**0.0287**	**0.0274**	**1,504.5382**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.46809e+006	420.1193	0.0193	4.0000e-003	421.7634
General Office Building	1.71458e+006	490.6573	0.0226	4.6700e-003	492.5775
Hospital	5.69129e+006	1,628.6585	0.0749	0.0155	1,635.0323
Library	255656	73.1604	3.3600e-003	7.0000e-004	73.4467
Medical Office Building	5.41535e+006	1,549.6935	0.0712	0.0147	1,555.7583
Research & Development	5.39719e+006	1,544.4964	0.0710	0.0147	1,550.5408
Strip Mall	488075	139.6709	6.4200e-003	1.3300e-003	140.2175
Unrefrigerated Warehouse-No Rail	188986	54.0815	2.4900e-003	5.1000e-004	54.2931
Total		**5,900.5377**	**0.2712**	**0.0561**	**5,923.6295**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.2634	1.9000e-004	0.0207	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0404	0.0404	1.0000e-004	0.0000	0.0426
Unmitigated	7.2634	1.9000e-004	0.0207	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0404	0.0404	1.0000e-004	0.0000	0.0426

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.4984					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8900e-003	1.9000e-004	0.0207	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0404	0.0404	1.0000e-004	0.0000	0.0426
Total	**7.2634**	**1.9000e-004**	**0.0207**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0404**	**0.0404**	**1.0000e-004**	**0.0000**	**0.0426**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,667.5764	12.6550	0.3114	2,029.8679
Unmitigated	1,667.5764	12.6573	0.3119	2,030.0634

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	29.8798 / 0	120.8170	0.9786	0.0240	148.8107
General Office Building	23.2174 / 14.23	139.1195	0.7625	0.0191	161.0483

Hospital	34.0394 / 6.48369	158.2496	1.1158	0.0276	190.2210
Library	0.704 / 1.10113	6.3474	0.0232	6.0000e-004	7.0207
Medical Office Building	51.7733 / 9.86158	240.6948	1.6970	0.0419	289.3227
Research & Development	233.555 / 0	944.3625	7.6490	0.1877	1,163.1743
Strip Mall	2.59254 / 1.58898	15.5346	0.0851	2.1300e-003	17.9833
Unrefrigerated Warehouse-No Rail	10.4987 / 0	42.4510	0.3438	8.4400e-003	52.2870
Total		**1,667.5763**	**12.6550**	**0.3114**	**2,029.8679**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,214.0321	71.7472	0.0000	2,720.7242
Unmitigated	1,214.0321	71.7472	0.0000	2,720.7242

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	160.22	32.5232	1.9221	0.0000	72.8866

General Office Building	121.49	24.6614	1.4575	0.0000	55.2677
Hospital	1106.68	224.6460	13.2762	0.0000	503.4463
Library	20.72	4.2060	0.2486	0.0000	9.4259
Medical Office Building	4456.08	904.5440	53.4570	0.0000	2,027.1413
Research & Development	36.1	7.3280	0.4331	0.0000	16.4225
Strip Mall	36.75	7.4599	0.4409	0.0000	16.7182
Unrefrigerated Warehouse-No Rail	42.68	8.6637	0.5120	0.0000	19.4158
Total		**1,214.0321**	**71.7473**	**0.0000**	**2,720.7242**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix D. 3
Mobile Source Emission Calculations

Harbor-UCLA Medical Center

GHG Operational Emissions: Mobile Emissions

CARB Emission Factors

Phase	Year	CARB EF (g CO2/mi)
Existing	2015	447
Interim	2023	391
Full Build	2030	350

Source: CARB, Statewide On-Road CO2 EFs for Mobile Sources, March 2014.

CalEEMod Mobile Output

Phase	Year	VMT (mi) [1]
Existing	2015	58,671,465
Interim	2023	65,928,062
Full Build	2030	84,363,840

Source: PCR Services, 2016.

Mobile Source GHG Calculations

Phase	Year	CO2 (MT/yr) [2]	CH4 (MT/yr) [1]	Total Mobile Emissions (MT CO2e/yr) [3]
Existing	2015	26,226	1.15	26,255
Interim	2023	25,778	0.87	25,800
Full Build	2030	29,527	0.95	29,551

[1] *From CalEEMod Annual Outputs.*

[2] *CO2 (MT/yr) = CARB EF * VMT*

[3] *CO2e (MT/yr) = CO2 (MT/yr) + (CH4 MT/yr * CH4 GWP)*

Source: PCR Services, 2016.

Appendix E

Hazardous Materials Assessments

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

PHASE I
HAZARDOUS MATERIALS ASSESSMENT
HARBOR UCLA MEDICAL CENTER
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA

PREPARED FOR:
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

April 30, 2015
Project No. 209023001

April 30, 2015
Project No. 209023001

Mr. David A. Crook, AICP
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

Subject: Phase I Hazardous Materials Assessment
Harbor UCLA Medical Center
1000 West Carson Street
Torrance, California

Dear Mr. Crook:

In accordance with our proposal dated February 13, 2013, Ninyo & Moore has performed a Phase I Hazardous Materials Assessment of the above-referenced property (site). The attached report presents our methodology, findings, opinions, and conclusions regarding the environmental conditions at the site.

We appreciate the opportunity to be of service to you on this project.

Sincerely,
NINYO & MOORE

Patrick Cullip
Senior Staff Engineer

Michael Cushner
Project Environmental Scientist

John Jay Roberts, PG, CEG
Senior Geologist

PJC/MSC/JJR/mtf

Distribution: (1) Addressee (via e-mail)

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1. INTRODUCTION

PCR Services Corporation (PCR) authorized Ninyo & Moore to perform a Phase I Hazardous Materials Assessment (HMA) of the Harbor UCLA Medical Center at 1000 West Carson Street in the city of Torrance, California (site; Figure 1). The HMA was conducted in general accordance with Ninyo & Moore's proposal dated February 13, 2013. Access to the site was not provided to Ninyo & Moore until 2015 because of scheduling and coordination issues from on-site County of Los Angeles representatives. The following sections identify the purpose, involved parties, scope of services, and limitations and exceptions associated with the HMA.

1.1. Purpose

The purpose of this HMA was to evaluate, in general accordance with the process described in ASTM International (ASTM) Practice E1527-13, recognized environmental conditions (RECs), which are defined by ASTM as "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to a release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

As defined in ASTM E1527-13, de minimis conditions are not considered RECs. A de minimis condition is defined as "a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

Identification of RECs fall into three categories: existing RECs (as defined above); Historical RECs (HRECs); or Controlled RECs (CRECs).

- HREC – A HREC is defined as "a past release of any hazardous substance or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations [AULs], institutional controls, or engineering controls)."

- CREC – A CREC is defined as "recognized environmental conditions resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the

issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, AULs, institutional controls, or engineering controls)."

Information herein is intended to aid PCR during their preparation of environmental documents for the Harbor-UCLA Medical Center demolition and renovation project.

1.2. Involved Parties

Mr. Patrick Cullip of Ninyo & Moore conducted the site reconnaissance on March 4 and 18, 2015. Mr. Cullip also performed historical research, document review, and prepared this report. Mr. Michael Cushner and Mr. John Jay Roberts of Ninyo & Moore performed project oversight and quality review.

1.3. Scope of Services

Ninyo & Moore's scope of services for this HMA includes the activities listed below.

- Reviewed readily available maps and reports pertaining to the site, as provided by the client.
- Performed a site reconnaissance to visually identify areas of possibly contaminated surficial soil or surface water, improperly stored hazardous materials, possible sources of polychlorinated biphenyls (PCBs), and possible risks of contamination from activities at the site and adjacent properties.
- Reviewed readily available local regulatory agency files for the site.
- Reviewed available regulatory agency databases for the site and for properties located within a specified radius of the site. The purpose of this review was to evaluate the possible environmental impact to the site. These databases list locations of known hazardous waste sites, landfills, leaking underground storage tanks (LUSTs), permitted facilities that utilize underground storage tanks (USTs), and facilities that use, store, or dispose of hazardous materials.
- Prepared this HMA report documenting findings and providing opinions and conclusions regarding possible environmental impacts at the site.

1.4. Limitations and Exceptions

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards. In addition, it should be noted that this HMA does not include analysis of the following: asbestos-containing materials (ACMs), radon, lead-based paint (LBP), lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our findings, opinions, and conclusions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control. Ninyo & Moore cannot warrant or guarantee that not finding indicators of any particular hazardous material means that this particular hazardous material or any other hazardous materials do not exist on the site. Additional research, including invasive testing, can reduce the uncertainty, but no techniques now commonly employed can eliminate the uncertainty altogether.

1.5. User Reliance

This report may be relied upon and is intended exclusively for use by the client. Any use or reuse of the findings, opinions, and/or conclusions of this report by parties other than the client is undertaken at said parties' sole risk.

1.6. Physical Limitations

Physical limitations were not encountered during the site reconnaissance.

1.7. Data Gaps

Data gaps were not encountered during this HMA.

2. GENERAL SITE CHARACTERISTICS

The following sections describe the location and the current uses of the site. The uses of adjacent properties are also described.

2.1. Location

The site is an approximately 72-acre, rectangular-shaped property at 1000 West Carson Street in the city of Torrance, California (Figure 1). The site is occupied by the Harbor UCLA Medical Center.

2.2. Current Title Information

A Title Report was not provided to Ninyo & Moore for review.

2.3. Adjacent Properties

Table 1 lists the properties adjoining the site and associated land use. The general site surrounding includes commercial and residential properties. Current and former gasoline service stations on West Carson Street and South Vermont Avenue may have impacted the environmental integrity of the site. The service stations are further discussed in Section 6.14.

Table 1 – Adjacent Properties

Location	Current Occupant(s)
North	West Carson Street, beyond which are various retail and commercial businesses (such as restaurants, nail salons, clothing stores, grocery stores, and health care offices) and a Shell service station.
South	West 200th Street, beyond which are residential properties and a parking lot.
East	South Vermont Avenue, beyond which are strip malls, a 76 service station, residential properties, and a mobile home park.
West	South Normandie Avenue, beyond which are vacant land and residential properties.

2.4. Site Description and Current Site Uses/Operations

The following paragraphs present a description of the structures present at the site, the tenants currently occupying the site, if any, the activities being conducted on-site, the heating and cooling systems utilized in the site buildings, the sewage disposal system, and the potable water provider for the site.

2.4.1. Site Description

The Harbor UCLA Medical Center property is an approximately 72-acre parcel of land (Figure 2), occupied with Harbor UCLA Medical Center (hospital), office buildings, medical research buildings, a hazardous waste storage area, a helipad, a power plant, a parking structure, parking lots, and several roads.

2.4.2. Occupants

The site is currently occupied by the Harbor UCLA Medical Center (hospital, offices, and medical research buildings), County of Los Angeles Department of Public Works (LADPW, hazardous waste storage area and power plant), and LA Biomedical Research Institute (LA BioMed, office and medical research buildings).

2.4.3. Heating and Cooling Systems

Heating and cooling systems are powered by electricity and natural gas. Southern California Edison provides electricity to the site. Natural gas is provided to the site by the Southern California Gas Company.

2.4.4. Sewage Disposal/Septic Systems

The LADPW provides sewer service to the site.

2.4.5. Potable Water

The LADPW provides potable water to the site.

3. SITE RECONNAISSANCE

On March 4 and 18, Mr. Patrick Cullip of Ninyo & Moore conducted site reconnaissance. The reconnaissance involved a visit to the site and visual observations of adjoining properties (from public thoroughfares). Weather conditions were sunny and clear at the time of the site reconnaissance. Selected photographs taken during the site reconnaissance are included in Appendix A. Mr. Damena Bahiru of LADPW provided information on the hazardous waste storage area and hospital. Mr. Juan Oliva of LADPW provided information on the power plant and helipad. Mr. Gil Armangue of LA BioMed provided information on LA BioMed buildings.

3.1. Physical Limitations

Major physical limitations were not encountered during the site reconnaissance. Areas inspected during the site reconnaissance were limited to locations with hazardous materials. Individual office buildings were not inspected during the site reconnaissance unless they contained hazardous materials, as reported by the site contacts above (Section 3).

3.2. Use and Storage of Hazardous Substances and Petroleum Products

Hazardous materials were observed in several areas of the site. Detailed information can be found in Table 2. Significant evidence of releases or spills was not observed at these areas and is therefore not considered an environmental concern.

Table 2 – Hazardous Materials Storage

Building	Location	Storage	Contents	Comments
Hospital	Pharmacy (1st floor)	Small fire closet	Rubbing alcohol	Used to clean surfaces
		RCRA container	Needles	
	Pathology lab (2nd floor)	Fire closets	Bleach, alcohols, reaction buffers, diaminobenzene, acids, methanol	
		Lab area	Three carbon dioxide cylinders	
	Dark room (Basement)	10-gallon bucket	Film fixer	Used for radiation therapy
	In-patient pharmacy (basement)	RCRA containers	Epinephrine, coumadin, chemotherapy chemicals	Restricted area, pictures not allowed
	Stock room (basement)	Fire closet	Phenol solution, acetic acid, tincture benzoin, isopropyl alcohol	Small quantity (less than 5-gallon) containers
	Loading dock	Enclosure	CO_2, oxygen, medical oxygen, medical nitrogen, empty cylinders	
		Exterior	Approximately 80 new car batteries	Placed on pallets, no secondary containment
Power Plant	Medical gas storage area	Enclosure	NOS, CO_2, helium, argon, sulfur hexafluoride, nitrogen, oxygen cylinders	
	Nitrogen and NOS room	Enclosure	Nitrogen and NOS cylinders	
	Boiler room	Corner of room	Oxygen/acetylene cylinders, 5-gallon buckets and 30- to 55-gallon drums of potassium hydroxide, boiler antifoam, chemical cleaner, corrosion inhibitor, oxygen scavenger	Secondary containment
	Boiler chemical storage area	ASTs	Morpholine, sodium glucoheptonate, sodium metabisulfite	See Section 3.5
	Equipment room	Corner of room	5-gallon bucket of pressure oil, 10 50-lb bags of absorbent	Secondary containment
	Exterior	Fire closet	Alcohols	Secondary containment
	Cooling tower	Storage shed	Anti-foam, pressure oil, microbicide, degreaser, bleach, lighter fluid, sulfuric acid	Secondary containment
		Chemical storage area (ASTs)	Microbicide, polymaleic acid, sodium hydroxide	See Section 3.5

Table 2 – Hazardous Materials Storage

Building	Location	Storage	Contents	Comments
LA BioMed	Buildings B1, C1, C3, E1, E6, F1, RB2, RB2 annex, RB3 (2nd floor), HH	Fire closets	Alcohols, acids, acetone, xylenes, chloroform, petroleum ether, hexanes, toluene, 2-propanol, ethanol, film fixer, potassium chloride, glycerin, pyridine, bleach	Small quantity (less than 5-gallon) containers, two 5-gallon buckets of ethyl alcohol in Building HH,
	Building F1	Chemical storage area	Two 135-pound hydrogen peroxide containers	Secondary containment
	Building RB2 annex	Cage washing area	Two 30-gallon clout (soap) drums, two 30-gallon phosphoric acid drums, four 2-gallon spray buckets of bleach and acid	Used to sterilize animal cages, secondary containment
	Buildings C1, C3, D1, E1, RB2, RB3 (2nd floor), HH	Gas cylinders	Oxygen, argon, nitrogen, CO_2, NOS, helium	

Notes:
ASTs – aboveground storage tanks
CO_2 – carbon dioxide
NOS – nitrous oxide
RCRA – Resource Conservation and Recovery Act

3.3. Storage and Disposal of Hazardous Wastes

Small quantities (less than five gallons) of hazardous waste were observed in designated buildings on the site. Hazardous waste generated at the site is regularly moved to the hazardous waste storage area adjacent to building N32. Six storage sheds with secondary containment were labeled for flammable, corrosive, oxidizing, and poisonous materials. Five of the storage sheds contained several fire closets with small quantities of acids, ammonium sulfate, film fixers, methanol, sodium nitrate, hypochlorite solutions, etc. The remaining storage shed contained used fluorescent light bulbs. Approximately 30 empty one to five-gallon gasoline canisters were observed in the rear of the hazardous waste storage area. Six empty drums (30 to 55 gallons in capacity) and an electrical transformer were observed in secondary containment. Approximately 25 empty 55-gallon drums and one empty nitrogen tank were observed adjacent to the hazardous waste storage area. Staining or signs

of release were not observed in or adjacent to the hazardous waste storage area. Copies of the most recent hazardous waste manifests are provided in Appendix B.

3.4. Unidentified Substance Containers

Unidentified substance containers were not observed during our site reconnaissance.

3.5. Aboveground and Underground Storage Tanks (ASTs and USTs)

ASTs were observed in the power plant area and adjacent to LA BioMed buildings. Detailed AST information can be found in Table 3.

Table 3 – AST Information

Area	Location	Tank Capacity (Gallons)	Contents	Comments
Power Plant	Boiler Chemical Storage Area	75	Morpholine	Chemicals used for maintaining boilers, secondary containment, no staining observed
		100	Sodium Glucoheptonate	
		75	Sodium Metabisulfite	
		Unknown	Empty	Empty propane tanks, no secondary containment, no staining observed
	Cooling Tower Chemical Storage Area	75	Microbicide	Chemicals used for corrosion protection, secondary containment, no staining observed
		75	Polymaleic Acid	
		75	Sodium Hydroxide	
	Cooling Tower Storage Shed	300	Sulfuric Acid	Planned to be removed this year, secondary containment, no staining observed
	Adjacent to Cooling Tower Storage Shed	4,000	Empty	Baker tank, originally planned to store water, never used
	Eastern edge	9,000	Liquid Oxygen	No secondary containment, no staining observed
		900		
	Outside Power Station	N/A	Two Autoclaves	One of the autoclave was never put into use, no staining observed
LA BioMed Buildings	Various	Approximately 200 to 250, one is 500	Diesel Fuel	Eight exterior emergency generators, no staining observed, no secondary containment

USTs were observed in the power plant area of the site. Detailed UST information is presented in Table 4.

Table 4 – UST Information

Area	Location	Tank Capacity (Gallons)	Contents	Construction	Comments
Power Plant	Northern portion	10,000	Amber Fuel	Double-walled fiberglass	Used for boilers, installed in 1999
		25,000		Single-walled fiberglass	
	Southern portion	15,000	Diesel Fuel	Double-walled fiberglass	Used for emergency backup generators, installed in 1999
		15,000			
Helipad	Adjacent to the south	Unknown	Two empty interceptors	Unknown	Emergency spill collection system for potential helicopter fuel release, no staining observed

3.6. Evidence of Releases

Evidence of chemical releases on site (i.e., odors, stressed vegetation, stains, leaks, pools of liquids, and spills) was not observed during our site reconnaissance.

3.7. Polychlorinated Biphenyls (PCBs)

Electrical transformers can be a source of PCBs. Pole-mounted transformers were observed along Medical Foundation Drive, Medical Center Drive, South Drive, and between several buildings at the site. Pad-mounted transformers were observed at the power station and adjacent to LA BioMed buildings. Staining or signs of release was not observed. Transformers were observed in the power station building of the power plant. According to Mr. Juan Oliva, PCBs are not used in the power station transformers.

3.8. Suspect Asbestos-Containing Materials (ACMs) and Lead-Based Paint (LBP)

Based on the construction date of the site buildings (prior to 1980), ACMs and LBP may be present on building materials at the site. A Hazardous Building Materials Survey (HBMS) was conducted by Ninyo & Moore simultaneously with this HMA to evaluate the presence of ACMs and LBP on building materials at the site. The results of the evaluation are presented under separate cover.

3.9. Wastewater Systems

Wastewater systems were not observed at the site during the site reconnaissance.

3.10. Storm Water Systems

Storm water catch basins and drains were observed throughout the site during the site reconnaissance. A storm water channel trending east-west was observed at the southern boundary of the site. Staining was not observed at the catch basins, drains, or channel.

3.11. Wells

Wells were not observed on the site during the site reconnaissance. One monitoring well was observed adjacent to the north of the site on West Carson Street, assumed to be part of one of the former gasoline service stations at 1259 West Carson Street (Section 6.14). Two monitoring wells were observed adjacent to the east of the site on South Vermont Avenue, which are associated with Mobil #11-MAF at 21700 South Vermont Avenue (Section 6.14).

3.12. Signs of Previous Environmental Investigations

Four boring locations were observed in areas throughout the site (labeled as B-1, B-2, etc.). Some of the locations showed signs of drilling activities (asphalt patching, underground utility markings).

3.13. Other On-Site and Off-Site Potential Environmental Concerns (PECs)

Other on- or off-site PECs were not observed.

4. PHYSICAL SETTING

The following sections discuss the topography, geology, and hydrology at the site.

4.1. Site Topography

Based on the review of the United States Geological Survey (USGS) 7.5 Minute Series, Torrance, California, Topographic Quadrangle Map, dated 1964 and photorevised in 1981, the site is situated at an approximate surface elevation of 40 feet above mean sea level. The site slopes gently towards the east.

4.2. Geology

Geologic conditions were reported in Law/Crandall, Inc.'s Limited Phase II Environmental Site Assessment (ESA) performed for the site in 1994. The site is located on the Torrance

Plain, located in the southern portion of the Los Angeles Coastal Plain. The site is mantled by an approximately 2.5 feet thick veneer of artificial fill soils consisting primarily of a mixture of gravel, sand, and silt. The fill is underlain by marine and continental alluvial deposits of the late Pleistocene age Lakewood Formation consisting of clay, silty sand, sand, and silt. The Lakewood Formation deposits extend to a depth of approximately 150 feet beneath the site, which are underlain by deposits of the early Pleistocene age San Pedro Formation. Significant geologic features in the proximity include the active Newport-Inglewood fault zone located approximately 3.8 miles northeast of the site and the Torrance Anticline, located approximately 7.0 miles southwest of the site (Law/Crandall Inc., 1994).

4.3. Site Hydrology

The following sections discuss the site hydrology in terms of both surface waters and groundwater.

4.3.1. Surface Waters

Natural surface waters are not located on the site. The Dominguez Channel is located approximately 2.7 miles north of the site and runs southeast.

4.3.2. Groundwater

Recent groundwater information for the site was not immediately available. Ninyo & Moore reviewed the State Water Resources Control Board's GeoTracker (GeoTracker) website for groundwater information in the site vicinity. According to the Semiannual Groundwater Monitoring Report, Fourth Quarter 2014 (ETIC Engineering, 2015), groundwater was measured at the former Mobil Service Station 18MAF (21700 South Vermont Avenue, adjacent to the east and down-gradient of the site) in November 2014. The average groundwater depth was 50.1 feet below ground surface (bgs), with groundwater generally flowing to the northeast. Previous groundwater monitoring reports indicated groundwater flowing to the southeast and northwest. According to several groundwater monitoring reports from 2010 to 2012 for the Shell service station (911 West Carson Street, adjacent to the north and cross-gradient of the site), groundwater flowed to the southeast, east-southeast, south-southeast, northwest, and

northeast. Based on this information, groundwater is expected to flow generally to the east.

5. HISTORICAL LAND USE

Historical aerial photographs, fire insurance rate maps, historical topographic maps, and oil and gas maps were reviewed as part of Ninyo & Moore's HMA for the site.

5.1. Historical Aerial Photographs

Historical aerial photographs for selected years between 1928 and 2012 were provided by Environmental Data Resources, Inc. (EDR). A summary of the aerial photograph review is presented in following table.

Table 5 – Aerial Photo Review

Year	Site	Adjacent Areas
1928	The site was divided in two parcels by a road. Each parcel had several structures along its perimeters along with some agricultural land.	Agricultural land with scattered residential structures (north), scattered residential and industrial properties (east, south), and residential properties (west).
1947	The two parcels were combined into one, and the center of the site was densely populated with several structures, roads, and parking lots. The eastern portion of the site appeared vacant.	Agricultural land developed with more residential properties (north), more residential and industrial properties than shown in the 1928 photograph (east, south), densely populated residential properties (west).
1956	The site appeared similar to the 1947 aerial photograph with additional structures on the western portion of the site and a parking lot on the eastern portion of the site.	Agricultural and residential properties (north), commercial and residential properties (east), and densely populated residential properties (south, west).
1963	The eastern portion of the site appeared developed with a hospital, power plant, and parking lots. The western portion of the site appeared similar to that observed in the 1956 aerial photograph.	Commercial structures immediately north, beyond which was densely populated residential structures (north) and all else is similar to 1956 photograph.
1972	An additional structure and helipad appeared south of the hospital on the eastern portion of the site. Structures on the southwest portion of the site had been removed.	The site vicinity appeared similar to that observed in the 1963 aerial photograph.
1982	The site appeared similar to that observed in the 1972 aerial photograph.	The site vicinity appeared similar to that observed in the 1972 aerial photograph.
1989	An additional structure appeared north of the power plant in the eastern portion of the site. Additional structures appeared in the western portion of the site.	The site vicinity appeared similar to that observed in the 1982 aerial photograph.

Table 5 – Aerial Photo Review

Year	Site	Adjacent Areas
1994-2009	The site appeared similar to that observed in the 1989 aerial photograph.	The site vicinity appeared similar to that observed in the 1989 aerial photograph.
2010	Additional structures appeared in the southwest portion of the site. An area to the west of the hospital appeared graded.	The site vicinity appeared similar to that observed in the 2009 aerial photograph.
2012	Additional areas west and northwest of the hospital appeared graded.	The site vicinity appeared similar to that observed in the 2010 aerial photograph.

The 1928 photograph showed the site as two separate parcels, separated by a road and lightly populated with several structures. The hospital appeared on the site in the 1947 photograph, which became developed with additional structures, roads, and parking lots through the 2012 photograph. The site looked generally similar from 1989 through 2012, with the exception of graded land appearing west and northwest of the hospital in 2010 and 2012. The surrounding properties to the north were developed from agricultural properties from at least 1928 to commercial and residential structures after 1956. The properties adjacent to the east, south, and west became populated with mostly residential structures from 1928 to 1972 and remained relatively unchanged through 2012. A copy of the aerial photographs is provided in Appendix C.

5.2. Fire Insurance Rate Maps

According to EDR, Sanborn Fire Insurance maps do not exist for the site and therefore were not provided by EDR. A copy of the Sanborn Fire Insurance Rate Map Report is provided in Appendix C.

5.3. City Directories

Ninyo & Moore reviewed the EDR Historical City Directory Abstract which included information from select historical city directories for the years 1920 through 2013. Table 6 presents the listings found under the site addresses. City directories are provided in Appendix C.

Table 6 – Historical City Directory Listings

Year	Site Address	Listing
1970	1000 West Carson Street	Harbor General Hospital Hospitals Regional Medical Programs – Area IV Various MDs
1971	1000 West Carson Street	Harbor General Hospital Los Angeles County of Contd Hospitals Dept of Condt Solomon David H MD Harbor General Hospital
1975	1000 West Carson Street	Harbor General Hospital
1980	1000 West Carson Street	Beverly Hills County Offices Culver City County Offices Harbor UCLA Medical Center Hospitals Harbor Genl Malibu County Offices Santa Monica County Offices Tay Sachs Disease Prevention Program of California
1981	1000 West Carson	Tay Sachs Disease Prevention Program of California Torrance
2008	1000 West Carson Street	AF Parlow Library of Health Science Cardiovascular Consultants Medical Childhood Injury Prevention Center County of Los Angeles Endovascular Surgery General Medicine Clinic Harbor General Hospital Morristown Management Specialists National Alnc for Mentally Ill National Hormone & Pituitary Nuclear Medicine Outpatient Clinic Onelegacy Options for Recovery Spice of Life Cafeteria Surgery Oncology Box 25
2013	1000 West Carson Street	County of Los Angeles Harbor UCLA Professional Building Harbor UCLA Medical Foundation Harbor UCLA Medical Center Limbach Company Onelegacy Options for Recovery Spice of Life Cafeteria University of California Los Angeles

Based on our historical city directory review, the site was occupied by a hospital and medical research facilities from at least 1970 to 2013. Adjoining properties included gasoline service stations, commercial properties, health clinics, and residential properties. The gasoline service stations are further discussed in Section 6.14. The site information is not indicative of a REC.

5.4. Historical Topographic Maps

Historical topographic maps were provided by EDR and dated 1896, 1901, 1930, 1948, 1951 Torrance, 1951 Long Beach Vicinity, 1964, 1964 photorevised 1972, and 1964 photorevised 1981. The site appeared as vacant land in the 1896 and 1901 historical topographic maps. A road appeared trending north-south through the center of the site, and several small structures appeared along the perimeter of the site in the 1930 and 1948 historical topographic maps. Several roads and structures appeared on the site in the 1951 historical topographic map. The hospital and power plant appeared developed in the eastern portion of the site in the 1964 historical topographic map. Structures in the southwest portion of the site appeared removed in the 1972 and 1981 historical topographic maps. The site was identified as the Los Angeles Harbor General Hospital from at least 1951 to 1981. A copy of the EDR Historical Topographic Map Report is included in Appendix C.

5.5. Oil and Gas Maps

According to the State of California, Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), Well Finder website, the site does not lie within the administrative boundaries of an oil field. The site is located approximately 0.25 miles north of the administrative boundaries of the Torrance oil field. The nearest oil well, Peckham 3, approximately 0.48 mile southwest and up to cross-gradient of the site, was listed as a plugged and inactive well. This information is not indicative of a REC for the site.

6. ENVIRONMENTAL DATABASE SEARCH

A computerized, environmental information database search was performed by EDR on May 22, 2013. A copy of the EDR report is included in Appendix D.

The following paragraphs describe the databases that contain noted properties of environmental concern, and include a discussion of the regulatory status of the facilities and potential environmental impact to the subject site. Based on our review of the GeoTracker website operated by the Regional Water Quality Control Board (RWQCB) and hydrologic information contained on that website, discussed in Section 4.3.2 of this report, shallow groundwater flow in the site vicinity is generally to the east.

6.1. National Priorities List (NPL): Distance Searched – 1 mile

The NPL is the United States Environmental Protection Agency (EPA) database of uncontrolled or abandoned hazardous waste properties listed for priority remedial actions under the Superfund program.

Neither the site nor properties located within the searched distance were listed on this database.

6.2. Proposed and Delisted National Priorities List (NPL): Distance Searched – ¼ mile

The Proposed NPL database lists properties that are currently being evaluated for priority remedial actions for the Superfund program. The Delisted NPL database includes properties that are deleted from the NPL database based upon the National Oil and Hazardous Substances Pollution Contingency Plan. This deletion takes place after no further response to the NPL is appropriate.

Neither the site nor properties located within the searched distance were listed on either database.

6.3. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List: Distance Searched – ¼ mile

The CERCLIS database contains properties which are either proposed or on the NPL and properties which are in the screening and assessment phase for possible inclusion on the NPL.

Neither the site nor properties located within the searched distance were listed on this database.

6.4. CERCLIS/No Further Remedial Action Planned (NFRAP) List: Distance Searched – ¼ mile

CERCLIS sites designated as NFRAP have been removed from the CERCLIS database following an initial investigation where no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

Neither the site nor properties located within the searched distance were listed on this database.

6.5. Corrective Action Report (CORRACTS): Distance Searched – ¼ mile

The EPA maintains this database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing corrective action. A corrective action order is issued when a release of hazardous waste or constituents into the environment from a RCRA facility has occurred.

Neither the site nor properties located within the searched distance were listed on this database.

6.6. Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) Facilities List: Distance Searched – ½ mile

The RCRA TSD database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste.

Neither the site nor properties located within the searched distance were listed on this database.

6.7. Resource Conservation and Recovery Act (RCRA) Generators List: Distance Searched – Site and Adjacent

This list identifies sites that generate hazardous waste as defined by RCRA. Inclusion on this list is for permitting purposes and is not indicative of a release.

UCLA Medical Center was listed as a large quantity generator (LQG) in 2008 for several chemicals including metals, nitroglycerine, formaldehyde, ignitable hazardous wastes, acids, and non-halogenated solvents. A portion of the site, Harbor UCLA Diagnostic Imaging at 21828 South Normandie Avenue was listed as a small quantity generator (SQG) in 1996. Violations were not found for either listing.

Exxonmobil Oil Corp. at 21700 South Vermont Avenue, adjacent to the east and down-gradient of the site, was listed as a LQG in 2002. Violations were not found for the listing. The Exxonmobil Oil Corp. facility, along with Norge Village Cleaners (1161 West Carson Street, adjacent to the northwest and up to cross-gradient of the site), and Shell Service Station (911 West Carson Street, adjacent to the north and cross-gradient of the site), were listed as SQGs in 2009, 1993, and 2002, respectively. Violations were not found for the facilities.

Though not adjacent, K & K Auto Parts (1986), Hertz Equipment Rental (1986), X Pert Rebuild & Machine Unit (1996), Paragon Engineering Inc. (1986), and Byrom Radiator Service (1986), were reported as SQGs without violations. Montrose Chemical Corporation was listed as a LQG in 2010 without violations.

6.8. Emergency Response Notification System (ERNS) List: Distance Searched – Site

The ERNS database contains information of reported releases of oil and hazardous substances and is maintained by the EPA.

The site had two listings on this database for the same incident. On April 29, 1994, approximately 30 gallons of gasoline leaked from a storage tank during the removal. According to the database, the action taken was United Pumping Company was planned to

clean up the spill. Based on the date and activity, it is assumed this incident was part of the removal of five USTs adjacent to the hazardous waste storage area that occurred at the site (Section 7.2).

6.9. United States Engineering Controls: Distance Searched – ¼ mile

This database is an EPA listing of facilities with engineering controls in place, such as various forms of caps, building foundations, liners, and treatment methods intended to eliminate pathways for regulated substances to enter environmental media or affect human health.

Neither the site nor properties located within the searched distance were listed on this database.

6.10. United States Institutional Controls: Distance Searched – ¼ mile

This database is an EPA listing of facilities with institutional controls in place, such as administrative measures, groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements, intended to prevent exposure to contaminants remaining on site.

Neither the site nor properties located within the searched distance were listed on this database.

6.11. State Sites: Distance Searched – ¼ mile

The State Sites database consists of potential or confirmed hazardous substance release properties. Ninyo & Moore reviewed the State Response Sites database for this information.

Neither the site nor properties located within the searched distance were listed on this database.

6.12. State CERCLIS: Distance Searched – ¼ mile

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's EnviroStor database identifies facilities that have known contamination of sites for which there may be reasons to investigate further.

"LA Port O Emb Station Hosp" was listed on this database without an address. The coordinates 33.83055, -118.2944 were listed, which correspond to a location towards the north of the site. The database listed the site type as a military evaluation and the site type detailed as FUDS. The status was "Inactive – Needs Evaluation" as of 07/01/2005. Other information was not provided.

6.13. Solid Waste Landfill Sites (SWL): Distance Searched – ¼ mile

The SWL database consists of open and closed solid waste disposal facilities and transfer stations. The data comes from the Integrated Waste Management Department's Solid Waste Information System database.

Neither the site nor properties located within the searched distance were listed on this database.

6.14. State Leaking Underground Storage Tank (LUST) Lists: Distance Searched – ¼ mile

Databases of the LUST information system are maintained by the California State RWQCBs.

The site was listed on the database with a status of "Open – Site Assessment" as of January 17, 2002. The potential contaminant of concern was gasoline, with the potential media affected listed as "under investigation." Ninyo & Moore reviewed the GeoTracker website for additional information on the site listing (Section 7.2).

The following 10 listings representing eight facilities were listed on the LUST database.

Listing and Address	Distance and Direction	Gradient Direction	Regulatory Status	Closure Date	Environmental Concern (Y/N)
UNOCAL #4944 1259 West Carson Street	Adjacent to the northwest	Up to cross-gradient	Closed	09/09/1996	Y
TONYS UNOCAL 1259 West Carson Street	Adjacent to the northwest	Up to cross-gradient	Closed	10/30/1996	Y
MOBIL #11-MAF 21700 South Vermont Avenue	Adjacent to the east	Down to cross-gradient	Open – Site Assessment	09/18/1990	Y
SHELL 911 West Carson Street	Adjacent to the northeast	Down to cross-gradient	Closed	01/16/2013	Y
JOHN BATES 21600 South Vermont Avenue	0.10 mile east-northeast	Down to cross-gradient	Closed	04/24/1996	N
JOHN BATES 21600 South Vermont Avenue	0.10 mile east-northeast	Down to cross-gradient	Closed	04/24/1996	N
DOYLE BROTHERS INC. 22203 South Vermont Avenue	0.18 mile southeast	Down to cross-gradient	Closed	04/01/1993	N
UNOCAL #2529 600 CARSON	0.22 mile east-northeast	Down to cross-gradient	Closed	07/17/1996	N
SO-CAL 21629 South Figueroa Street	0.24 mile east-northeast	Down to cross-gradient	Closed	02/24/1986	N
ARCO #5108 21704 FIGUEROA	0.25 mile east	Down-gradient	Closed	05/19/1998	N

Notes:
N – No
Y – Yes

Ninyo & Moore reviewed the GeoTracker website for additional information on the adjacent properties. The following is a summary of the findings:

- Unocal #4944 at 1259 West Carson Street – Most recent groundwater monitoring report, dated August 23, 2010, showed the groundwater flow direction as generally to the south, towards the site.

- Tony's Unocal at 1259 West Carson Street – Most recent groundwater monitoring report, dated January 8, 2009, showed the groundwater flow direction as generally to the northwest, away from the site.

- Mobil #11-MAF at 21700 South Vermont Avenue – Two groundwater monitoring wells were installed in South Vermont Avenue in October 2014, adjacent to the site. Soil and groundwater data for these wells showed low to non-detect concentrations of TPHs and VOCs.

- Shell at 911 West Carson Street – Most recent groundwater monitoring report showed groundwater flowing to the southeast, tangential to the site.

Based on the varying groundwater flow directions and proximity of several closed LUST cases to the site, there is a possibility groundwater beneath the site is impacted with petroleum hydrocarbons from off-site facilities. This is considered a REC for the site. Based on the distance, direction, and the current regulatory status, the remaining listings in the table are not a REC.

6.15. Underground Storage Tank (UST) Registration List: Distance Searched – Site and Adjacent

According to EDR, UST records are provided by the Department of Building and Fire Safety. Inclusion of facilities on this list does not necessarily indicate a release.

The site was listed on this database. Tosco/Unocal #30769 at 1259 West Carson Street located adjacent to the northwest and crossgradient of the site, Mobil Oil Corp S/S #18-MAF at 21700 South Vermont Avenue located adjacent to the northeast and downgradient of the site, and Torrance Harbor Shell at 911 West Carson Street located adjacent to the northeast of the site are listed on this database. Information on this database included a facility identification number, and latitude and longitude coordinates. These listings alone are not indicative of a release and would not be considered a REC to the site.

6.16. Permitted Aboveground Storage Tank (AST) List: Distance Searched – Site and Adjacent

According to EDR, AST records are provided by the Department of Building and Fire Safety. Inclusion of facilities on this list does not necessarily indicate a release.

The site and adjacent properties were not listed on this database.

6.17. State Engineering Controls: Distance Searched – ¼ mile

This database is a California Environmental Protection Agency (Cal-EPA) listing of facilities with engineering controls in place, such as various forms of caps, building foundations, liners, and treatment methods intended to eliminate pathways for regulated substances to enter environmental media or affect human health.

Neither the site nor properties located within the searched distance were listed on this database.

6.18. State Institutional Controls: Distance Searched – ¼ mile

This database is a Cal-EPA listing of facilities with institutional controls in place, such as administrative measures, groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements, intended on preventing exposure to contaminants remaining on site.

Neither the site nor properties located within the searched distance were listed on this database.

6.19. Brownfields: Distance Searched – ¼ mile

This database is a DTSC tracking system of California Brownfields sites.

Neither the site nor properties located within the searched distance were listed on this database.

6.20. Voluntary Cleanup Program Sites: Distance Searched – ¼ mile

This database is a Cal-EPA listing of properties involved in the voluntary remediation program.

Neither the site nor properties located within the searched distance were listed on this database.

6.21. Indian Reservation: Distance Searched – ¼ mile

USGS map layer portrays Indian administered land within the United States with an area equal to or greater than 640 acres.

Indian reservation land was not found to be within the searched distance.

6.22. Indian Leaking Underground Storage Tank (LUST): Distance Searched – ½ mile

This database is a database maintained by the EPA of LUSTs on Indian land in Arizona, California, New Mexico, and Nevada.

Neither the site nor properties located within the searched distance were listed on this database.

6.23. Indian Underground Storage Tank (UST): Distance Searched – ¼ mile

This database is a database maintained by the EPA of USTs on Indian land.

Neither the site nor properties located within the searched distance were listed on this database.

6.24. Additional Databases: Distance Searched – Various

EDR searches several additional databases of potentially important information. These databases are outside the scope of the ASTM E1527-13 standard. The site was listed on the following non-ASTM databases: Historical UST, California Hazardous Material Incident Report System (CHMIRS), Facility and Manifest Data (HAZNET), California Facility Information Database (FID) UST, and Statewide Environmental Evaluation and Planning System (SWEEPS) UST. The following is a summary of the information provided in the databases:

- Historical UST – one 8,000-gallon and one 4,000-gallon unleaded product USTs were listed for the site address.
- CHMIRS – same incident of a 30-gallon release of gasoline in 1994 as listed on the ERNS database (Section 6.8).

- HAZNET – over 1,000 listings from 1993 to 2013 of various chemicals being removed from the site under hazardous waste manifests.
- California FID UST – status was listed as active. Additional information was not provided.
- SWEEPS UST – listed for two USTs in 1991 (capacities and contents not reported).

The USTs are further discussed in Section 7.2.

7. ONLINE ENVIRONMENTAL RECORDS REVIEW

Ninyo & Moore reviewed records from the DTSC EnviroStor website (EnviroStor), GeoTracker, and the South Coast Air Quality Management District (SCAQMD).

7.1. Department of Toxic Substances Control (DTSC) EnviroStor website

Ninyo & Moore reviewed the DTSC EnviroStor website for information regarding the site address. One listing for a military evaluation exists for "LA Port O Emb Station Hosp." The potential contaminants of concern, potential media affected, and past uses that caused contamination were not specified. The cleanup status is "Inactive – Needs Evaluation as of 7/1/2005." Additional information was not provided.

7.2. State Water Resources Control Board GeoTracker Website

Ninyo & Moore reviewed the SWRCB GeoTracker website for information regarding the site address. One LUST cleanup site listing was shown on the eastern portion of the site with a cleanup status of "Open – Site Assessment" as of March 17, 2015. Listed regulatory activities date back to 1994, including tank removals, UST sampling reports, soil and water investigation work plans, and site assessment reports. According to GeoTracker, LUSTs were present in several areas of the site under the one LUST case listing on GeoTracker. The locations of former LUST areas are provided on Figure 2. The following is a brief summary of selected reports:

- 1994 UST Removal – Five USTs (two 10,000-gallon fuel oil, one 12,000-gallon diesel, one 500-gallon diesel, and one 300-gallon gasoline) and associated piping adjacent to the east of the hazardous waste storage area were removed (Former LUST Area 1). Soil staining was observed around and beneath many of the USTs.

- 1994 Site Assessment and Additional Site Assessment – Five borings plus three additional borings were advanced (one of which converted to a groundwater monitoring well) to determine the lateral and vertical extents of contamination found during the removal of the five USTs in 1994 (Former LUST Area 1). Groundwater samples did not have detectable levels of hydrocarbons. The extent of contamination was determined to be defined.

- 1994 Limited Phase II ESA – Five soil borings were advanced in an area planned for hospital expansion (loading dock) where two 1,000-gallon diesel USTs were present and a previous investigation showed low levels of hydrocarbons in soil (Former LUST Area 2). Soil contamination was not found in the soil borings.

- 1995 Leak Detection Investigation – Six soil borings were advanced at a fuel station near Building T-1 (southern portion of the site) where one 8,000-gallon and one 4,000-gallon gasoline USTs and two fuel dispensers were present (Former LUST Area 3). Petroleum hydrocarbons were present in soil samples.

- 1995 Site Assessment – Three soil borings were advanced near one 25,000-gallon and one 300-gallon diesel USTs, and one 10,000-gallon amber fuel UST at the power plant (Former LUST Area 4). "Very low concentration levels of petroleum hydrocarbons" were present in soil samples. Soil excavation was recommended.

- 1995 Vapor Extraction Pilot Test – A pilot test was conducted in the area of the five former USTs near the hazardous waste storage area (LUST Area 1). Based on the results, a thermal oxidizer with carbon adsorption was recommended for soil vapor remediation.

- 1996 – Site Remediation Report – Soil vapor remediation was conducted from 1995 to 1996 in the area of the five former USTs (LUST Area 1). Laboratory results of soil and soil vapor samples showed very low to non-detectable levels of petroleum hydrocarbons in the area of former UST locations. Site closure was requested.

- 1999 UST Removal – In 1998, the two USTs and dispensers at the fuel station near Building T-1 were removed and replaced with one 10,000-gallon gasoline UST (Former LUST Area 3). During removal activities, a previously unknown 3,600-gallon fuel UST was discovered. Once cut open, the previously unknown tank was observed to be filled with sand slurry. The LADPW inspector allowed the tank to be abandoned in place. Soil samples collected during the UST removal indicated low levels of contamination near the previously unknown UST. In 1999, the two diesel USTs at the power plant were removed, and the 25,000-gallon amber fuel UST was re-piped (Former LUST Area 4). Moderate levels of petroleum hydrocarbons were identified in soil samples collected beneath the west end of the removed 10,000-gallon UST and beneath the product lines.

- 2000 UST Removal – In 1999, the two 1,500-gallon diesel USTs at the loading dock (previously reported as 1,000-gallon USTs) were removed (Former LUST Area 2). Soil samples collected from the excavation were either non-detect or below the clean-up action level. The site was recommended for closure.

Based on the regulatory status and history of soil contamination, these LUSTs listings represent a REC for the site.

7.3. South Coast Air Quality Management District

Ninyo & Moore reviewed the SCAQMD's Facility Information Detail Search website for permits regarding the site address. The following is a summary of our review.

The site address is listed as LA Co Harbor-UCLA Medical Center with an active status. Equipment with an active permit status included 2 emergency generators, 3 low nitrogen oxide burners, and 3 boilers, all of which had an issued date in 2013. Other equipment include "Negative Air Machine/HEPA, ASBES <=15 Gal", various Rule 1415 Plan notifications, various Title V permit revisions, and a compliance plan for rule 1146, all of which are dated between 2001 and 2012. The facility received a notice of violation in 2009 for failure to submit a semiannual report and certified annual report on time and one in 2006 for receiving gasoline fuel drop through a non-carb certified Phase I system. A notice to comply was issued to the facility in 2010 to have a Certified Asbestos Consultant perform an after-fire, asbestos inspection/assessment in the hallways, rooms, buildings associated with a fire prior to anymore construction, renovation, or disturbance. Emission data for the facility is included for the years 2000 and 2002-2012.

The site address is also listed as LA Co Dept Health Srv, UCLA Harbor Med Ho. Active permits for equipment included 2 ethylene oxide (ETO) sterilization hospital issued in 2000, 4 emergency generators issued in 1999, and a "Control ETO Sterilization Hospital" issued in 2000. Inactive permits include those for ETO sterilization hospitals, control ETO sterilization hospitals, an emergency generator, boilers, and flue gas recirculation, dated between 1993 and 2000. Two notices to comply were issued in 2000 for "hang hose on gas disp such that loop is less than 10? [sic] Post required signs on gas disp. Provide records of

static pressure and dynamic pressure tests" and "install an indicator to monitor flue gas flow to boilers. Post a copy of permit for professional building generator. Provide engine operating log for professional building generator."

Harbor-UCLA Professional Building at 21840 S. Normandie Avenue was listed on this database for a rejected application for an emergency generator in 2000. Notices of violation or notices to comply were not issued. LA Biomedical Research Institute at 1124 West Carson Street was listed on this database for eight active permits for emergency generators, dated from 2005 to 2013. Two inactive permits for the same equipment were found on record. A multi-ICE Rule 1472 permit was granted in 2010. A notice to comply was issued in 2012 to re-permit a Generac emergency generator, which had a status of "in compliance." LA Biomedical Research Institute: Child at 1123 West Carson Street was listed in this database for an emergency generator in 2012. A permit for an emergency generator was rejected in an unlisted year. Notices of violation or notices to comply were not issued.

This information is not indicative of a REC for the site.

8. CONCLUSIONS

Ninyo & Moore completed an HMA for the Harbor UCLA Medical Center at 1000 West Carson Street in Torrance, California. The HMA revealed the following potential issues of concern:

- **Building Materials** – Based on the construction date of the site buildings (prior to 1980), ACMs and LBP may be present on building materials at the site. An HBMS was conducted by Ninyo & Moore simultaneously with this HMA to evaluate the presence of ACMs and LBP on building materials at the site. The results of the evaluation are presented under separate cover.

- **Hazardous Materials** – Small quantities of hazardous materials and hazardous waste were observed throughout the site. Hazardous waste is accumulated and stored at the hazardous waste storage area, adjacent to Building N32, until it is removed from the site. Two sets of three ASTs were observed in secondary containment in the boiler chemical storage area and the cooling tower chemical storage area of the power plant. One 300-gallon sulfuric acid AST with secondary containment was observed in the cooling tower storage shed. One 900-gallon and one 9,000-gallon liquid oxygen ASTs were observed on the eastern edge of the power plant. Several emergency diesel generators, with ASTs ranging from 200 to 500 gallons in capacity, were observed in various exterior locations of the LA BioMed buildings.

The following ASTs were observed during the site reconnaissance and did not contain hazardous materials: several empty propane tanks of unknown capacity in the boiler chemical storage area of the power plant; one empty 4,000-gallon water Baker tank adjacent to the cooling tower storage shed; and two autoclaves (one never put into use) outside the power station. Evidences of releases or spills were not observed at these areas and are therefore not considered recognized environmental conditions. Two 15,000-gallon diesel USTs were observed in the southern portion of the power plant. One 10,000-gallon and one 25,000-gallon amber fuel USTs were observed in the northern portion of the power plant. The presence of USTs at the power plant represents a PEC for the site. Two empty interceptors of unknown capacity were observed adjacent to the south of the helipad. The interceptors are used as an emergency spill collections system for potential helicopter fuel releases. Since records of a spill in the area were not reported and indications of a release were not observed during the site reconnaissance, the presence of the interceptors is not considered a PEC.

- **Environmental Database Report** – The site was listed on several environmental databases searched by EDR, primarily for USTs and hazardous waste. The site was listed in the LUST database for the presence of four LUST areas of the site. According to GeoTracker, the site has a status of "Open – Site Assessment" as of March 17, 2015. This information is considered a PEC for the site.

- **Off-Site Issues** – Based on the current regulatory status, the potential contaminants of concern, the media affected, and/or location, Unocal #4944/Tony's Unocal at 1259 West Carson Street (adjacent to the northwest), Mobil #11-MAF at 21700 South Vermont Avenue (adjacent to the northeast), and Shell service station at 911 West Carson Street (adjacent to the northeast), are considered a REC for the site.

9. PROJECT IMPACTS AND MITIGATION MEASURES

The following paragraphs discuss the Potential Significant Project Impacts, Feasible Mitigation Measures, and Potential Project Impacts not Fully Mitigated to Less than Significant.

9.1. Potential Significant Project Impacts

Potential Significant Project Impacts include the known or probable presence of soil contamination where remediation has not been performed, is incomplete, or is not documented. Potential Significant Project Impacts also include asbestos and LBP in buildings that may be demolished or renovated. The following direct Potential Significant Project Impacts have been identified:

- **Building Materials** – Demolition of structures built prior to 1980 may result in the exposure of the public and/or the environment to LBP and/or ACMs in buildings.

- **USTs** – The presence of fuel USTs at the power plant represents a PEC for the site.

- **LUSTs** – The presence of four LUST areas on the site represents a REC for the site.

- **Off-Site Issues** – Based on the current regulatory status, the potential contaminants of concern, the media affected, and/or location, Unocal #4944/Tony's Unocal at 1259 West Carson Street (adjacent to the northwest), Mobil #11-MAF at 21700 South Vermont Avenue (adjacent to the northeast), and Shell service station at 911 West Carson Street (adjacent to the northeast), are considered a PEC.

9.2. Feasible Mitigation Measures

Feasible mitigation measures may reduce each of the listed project impacts to less than significant. The following are the feasible mitigation measures for each of the listed project impacts:

- An HBMS was conducted by Ninyo & Moore simultaneously with this HMA to evaluate the presence of ACMs and LBP on building materials at the site. The results of the evaluation are presented under separate cover. Abatement measures should be implemented in accordance with the recommendations of these evaluations.

- Prior to start of construction, we recommend additional investigation of the off-site LUST facilities, on-site LUST cases, and on-site USTs to evaluate their potential impact to the site. A Soil Management Plan (SMP) should be prepared and submitted to the Los Angeles County Fire Department for review and approval. The SMP should be implemented during excavation and grading activities in areas of potential soil contamination to ensure site closure is properly implemented, and contaminated soil encountered is properly identified, removed, and disposed of off-site. The SMP should include the following:

    - A qualified environmental consultant should be present as necessary during grading and excavation activities to monitor compliance with the SMP and to actively monitor the soil and excavations for evidence of contamination.

    - Soil encountered during excavation or grading activities that appears to have been affected by hydrocarbons or other contamination should be evaluated, based on appropriate laboratory analysis, by a qualified environmental consultant prior to off-site disposal at a licensed facility.

    - Identified contaminated soil should be properly removed, handled, and transported to an appropriately licensed disposal facility, in accordance with the SMP.

9.3. Potential Project Impacts Not Fully Mitigated to Less Than Significant

Based on the information evaluated to date, there are no direct Potential Significant Project Impacts that cannot be mitigated to less than significant.

10. REFERENCES

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Environmental Data Resources, Inc., 2013b, Certified Sanborn Map Report, 1000 West Carson Street, Torrance, California 90502, dated November 4.

Environmental Data Resources, Inc., 2013c, EDR Historical Topographic Map Report, 1000 West Carson Street, Torrance, California 90502, dated November 5.

Environmental Data Resources, Inc., 2013d, The EDR Radius Map Report with GeoCheck, 1000 West Carson Street, Torrance, California 90502, dated November 5

Environmental Data Resources, Inc., 2013e, EDR Summary Radius Map Report, 1000 West Carson Street, Torrance, California 90502, dated November 5.

ETIC Engineering, 2015, Semiannual Groundwater Monitoring Report, Fourth Quarter 2014 (18 June 2014 to 26 November 2014), Former Mobil Service Station 18MAF, 21700 South Vermont Avenue, Torrance, California 90502, CRWQCB-LAR Case #R04331, dated January 13.

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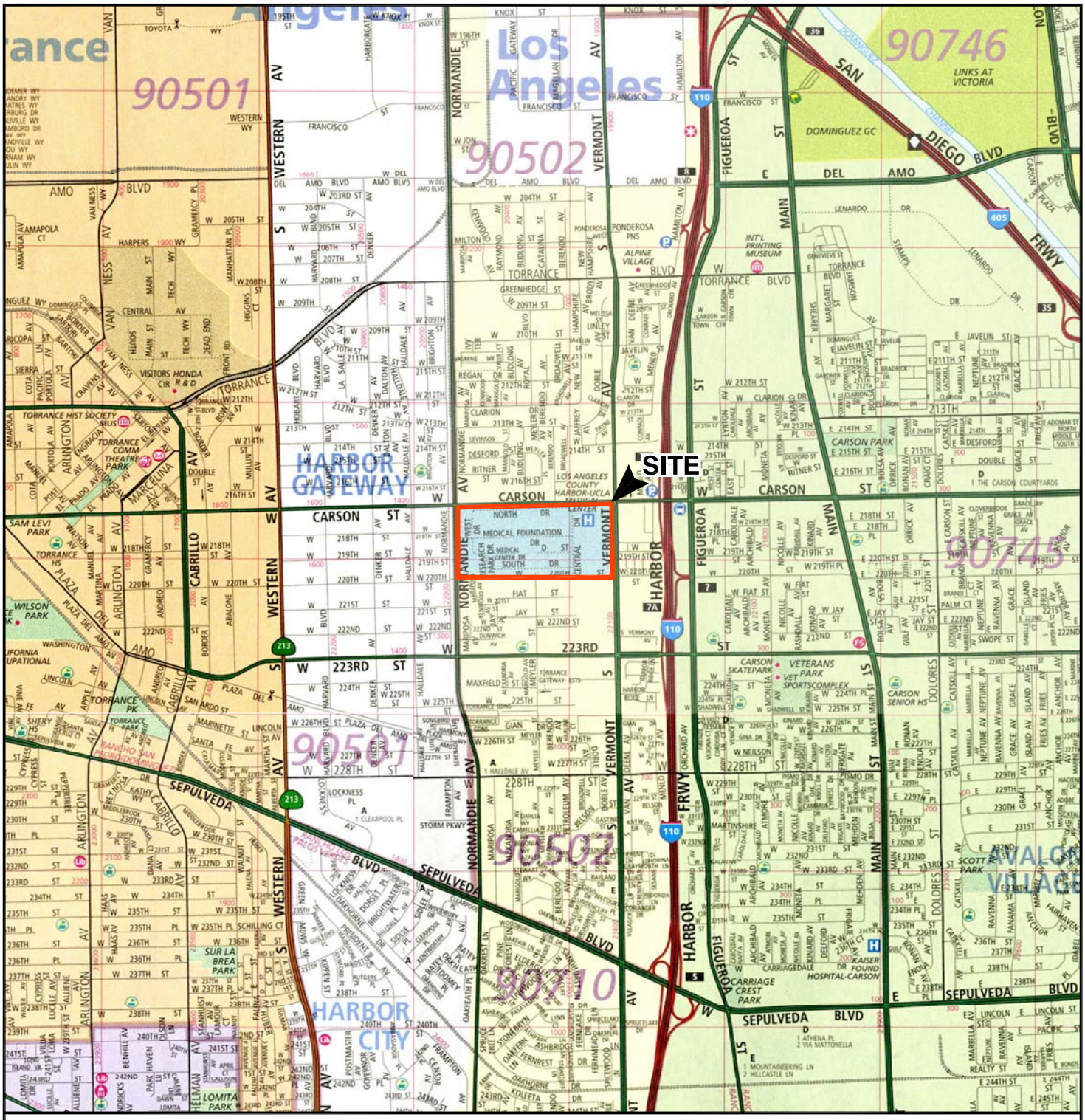
State of California's State Water Resources Control Board, 2013, GeoTracker Database System at http://geotracker.swrcb.ca.gov/.

United States Geological Survey, 1964, Torrance, California: 7.5-minute Series, Topographic, Scale 1:24,000: Photorevised 1981.

11. QUALIFICATIONS STATEMENT AND SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

Mr. John Jay Roberts states that the HMA was performed under his direct supervision and that he has reviewed and approved the report and the methods and procedures employed in the development of the report confirm to the minimum industry standards. Mr. Roberts certifies that Ninyo & Moore project personnel and subcontractors are properly licensed and/or certified to do the work described herein.

John Jay Roberts, PG, CEG
Senior Geologist



REFERENCE: 52ND EDITION, THOMAS GUIDE FOR LOS ANGELES/ORANGE COUNTIES, STREET GUIDE AND DIRECTORY.

N

SCALE IN FEET

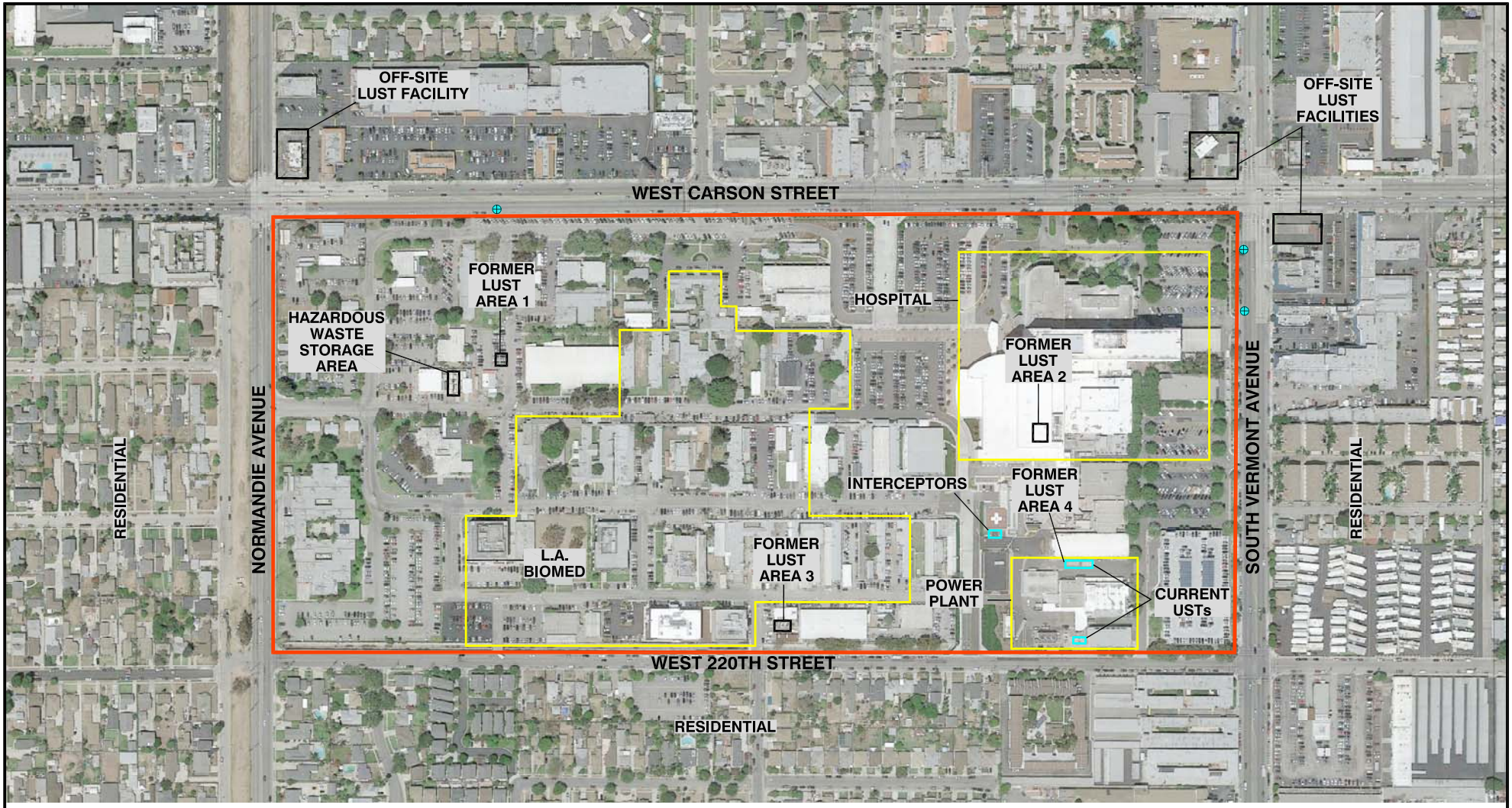
0 2,400 4,800

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Map © Rand McNally, R.L.07-S-129

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. 209023001 / DATE 4/15	HARBOR UCLA MEDICAL CENTER 1000 WEST CARSON STREET TORRANCE, CALIFORNIA	1

209023001_SL.dwg 15:44:24 04/24/2015 GK



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2015.

LEGEND	
	SITE BOUNDARY
LUST	LEAKING UNDERGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK
⊕	MONITORING WELL

N

SCALE IN FEET

0 400 800

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

PROJECT NO.	DATE
209023001	4/15

SITE PLAN

HARBOR UCLA MEDICAL CENTER
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA

FIGURE
2

209023001_SP2.dwg 15:50:08 04/08/2015 GK



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2015.

LEGEND	
AST	ABOVEGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK

N

SCALE IN FEET

0 100 200

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore		POWER PLANT	FIGURE
PROJECT NO.	DATE	HARBOR UCLA MEDICAL CENTER 1000 WEST CARSON STREET TORRANCE, CALIFORNIA	3
209023001	4/15		

209023001_PP.dwg 15:50:08 04/08/2015 GK



REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2015.

LEGEND	
T	PAD-MOUNTED TRANSFORMER
G	GENERATOR
AST	ABOVEGROUND STORAGE TANK
E1	BUILDING NUMBER

N

SCALE IN FEET

0 200 400

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

209023001_BB.dwg 15:50:08 04/08/2015 GK

Ninyo & Moore

PROJECT NO.	DATE
209023001	4/15

LA BIOMED BUILDINGS

HARBOR UCLA MEDICAL CENTER
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA

FIGURE

4

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION



Photograph 1: **Looking southeast at the Harbor UCLA Medical Center.**



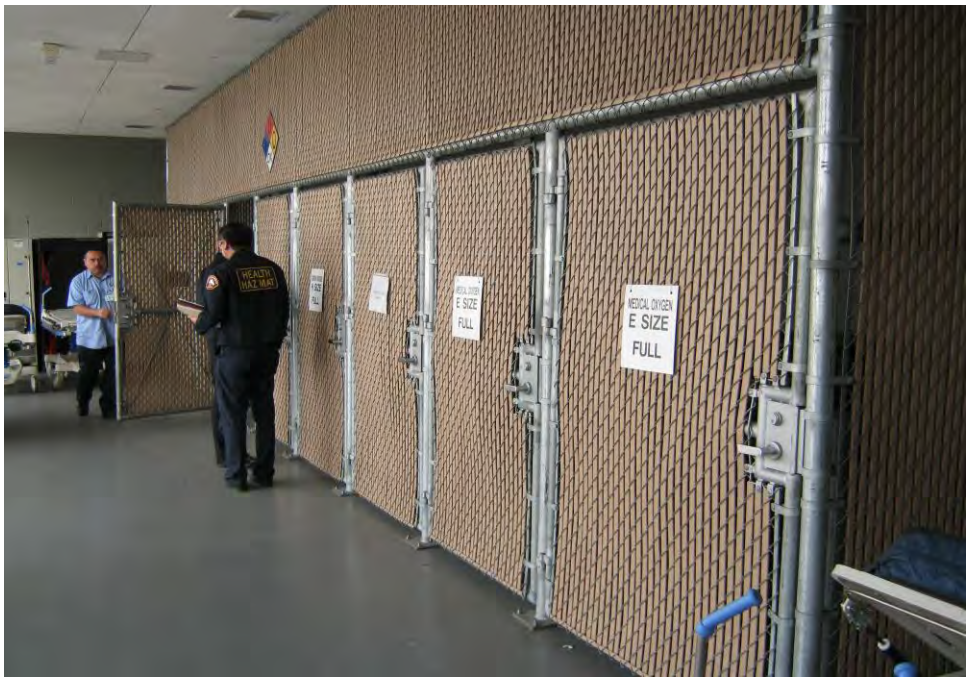
Photograph 2: **Looking north at the Harbor UCLA Medical Center.**



Photograph 3: **View of RCRA hazardous waste container in the Pharmacy on the first floor of the hospital.**



Photograph 4: **View of typical fire closet in the basement of the hospital.**



Photograph 5: **View of gas cylinder storage area at the loading dock of the hospital, containing oxygen, carbon dioxide medical oxygen, and medical nitrogen.**



Photograph 6: **View of approximately 80 new car batteries at the loading dock of the hospital.**



Photograph 7: **View of hazardous waste storage area adjacent to Building N32.**



Photograph 8: **View of storage sheds in the hazardous waste storage area.**



Photograph 9: **View of fire closet containing small quantities of acids, film fixer, ammonium sulfate, etc. within a storage shed in secondary containment in the hazardous waste storage area.**



Photograph 10: **View of empty drums and electrical transformer in secondary containment in the hazardous waste storage area.**



Photograph 11: **View of empty 55-gallon drums adjacent to the hazardous waste storage area.**



Photograph 12: **View of empty interceptors adjacent to the helipad.**



Photograph 13: **View of 10,000-gallon and 25,000-gallon amber fuel USTs in the northern portion of the power plant.**



Photograph 14: **View of two 15,000-gallon diesel USTs in the southern portion of the power plant.**



Photograph 15: **View of pad-mounted electrical transformer adjacent to the diesel USTs.**



Photograph 16: **View of medical gas storage area with cylinders containing helium, argon, nitrogen, oxygen, etc. on the western portion of the power plant.**



Photograph 17: **View of 75- to 100-gallon ASTs of chemicals used to maintain boilers in secondary containment in the boiler chemical storage area.**



Photograph 18: **View of 30- and 55-gallon drums of corrosion inhibitor, antifoam, and potassium hydroxide in secondary containment in the boiler room of the power plant.**



Photograph 19: **View of 5-gallon bucket of compressor oil and ten 50-lb bags of absorbent in secondary containment in the equipment room of the power plant.**



Photograph 20: **View of cooling tower storage shed in the power plant.**



Photograph 21: **View of 300-gallon sulfuric acid AST in secondary containment in cooling tower storage shed.**



Photograph 22: **View of 75-gallon ASTs of chemicals used for corrosion protection in secondary containment in the cooling tower chemical storage area.**



Photograph 23: **View of fire closet containing small quantities of alcohols in the northeast portion of the power plant.**



Photograph 24: **Looking northwest at the power plant at the 900- and 9,000-gallon liquid oxygen ASTs.**



Photograph 25: **View of typical pad-mounted transformer and emergency generator outside an LA BioMed building.**



Photograph 26: **View of 500-gallon diesel AST and emergency generator between Buildings E2 and E3.**



Photograph 27: **View of typical evidence of subsurface investigation adjacent to an LA Biomed building.**



Photograph 28: **View of typical fire cabinets in LA BioMed building containing small quantities of acids, hexanes, alcohols, acetone, chloroform, etc.**



Photograph 29: **View of typical gas cylinders in LA BioMed building containing nitrous oxide, carbon dioxide, nitrogen, etc.**



Photograph 30: **View of two 135-pound hydrogen peroxide drums in secondary containment in the chemical storage room of Building F1.**



Photograph 31: **View of several 1-liter containers of bleach in a fire closet in the chemical storage room of Building F1.**



Photograph 32: **View of two 30-gallon buckets of soap and two 30-gallon buckets of phosphoric acid in secondary containment in the cage washing area of Building RB2 Annex.**



Photograph 33: **Looking west at Medical Center Drive with pole-mounted transformers.**



Photograph 34: **View of typical storm drain on the northern portion of the site.**



Photograph 35: **Looking east at the storm water channel on the southern portion of the site.**



Photograph 36: **Looking north away from the western portion of the site at West Carson Street, beyond which are commercial properties.**



Photograph 37: **View of monitoring well on West Carson Street, adjacent to the north of the site.**



Photograph 38: **Looking north away from the eastern portion of the site at West Carson Street, beyond which is a Shell service station.**



Photograph 39: **Looking east away from the northeast corner of the site at South Vermont Avenue, beyond which is a 76 service station.**



Photograph 40: **View of groundwater monitoring well on South Vermont Avenue, adjacent to the east of the site.**



Photograph 41: **Looking east away from the site at South Vermont Avenue, beyond which are commercial properties.**



Photograph 42: **Looking south away from the site at West 220th Street, beyond which are residential properties.**



Photograph 43: **Looking west away from the site at South Normandie Avenue, beyond which are vacant land and residential properties.**

APPENDIX B

HAZARDOUS WASTE MANIFESTS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAD079605366
2. Page 1 of: 1
3. Emergency Response Phone: NSE: (909) 875-9288
4. Manifest Tracking Number: 007668242 FLE

5. Generator's Name and Mailing Address
Los Angeles County Harbor-UCLA Medical Center
1000 W. Carson St. (BldgN32,Box477)
Torrance CA 90502
Generator's Phone: (310)222-2836 Attn:EH & S Department

Generator's Site Address (if different than mailing address)

CD Requested

6. Transporter 1 Company Name: North State Environmental
U.S. EPA ID Number: CAR000206086

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology, Inc.
Hwy 95, 11 miles south of
Beatty NV 89003
Facility's Phone: (775)553-2203
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. Non-RCRA hazardous waste solid (lab debris)	1	DF	100	P	352		
	2. Non-RCRA hazardous waste solid (water-base adhesive)	1	DF	201	P	331		
	3. Non-RCRA hazardous waste solid (oily rags,oily debris)	1	DF	43	P	352		
X	4. RQ,NA3077,Hazardous waste solid,n.o.s., (debris with lead),9,III (D008)	1	BA	200	P	D008	181	

14. Special Handling Instructions and Additional Information

	ERG#	
1: Profile#070128300-9087: Lab debris with broken glass,rags,absorbent,gloves	N/A	1: 2 x 55gal fiber drum
2: Drum#0302-2: Water-base adhesive	N/A	2: 2 x 55gal fiber drum
3: Profile#070128300-9088: Oily rags,oily towels,oily carboard,oily,debris	N/A	3: 1 x 30gal fiber drum
4: Profile#070128301-8540: Debris with lead	171	4: 1 x cubic yard box

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Damena Balinu
Signature: [signature]
Month 03 Day 02 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [signature]
Signature:
Month 03 Day 02 Year 15
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAD079605366
2. Page 1 of: 1
3. Emergency Response Phone: NSE: (909) 875-9288
4. Manifest Tracking Number: 007668241 FLE

5. Generator's Name and Mailing Address
Los Angeles County Harbor-UCLA Medical Center
1000 W. Carson St. (BldgN32,Box477)
Torrance CA 90502
Generator's Phone: (310)222-2836 Attn:EH & S Department

Generator's Site Address (if different than mailing address): CD Requested

6. Transporter 1 Company Name: North State Environmental
U.S. EPA ID Number: CAR000206086

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Pacific Resource Recovery
3150 East Pico Boulevard
Los Angeles CA 90023
Facility's Phone: (800)499-7145
U.S. EPA ID Number: CAD008252405

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1263,Waste paint related material,3,III	1	DF	75	P	D001	331	
X	2. UN1950,Waste aerosols,2.1	1	DF	21	P	D001	331	
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1: Drum#0302-1: Labpack of flammable paints,stains,varnish,adhesives
2: Profile#Pending:Flammable aerosols with hydrocarbon solvents/propellants

ERG#
128
126

1: 1 x 55gal fiber drum
2: 1 x 15gal fiber drum
3:
4:

Damena Balini

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Damena Balini
Signature: [signature]
Month 03 Day 02 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible]
Signature:
Month 03 Day 02 Year 15
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	CAD079605366	3	NSE: (909)875-9288	007668238 FLE

5. Generator's Name and Mailing Address
Los Angeles County Harbor-UCLA Medical Center
1000 W. Carson St. (BldgN32,Box477)
Torrance CA 90502
Generator's Phone: (310)222-2836 Attn:EH & S Department

Generator's Site Address (if different than mailing address)
CD Requested

6. Transporter 1 Company Name
North State Environmental
U.S. EPA ID Number: CAR000206086

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
NSSI/Sources & Services,Inc.
5711 Etheridge Street
Houston TX 77087
Facility's Phone: (713)641-0391
U.S. EPA ID Number: TXD982560294

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ,UN1993,Waste flammable liquids,n.o.s., (methanol,hexane),3,II (D001)	~~1~~ 2	DF	220	P	D001	F003	551
X	2. UN1791,Waste hypochlorite solutions,8,II	1	DF	12	P	D001	551	
X	3. UN1498,Waste sodium nitrate,5.1,III	1	DF	12	P	D001	551	
X	4. UN3122,Waste toxic liquid,oxidizing,n.o.s., (povidone-iodine,iodine),6.1,(5.1),II	1	DF	22	P	D001	551	

14. Special Handling Instructions and Additional Information

	ERG#	
1: Drum#0302-1A,1B: (Labpack) TX State Code: OUTS001H	128	1: 2 x 55gal fiber drum
2: Drum#0302-2: (Labpack) TX State Code: OUTS001H	154	2: 1 x 5gal poly drum
3: Drum#0302-3: (Labpack) TX State Code: OUTS001H	140	3: 1 x 5gal poly drum
4: Drum#0302-4: (Labpack) TX State Code: OUTS001H	154	4: 1 x 15gal fiber drum

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Daniela Bahine
Signature: [signature]
Month 03 Day 02 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible]
Signature:
Month 03 Day 02 Year 15
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

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Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number	22. Page	23. Manifest Tracking Number
CAD079605366	2 of 3	007668238FLE

24. Generator's Name: Los Angeles County Harbor-UCLA Medical Center

25. Transporter _____ Company Name — U.S. EPA ID Number

26. Transporter _____ Company Name — U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
X	5.UN1362,Waste carbon,activated,4.2,III DOT-SP13192	1	DF	12	P	D001	551	
X	6.UN2984,Waste hydrogen peroxide,aqueous solution, 5.1,III	1	DF	13	P	D001	551	
X	7.UN3085,Waste oxidizing solids,corrosive,n.o.s., (sodium dichloro-s-triazinetrione),5.1,(8),II	1	DF	13	P	D001	551	
X	8.UN1950,Waste aerosols,toxic,2.1,(6.1) (allethrin,petroleum distillates)	1	DF	12	P	D001	331	
X	9.UN1950,Waste aerosols,corrosive,2.2,(8) (sodium hydroxide)	1	DF	12	P	D002	551	
X	10.UN1564,Waste barium compounds,n.o.s., (barium chloride),5.1,II	1	DF	12	P	D005	551	
X	11.UN2902,Pesticides,liquid, toxic,n.o.s., (acetamiprid),6.1,III	1	DF	13	P	551		
X	12.UN3261,Corrosive solid,acidic,organic,n.o.s., (tartaric acid),8,III	1	DF	12	P	551		
X	13.UN3260,Corrosive solid,acidic,inorganic,n.o.s., (ferric ammonium sulfate),8,III	1	DF	13	P	551		
X	14.UN2471,Osmium tetroxide,6.1,I "toxic" "Marine Pollutant"	1	DF	13	P	551		

GENERATOR

32. Special Handling Instructions and Additional Information

	ERG#
05: Drum#0302-5: (Labpack) TX State Code: OUTS001H	133
06: Drum#0302-6: (Labpack) TX State Code: OUTS001H	140
07: Drum#0302-7: (Labpack) TX State Code: OUTS001H	140
08: Drum#0302-8: (Labpack) TX State Code: OUTS801H	126
09: Drum#0302-9: (Labpack) TX State Code: OUTS701H	126
10: Drum#0302-10: (Labpack) TX State Code: OUTS001H	154
11: Drum#0302-11: (Labpack) TX State Code: OUTS0011	151
12: Drum#0302-12: (Labpack) TX State Code: OUTS0011	154
13: Drum#0302-13: (Labpack) TX State Code: OUTS0011	154
14: Drum#0302-14: (Labpack) TX State Code: OUTS0011	154

5: 1 x 5gal poly drum
6: 1 x 5gal poly drum
7: 1 x 5gal poly drum
8: 1 x 5gal poly drum
9: 1 x 5gal poly drum
10: 1 x 5gal poly drum
11: 1 x 5gal poly drum
12: 1 x 5gal poly drum
13: 1 x 5gal poly drum
14: 1 x 5gal poly drum

TRANSPORTER

33. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

APPENDIX C

HISTORICAL RESEARCH DOCUMENTATION

1000 West Carson Street
1000 West Carson Street
Torrance, CA 90502

Inquiry Number: 3776452.5
November 08, 2013

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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Date EDR Searched Historical Sources:

Aerial Photography November 08, 2013

Target Property:

1000 West Carson Street

Torrance, CA 90502

Year	***Scale***	***Details***	***Source***
1928	Aerial Photograph. Scale: 1"=500'	Flight Year: 1928	Fairchild
1947	Aerial Photograph. Scale: 1"=500'	Flight Year: 1947	Fairchild
1956	Aerial Photograph. Scale: 1"=500'	Flight Year: 1956	Fairchild
1963	Aerial Photograph. Scale: 1"=500'	Flight Year: 1963	EDR
1972	Aerial Photograph. Scale: 1"=500'	Flight Year: 1972	EDR
1982	Aerial Photograph. Scale: 1"=500'	Flight Year: 1982	AMI
1989	Aerial Photograph. Scale: 1"=500'	Flight Year: 1989	USGS
1994	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1994	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	EDR
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	EDR
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	EDR


INQUIRY #: 3776452.5
YEAR: 1928
= 500'
N



INQUIRY #: 3776452.5

YEAR: 1947

= 500'

N

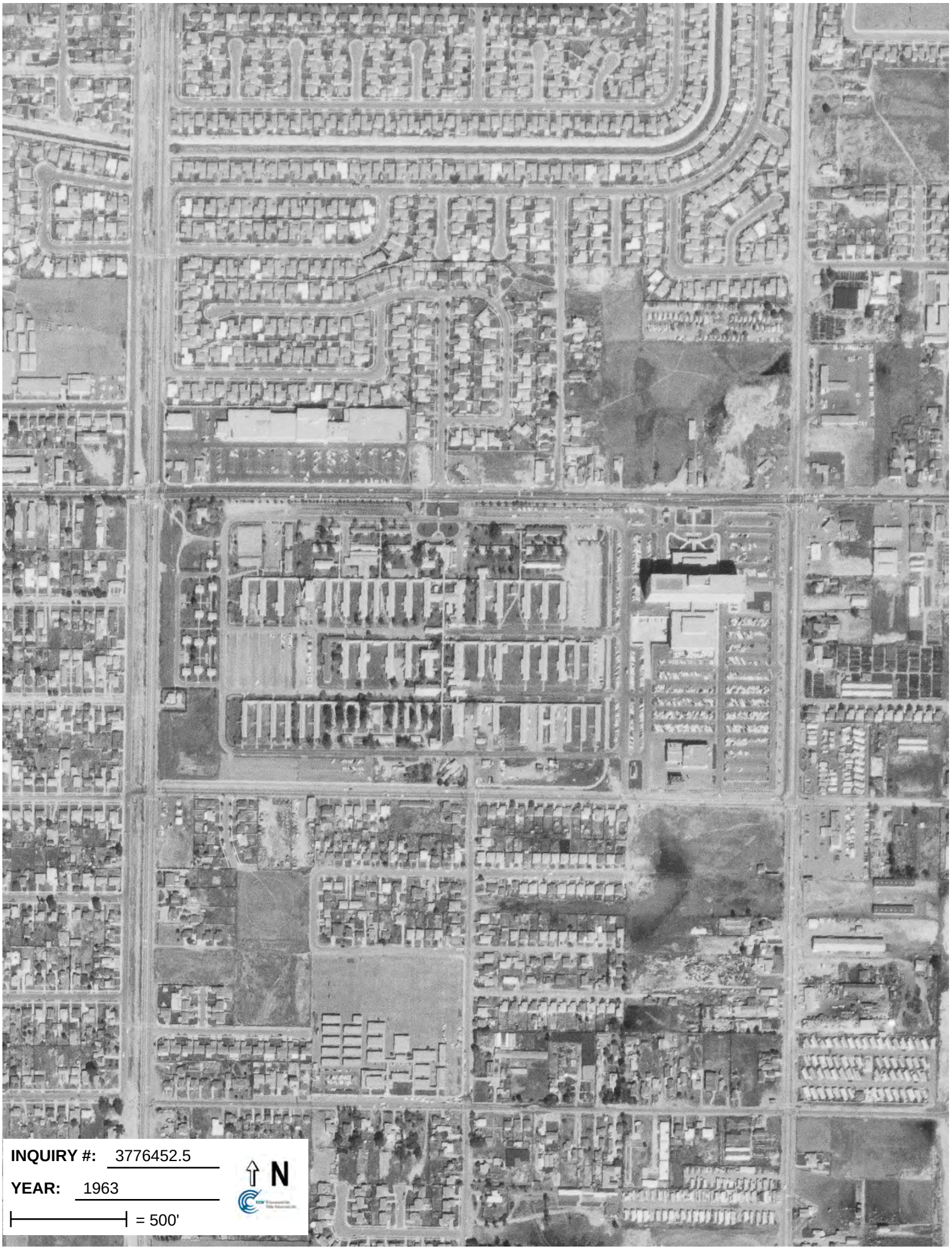


INQUIRY #: 3776452.5

YEAR: 1956

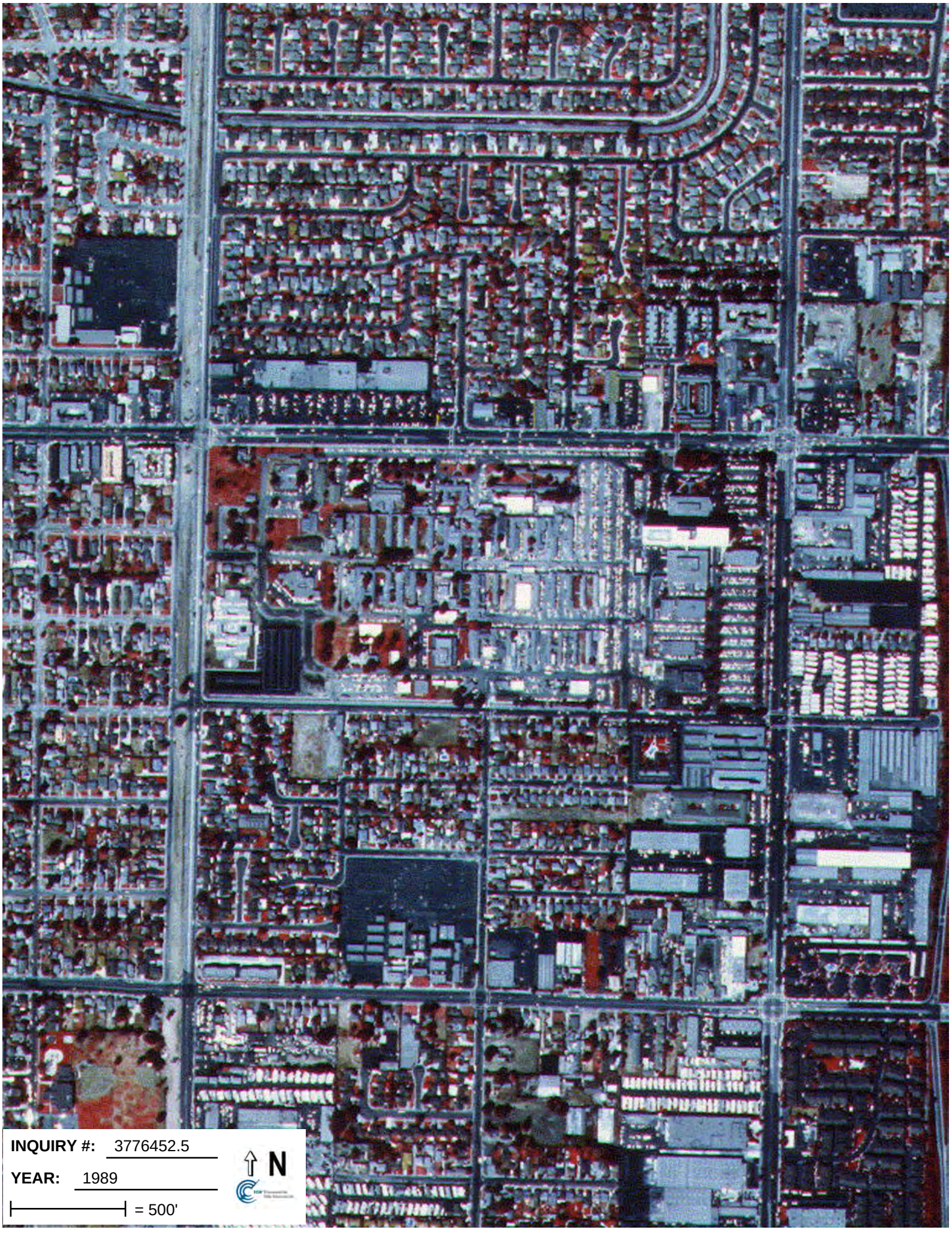
= 500'

N


INQUIRY #: 3776452.5
YEAR: 1963
= 500'
N


INQUIRY #: 3776452.5
YEAR: 1972
= 500'
N


INQUIRY #: 3776452.5
YEAR: 1982
= 500'
N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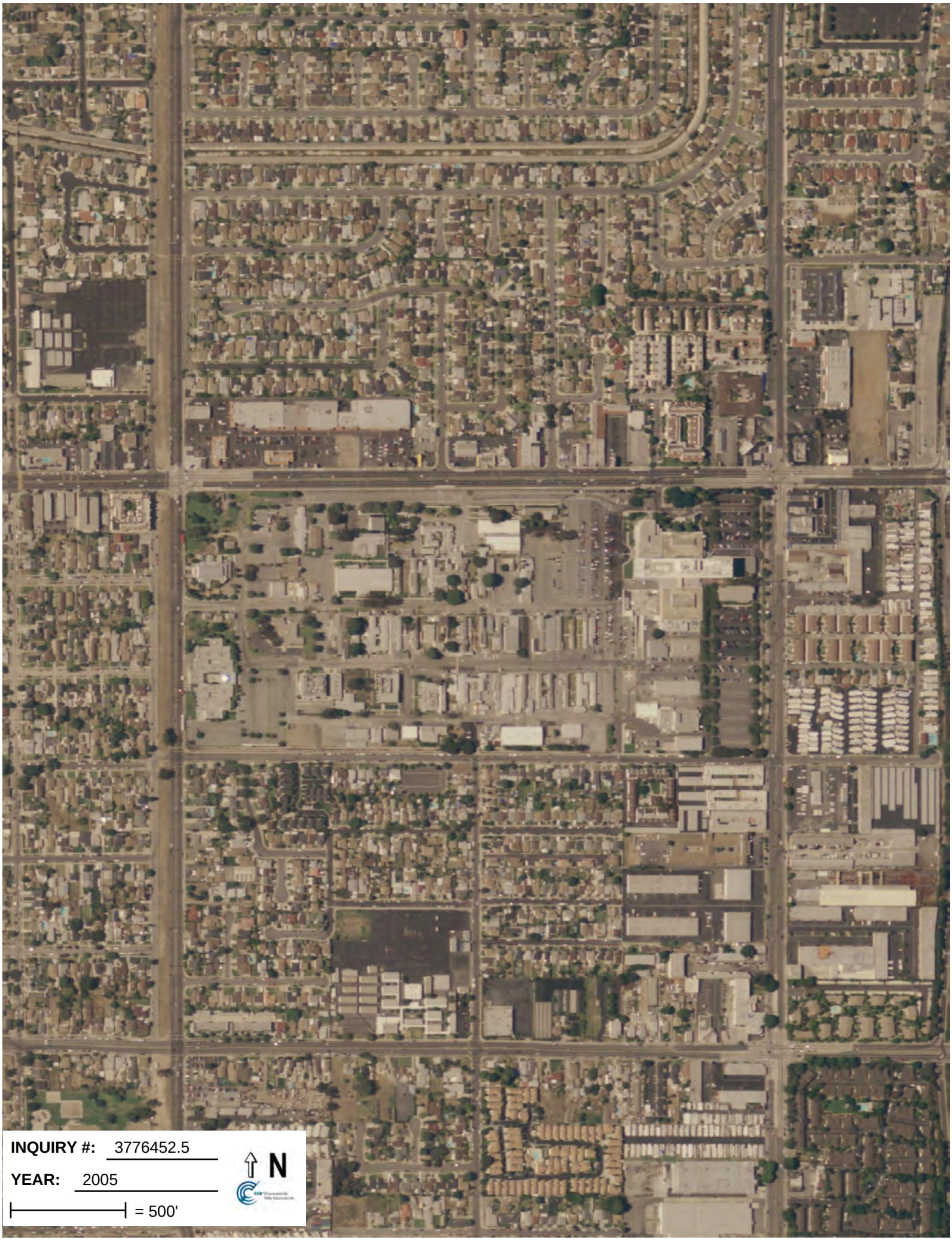
YEAR: 1989
= 500'
N


INQUIRY #: 3776452.5
YEAR: 1994
= 500'
N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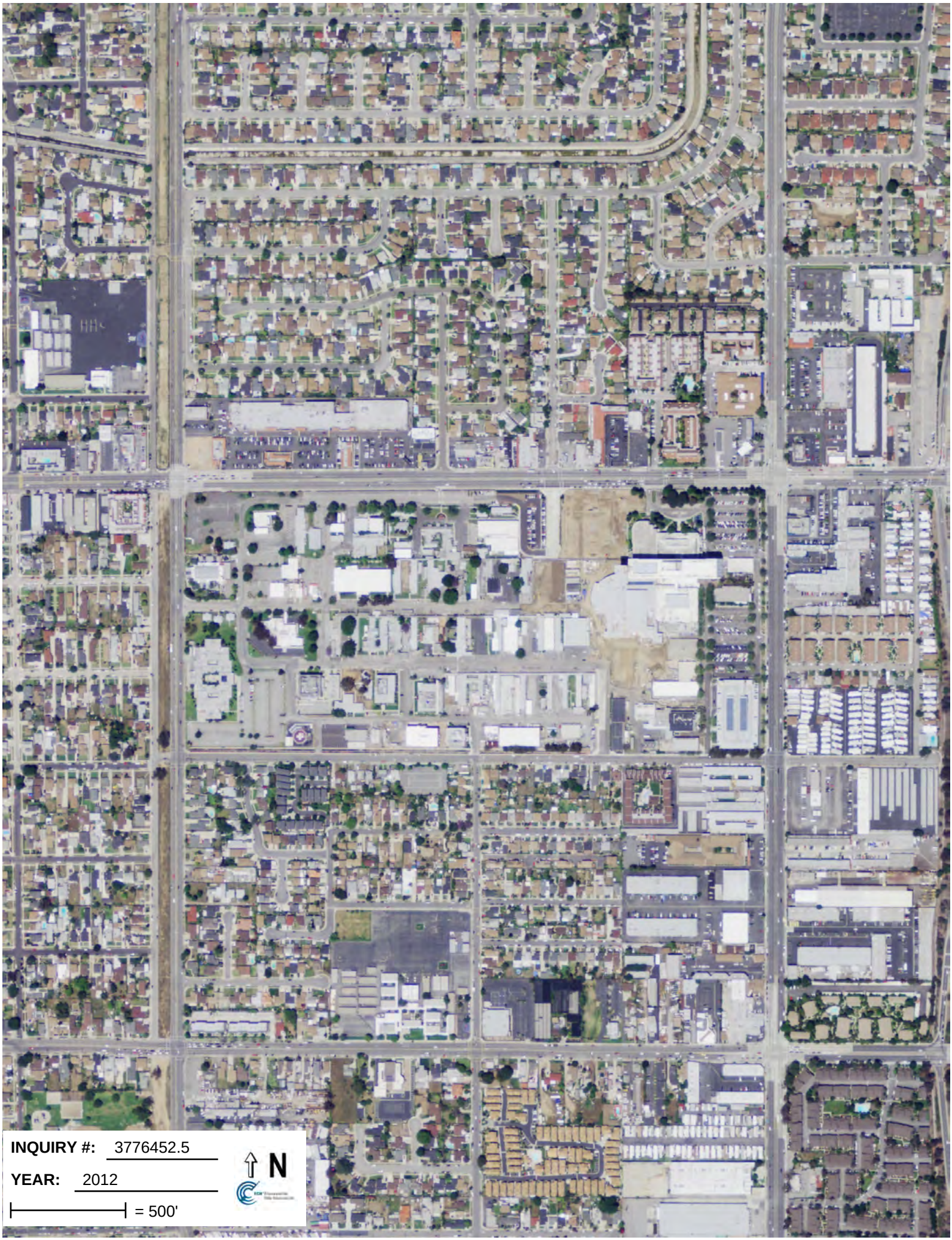
YEAR: 2005
= 500'
N


INQUIRY #: 3776452.5
YEAR: 2009
= 500'
N


INQUIRY #: 3776452.5
YEAR: 2010
= 500'
N


INQUIRY #: 3776452.5
YEAR: 2012
= 500'
N

1000 West Carson Street
1000 West Carson Street
Torrance, CA 90502

Inquiry Number: 3776452.3
November 04, 2013

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

11/04/13

Site Name:
1000 West Carson Street
1000 West Carson Street
Torrance, CA 90502

Client Name:
Ninyo & Moore
475 Goddard
Irvine, CA 92618

EDR Inquiry # 3776452.3

Contact: Andrew Luong

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Ninyo & Moore were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: 1000 West Carson Street
Address: 1000 West Carson Street
City, State, Zip: Torrance, CA 90502
Cross Street:
P.O. # 209023001
Project: 209023001
Certification # F0C6-4F29-9459

Sanborn® Library search results
Certification # F0C6-4F29-9459

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

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1000 West Carson Street
1000 West Carson Street
Torrance, CA 90502

Inquiry Number: 3776452.6
November 07, 2013

The EDR-City Directory Abstract

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2013. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2013	Cole Information Services	X	X	X	-
2008	Cole Information Services	X	X	X	-
2006	Haines Company	-	-	-	-
2004	Haines Company	-	-	-	-
2003	Haines & Company	-	-	-	-
2001	Haines & Company, Inc.	-	X	X	-
2000	Haines & Company	-	-	-	-
1999	Haines Company	-	-	-	-
1996	GTE	-	-	-	-
1995	Pacific Bell	-	X	X	-
1992	PACIFIC BELL WHITE PAGES	-	-	-	-
1991	Pacific Bell	-	-	-	-
1990	Pacific Bell	-	X	X	-
1986	Pacific Bell	-	X	X	-
1985	Pacific Bell	-	X	X	-
1981	Pacific Telephone	X	-	X	-
1980	Pacific Telephone	X	X	X	-
1976	Pacific Telephone	-	-	-	-
1975	Pacific Telephone	X	X	X	-
1972	R. L. Polk & Co.	-	-	-	-
1971	Pacific Telephone	X	X	X	-
1970	Pacific Telephone	X	X	X	-
1969	Pacific Telephone	-	-	-	-
1967	Pacific Telephone	-	-	-	-
1966	Pacific Telephone	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1965	Pacific Telephone	-	-	-	-
1964	Pacific Telephone	-	X	X	-
1963	Pacific Telephone	-	-	-	-
1962	Pacific Telephone	-	-	-	-
1961	R. L. Polk & Co.	-	-	-	-
1960	Pacific Telephone	-	X	X	-
1958	Pacific Telephone	-	-	-	-
1957	Pacific Telephone	-	X	X	-
1956	R. L. Polk & Co.	-	-	-	-
1955	R. L. Polk & Co.	-	-	-	-
1954	R. L. Polk & Co.	-	X	X	-
1952	Los Angeles Directory Co.	-	-	-	-
1951	R. L. Polk & Co.	-	-	-	-
1950	Pacific Telephone	-	X	X	-
1949	Los Angeles Directory Co.	-	-	-	-
1948	Associated Telephone Company, Ltd.	-	-	-	-
1947	Los Angeles Directory Co.	-	-	-	-
1946	Western Directory Co.	-	X	X	-
1945	R. L. Polk & Co.	-	-	-	-
1944	R. L. Polk & Co.	-	-	-	-
1942	Los Angeles Directory Co.	-	-	-	-
1940	Western Directory Co.	-	X	X	-
1939	Los Angeles Directory Co.	-	-	-	-
1938	Los Angeles Directory Co.	-	-	-	-
1937	Los Angeles Directory Co.	-	-	-	-
1936	Los Angeles Directory Co.	-	-	-	-
1935	Los Angeles Directory Co.	-	-	-	-
1934	Los Angeles Directory Co.	-	-	-	-
1933	Los Angeles Directory Co.	-	-	-	-
1932	Los Angeles Directory Co.	-	-	-	-
1931	TRIBUNE-NEWS PUBLISHING CO.	-	-	-	-
1930	Los Angeles Directory Co.	-	-	-	-
1929	Los Angeles Directory Co.	-	-	-	-
1928	Los Angeles Directory Co.	-	-	-	-
1927	Los Angeles Directory Co.	-	-	-	-
1926	Los Angeles Directory Co.	-	-	-	-
1925	Los Angeles Directory Co.	-	-	-	-
1924	Los Angeles Directory Co.	-	-	-	-
1923	Los Angeles Directory Co.	-	-	-	-
1921	Los Angeles Directory Co.	-	-	-	-
1920	Los Angeles Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

Address	*Type*	*Findings*
2170 s vermont ave	Client Entered	
1153 w carson st	Client Entered	X
911 w carson st	Client Entered	X
826 w 220th st	Client Entered	X
21611 s vermont ave	Client Entered	X
1037 w carson st	Client Entered	X
21730 s vermont ave	Client Entered	X
835 w carson st	Client Entered	X
1029 w carson st	Client Entered	X

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

1000 West Carson Street
Torrance, CA 90502

FINDINGS DETAIL

Target Property research detail.

W CARSON

1000 W CARSON

Year	Uses	Source
1981	TAY SACHS DISEASE PREVENTION PROGRAM OF CALIFORNIA TORRANCE	Pacific Telephone

W CARSON ST

1000 W CARSON ST

Year	Uses	Source
2013	COUNTY OF LOS ANGELES	Cole Information Services
	HARBOR UCLA MED FOUNDATION INFORMATI	Cole Information Services
	HARBOR UCLA PROFESSIONAL BUILDING	Cole Information Services
	HARBORUCLA MED FOUNDATION	Cole Information Services
	HARBORUCLA MEDICAL CENTER MEDICAL	Cole Information Services
	HENSEL PHELPS	Cole Information Services
	LIMBACH COMPANY	Cole Information Services
	ONELEGACY	Cole Information Services
	OPTIONS FOR RECOVERY	Cole Information Services
	SPICE OF LIFE CAFETERIA	Cole Information Services
	UNIVERSITY OF CALIFORNIA LOS ANGELES	Cole Information Services
2008	AF PARLOW LIBRARY OF HEALTH SCIENCES	Cole Information Services
	CARDIOVASCULAR CONSULTANTS MEDICAL	Cole Information Services
	CHILDHOOD INJURY PREVENTION CENTER	Cole Information Services
	COUNTY OF LOS ANGELES	Cole Information Services
	ENDOVASCULAR SURGERY	Cole Information Services
	GENERAL MEDICINE CLINIC	Cole Information Services

FINDINGS

Year	Uses	Source
2008	HARBOR GENERAL HOSPITAL	Cole Information Services
	HARBOR HOSPITAL	Cole Information Services
	HARBOR UCLA IMMUNOLOGY	Cole Information Services
	HARBOR UCLA MC	Cole Information Services
	HARBOR UCLA MEDICAL CENTER GNS	Cole Information Services
	JACOB RAJIFER	Cole Information Services
	JULIA A CHUNG MD	Cole Information Services
	LAKS MICHAELS MD	Cole Information Services
	MICHEAL M LAKS	Cole Information Services
	MORRISTOWN MANAGEMENT SPECIALISTS	Cole Information Services
	NAMI	Cole Information Services
	NATIONAL ALNC FOR MNTLY ILL	Cole Information Services
	NATIONAL HORMONE & PITUITARY	Cole Information Services
	NUCLEAR MEDICINE OUTPATIENT CLINIC	Cole Information Services
	ONELEGACY	Cole Information Services
	OPTIONS FOR RECOVERY	Cole Information Services
	SPICE OF LIFE CAFETERIA	Cole Information Services
	SURG ONCOLOGY BOX 25	Cole Information Services
1980	Beverly Hills County Offices	Pacific Telephone
	Culver City County Offices	Pacific Telephone
	Harbor UCLA Medical Center	Pacific Telephone
	HOSPITALS Harbor Genl	Pacific Telephone
	MALIBU County Offices	Pacific Telephone
	Santa Monica County Offices	Pacific Telephone
	Tay Sachs Disease Prevention Program Of California	Pacific Telephone
	West Los Angeles County Office	Pacific Telephone
1975	Harbor General Hospital	Pacific Telephone
	Harbor Genl	Pacific Telephone
1971	Harbor General Hospital	Pacific Telephone
	Harbor Genl	Pacific Telephone
	LOS ANGELES COUNTY OF Contd HOSPITALS DEPT OF Contd Hospitals Contd	Pacific Telephone
	Solomon David H MD Harbor General Hospital	Pacific Telephone
1970	BAILEY S RUSH	Pacific Telephone
	BRADLEY J G DR	Pacific Telephone
	CHIN MUNN W DR	Pacific Telephone
	CLIFTON JAS F	Pacific Telephone

FINDINGS

Year	Uses	Source
1970	FAY RAYMOND	Pacific Telephone
	HARBOR GENERAL HOSPITAL	Pacific Telephone
	HOSPITALS	Pacific Telephone
	JAUSSI JAS R MD	Pacific Telephone
	JEFFERS ROBT MD	Pacific Telephone
	RASMUSSEN KENT MD	Pacific Telephone
	REGIONAL MEDICAL PROGRAMS-AREA IV	Pacific Telephone
	SCHMUCK JAS MD	Pacific Telephone
	SOLOMON DAVID H MD HARBOR GENERAL HOSPITAL	Pacific Telephone

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

216TH W

1102 216TH W

Year	Uses	Source
1990	CHASCO PHIL	Pacific Bell

1116 216TH W

Year	Uses	Source
1995	LAU PHILIP	Pacific Bell
1990	LAU PHILIP	Pacific Bell

BERENDO AVE

21502 BERENDO AVE

Year	Uses	Source
2001	BENDERCa	Haines & Company, Inc.
1980	BENDER CARROLL J MAJ USAF	Pacific Telephone
	HIATT RENA MRS	Pacific Telephone
1975	HIATT BILL JR	Pacific Telephone
	HIATT WM N SR	Pacific Telephone
1954	HIATT WM N	R. L. Polk & Co.

21505 BERENDO AVE

Year	Uses	Source
2001	STAYLORGlen 0 S	Haines & Company, Inc.
1985	PHILLIPS FERNE	Pacific Bell
	MAUSTELLER ARTHUR E	Pacific Bell
1980	PHILLIPS FERNE	Pacific Telephone
1975	PHILLIPS FERNE	Pacific Telephone
1970	PHILLIPS FERNE	Pacific Telephone
1964	PHILLIPS FERNE	Pacific Telephone
1960	HALL MURTIE	Pacific Telephone
1954	HALL ARLIE O	R. L. Polk & Co.

FINDINGS

21513 BERENDO AVE

Year	Uses	Source
1970	SHAFFER RALPH L	Pacific Telephone
1964	SHAFFER MAXINE	Pacific Telephone
1960	SHAFFER MAXINE	Pacific Telephone

21514 BERENDO AVE

Year	Uses	Source
1970	DODOS MARIGO	Pacific Telephone
1964	DODOS PETE J	Pacific Telephone

21516 BERENDO AVE

Year	Uses	Source
2001	SINGPo	Haines & Company, Inc.

21517 BERENDO AVE

Year	Uses	Source
2001	FUENTESNicho las	Haines & Company, Inc.
1985	EVANS FLOYD	Pacific Bell
1980	EVANS FLOYD	Pacific Telephone
1975	EVANS FLOYD	Pacific Telephone
1960	WHITE KENNETH W	Pacific Telephone
1957	MAYEDA JUNICHI	Pacific Telephone
1954	HAYASLHIBARA GEO	R. L. Polk & Co.

21520 BERENDO AVE

Year	Uses	Source
2001	SJARVINAWiired O	Haines & Company, Inc.

21527 BERENDO AVE

Year	Uses	Source
2013	ALLIED MEDICAL SERVICES INC	Cole Information Services
2008	JARVINA ROSALINDA	Cole Information Services
	ALLIED REHAB SERVICES	Cole Information Services
	JARVINA WILFREDO VENDING MACHINE	Cole Information Services
2001	HARRISWilliam	Haines & Company, Inc.
1970	CHIRRICK DARREL	Pacific Telephone
1964	CHIRRICK DARREL	Pacific Telephone
1960	NEAL J M	Pacific Telephone
1957	NEAL J NI	Pacific Telephone

FINDINGS

Year	Uses	Source
1954	NEAL J M	R. L. Polk & Co.
1946	EDDIE MITCHELL	Western Directory Co.
1940	MCCULLOCH RALPH H (SHIRLEY) LAB NATI SUP COH	Western Directory Co.

21602 BERENDO AVE

Year	Uses	Source
2001	DROMMERHAUSED	Haines & Company, Inc.
1985	JANSSEN ROOFING	Pacific Bell
1975	PISCIOTTA I G NICK	Pacific Telephone

21603 BERENDO AVE

Year	Uses	Source
2001	RIVERASakid	Haines & Company, Inc.
1990	ESPINOZA JOSE	Pacific Bell
1970	COBURN WM M	Pacific Telephone
1964	PETERS LEMUEL	Pacific Telephone
1957	EHST JAS W	Pacific Telephone
1954	NOONE NOVELTY CO	R. L. Polk & Co.
1950	DILL RONALD E R	Pacific Telephone
1946	T A DELANCEY	Western Directory Co.
1940	PETERSON JESSE L (ANNA) OIL WKRH	Western Directory Co.

21603 1/2 BERENDO AVE

Year	Uses	Source
1990	RIVERA SALUD	Pacific Bell
1985	RIVERA SALUD	Pacific Bell

21605 BERENDO AVE

Year	Uses	Source
2001	RUSSELLOonal	Haines & Company, Inc.
1964	MARGOLIS JENNIE	Pacific Telephone

21605 1/2 BERENDO AVE

Year	Uses	Source
1990	AMONDSEN TED	Pacific Bell
1960	DOUGLASS HELEN F	Pacific Telephone
1957	DOTUGLASS HELEN F	Pacific Telephone

FINDINGS

21606 BERENDO AVE

Year	Uses	Source
2001	ABADM	Haines & Company, Inc.
1964	COLLINS MEREDITH	Pacific Telephone

21607 BERENDO AVE

Year	Uses	Source
1975	BLAKE E A	Pacific Telephone
1970	PARK YOON	Pacific Telephone

21607 1/2 BERENDO AVE

Year	Uses	Source
1980	EVANS JAS	Pacific Telephone
1975	JUAN FELICIDAD	Pacific Telephone
1970	HANAOKA NORL	Pacific Telephone
1964	FUENTES FELICIA	Pacific Telephone

21609 BERENDO AVE

Year	Uses	Source
2001	MONTIEL	Haines & Company, Inc.
1990	RODRIGUEZ GASPAR A & ISABEL	Pacific Bell
1980	PETER MARVIN	Pacific Telephone
1975	LIEBER ROBT	Pacific Telephone
1970	EVANS FLOYD	Pacific Telephone
1964	EVANS FLOYD	Pacific Telephone
1960	EVANS FLOYD	Pacific Telephone
1957	EVANS FLOYD	Pacific Telephone
1950	MARKS PHILIP DR	Pacific Telephone
1946	MRS I I MOODY	Western Directory Co.

21610 BERENDO AVE

Year	Uses	Source
2001	SEMBISANRowena	Haines & Company, Inc.
1975	COMEAU ALICE B	Pacific Telephone
1964	PASSI KAPELI	Pacific Telephone
1957	BUELA LEX S	Pacific Telephone

21611 BERENDO AVE

Year	Uses	Source
1946	VACANT	Western Directory Co.

FINDINGS

21612 BERENDO AVE

Year	Uses	Source
2001	KAWAMORITADan	Haines & Company, Inc.
1995	LLAVAN PRIME	Pacific Bell
1975	KIM YOUNG MO	Pacific Telephone
1970	DOUGLASS HELEN F	Pacific Telephone
1964	DOUGLASS HELEN F	Pacific Telephone

21612 1/2 BERENDO AVE

Year	Uses	Source
1970	ROBERTSON ROBT L	Pacific Telephone

21613 BERENDO AVE

Year	Uses	Source
1946	T EB DILL	Western Directory Co.
1940	COGSWELL LOUISA A MRSH	Western Directory Co.

21614 BERENDO AVE

Year	Uses	Source
2001	XXXX	Haines & Company, Inc.
1985	EDWARDS EDDIE	Pacific Bell
1980	BOISER CARIOS	Pacific Telephone

21615 BERENDO AVE

Year	Uses	Source
2013	ABJELINA KENNETH MD	Cole Information Services
	ASIAN INTERNET BIBLE INSTITUTE INTER	Cole Information Services
	ABJELINA ANGELLI A DDS	Cole Information Services
2008	ABJELINA DENTAL HEALTH INC	Cole Information Services
	ANDEL CARE HOSPICE	Cole Information Services
	ABJELINA KENNETH MD	Cole Information Services
	ANGELLI A ABJELINA	Cole Information Services
2001	ABJELINAANGELLIA 3 S 931 W I	Haines & Company, Inc.
1995	NOORTHOEK ROGER	Pacific Bell
1985	ROYALTY HOMES	Pacific Bell
1980	LESACA BOB LESACA WATSON INS	Pacific Telephone
	LESACA & WATSON INS	Pacific Telephone

FINDINGS

21618 BERENDO AVE

Year	Uses	Source
1964	WALTERS GORDON TORRANCE	Pacific Telephone

BROADWELL AVE

21403 BROADWELL AVE

Year	Uses	Source
1995	SHELDON L	Pacific Bell
1990	SHELDON L	Pacific Bell

21409 BROADWELL AVE

Year	Uses	Source
1995	DEMERJIAN R SCOTT	Pacific Bell
1990	DEMERJIAN R SCOTT	Pacific Bell

21412 BROADWELL AVE

Year	Uses	Source
1995	URADA R K	Pacific Bell
1990	URADA R K	Pacific Bell

21424 BROADWELL AVE

Year	Uses	Source
1995	P C EXPORT	Pacific Bell

21425 BROADWELL AVE

Year	Uses	Source
1995	RIVERA JULIO	Pacific Bell
1990	RIVERA JULIO	Pacific Bell

21500 BROADWELL AVE

Year	Uses	Source
2001	LOPEZCarlos	Haines & Company, Inc.
1995	SUEZAKI R T	Pacific Bell
1990	SUEZAKI R T	Pacific Bell

21501 BROADWELL AVE

Year	Uses	Source
2001	ALZONAAndres	Haines & Company, Inc.
1990	WRIGHT RICKLE G	Pacific Bell
1985	VICKERY JOHN H	Pacific Bell

FINDINGS

21506 BROADWELL AVE

Year	Uses	Source
2001	MORALLORichard	Haines & Company, Inc.

21512 BROADWELL AVE

Year	Uses	Source
2001	KIMBeau 00 Vr	Haines & Company, Inc.

21515 BROADWELL AVE

Year	Uses	Source
2001	ENCINAAlberto	Haines & Company, Inc.

21518 BROADWELL AVE

Year	Uses	Source
2001	MELLADOMarco 00 i	Haines & Company, Inc.
1985	SMITH DENNIS P	Pacific Bell

21524 BROADWELL AVE

Year	Uses	Source
2001	MINSung Won	Haines & Company, Inc.
1995	MIN SUNG WON	Pacific Bell
1990	CHOI SANG KOO	Pacific Bell

21530 BROADWELL AVE

Year	Uses	Source
2001	OHALLDebbi	Haines & Company, Inc.
1995	HALL DON C & DEBBI	Pacific Bell
1990	HALL DON C & DEBBI	Pacific Bell
1985	HALL DON C & DEBBI	Pacific Bell

CARSON W

923 CARSON W

Year	Uses	Source
1995	SMILECARE DENTAL GROUP	Pacific Bell
1990	SMILECARE DENTAL GROUP	Pacific Bell

941 CARSON W

Year	Uses	Source
1995	114 FRELIGH A	Pacific Bell
	112 KANSAKAR RAJENDRA	Pacific Bell
	106 CHEUNG CHUNG LUN	Pacific Bell

FINDINGS

Year	Uses	Source
1995	HARBOR MANOR CONDO & ASSOCIATION	Pacific Bell
	122 MILLER T	Pacific Bell
1990	124 DAVIS CAROLE	Pacific Bell
	125 SIMMONS MARK A	Pacific Bell
	126 MCGRATH DENIS M	Pacific Bell
	201 BON BRAINSTORM DESIGN NETWORK	Pacific Bell
	205 JUPON COSMETICS USA INC	Pacific Bell
	206 LICAVOLI A	Pacific Bell
	207 JACKSON K & E	Pacific Bell
	210 JASKOT STANLEY	Pacific Bell
	211 ROBINSON CRAIG W	Pacific Bell
	212 NORRIS J M	Pacific Bell
	214 BACHIS B	Pacific Bell
	215 DELOACH BRUCE	Pacific Bell
	217 PENNINGTON CLEMMIE	Pacific Bell
	223 REINEHR THOMAS	Pacific Bell
	302 FENN DONNELLY M	Pacific Bell
	303 SHAHIDI ESMALL	Pacific Bell
	311 JOHNSON GORDON L	Pacific Bell
	328 FRELTAS GREGORY R	Pacific Bell
	325 MATHEWS MICHAEL & SANDRA	Pacific Bell
	323 NIERAETH D	Pacific Bell
	315 SAATY NEIL	Pacific Bell
	314 DANG DELWIN	Pacific Bell
	HARBOR MANOR CONDO & ASSOCIATION	Pacific Bell
	101 BARRETT JOHN A	Pacific Bell
	102 POWELL URSULA	Pacific Bell
	104 CUNITZ GARY & CLAUDETTE	Pacific Bell
	105 CUENCA VALERLE A	Pacific Bell
	106 CHEUNG CHUNG LUN	Pacific Bell
	108 WHARTON C & D	Pacific Bell
	114 FRELIGH A	Pacific Bell
	118 SOUTHWORTH GEOFFREY	Pacific Bell

943 CARSON W

Year	Uses	Source
1995	107 SIMON ROBERT	Pacific Bell

FINDINGS

Year	Uses	Source
1995	101 HARBOR COVE APARTMENTS	Pacific Bell
1990	313 COPE EDWARD T & LOIS	Pacific Bell
	306 ANDERSON DWAYNE	Pacific Bell
	209 LIGHT SYLVESTER & FENELLA	Pacific Bell
	112 SALAHI WALID	Pacific Bell
	108 ZAMORA PIERRE	Pacific Bell
	101 HARBOR COVE SALES OFFICE	Pacific Bell
	212 PARAGAS EDUARDO M	Pacific Bell

945 CARSON W

Year	Uses	Source
1995	102 RAMIREZ VINCENT A	Pacific Bell
	111 LEE CHIHJEN	Pacific Bell
	112 HUYNH KLEMENS	Pacific Bell
	120 ZEVALLOS DANIEL	Pacific Bell
	122 DUNSON DAVID F	Pacific Bell
	201 BUCAG-CERDENA MARY K	Pacific Bell
	219 HARRIS CHAD	Pacific Bell
	305 LEE HO SOOK	Pacific Bell
	322 JUN KOOMSOOK	Pacific Bell
	323 ADOUS ZEKARIA	Pacific Bell
1990	109 LEE HO SOOK	Pacific Bell
	111 TAYLOR ANDREA	Pacific Bell
	115 BEST TYROME & VALERIE	Pacific Bell
	118 SMITH OSCAR	Pacific Bell
	120 ZEVALLOS DANIEL	Pacific Bell
	124 MILLER ANGELA	Pacific Bell
	202 MARSCHNER VELT	Pacific Bell
	203 TAN ROGELIO	Pacific Bell
	206 POSSLENZNY ROBERT & YUKO	Pacific Bell
	208 COHEN T & E	Pacific Bell
	211 CONTEH MIATTA	Pacific Bell
	216 FREED GARY PAUL	Pacific Bell
	220 WANG JOE H	Pacific Bell
	304 MCLEOD J S	Pacific Bell
	308 MALDONADO NORBERTO	Pacific Bell
	316 SHANNON MICHAEL L	Pacific Bell
	317 HAMMOND BRENT W	Pacific Bell
	321 MANZANO JOSEPHINE	Pacific Bell

FINDINGS

CARSON ST

1045 CARSON ST

Year	Uses	Source
1954	BOYD DOUGLAS G	R. L. Polk & Co.

E CARSON ST

1025 E CARSON ST

Year	Uses	Source
1970	GRACE BROTHERS	Pacific Telephone

933 E CARSON ST

Year	Uses	Source
1970	S & C AUTO WRECKERS	Pacific Telephone

MEYLER AVE

21534 MEYLER AVE

Year	Uses	Source
1964	TABELLARIO CARLO A	Pacific Telephone
1960	TABELLARIO C A DR	Pacific Telephone

MEYLER ST

21534 MEYLER ST

Year	Uses	Source
2001	TABELLARIOC	Haines & Company, Inc.
1970	TABELLARIO MARIA	Pacific Telephone

s vermont ave

21611 s vermont ave

Year	Uses	Source
1970	SOF-SPRA CAR WASH	Pacific Telephone

S VERMONT AVE

21730 S VERMONT AVE

Year	Uses	Source
2013	COUNTY OF LOS ANGELES	Cole Information Services

Year	Uses	Source
2013	JEFF LUKOVICH STATE FARM INSURANCE	Cole Information Services
	TROPICAL DRINKS	Cole Information Services

s vermont ave

21730 s vermont ave

Year	Uses	Source
1960	PURSCIE JUANDELL I	Pacific Telephone
1957	TAYLOR DENNIS C	Pacific Telephone
1954	TAYLOR DENNIS C	R. L. Polk & Co.
	MORRISON HARDY	R. L. Polk & Co.

W 216TH ST

1102 W 216TH ST

Year	Uses	Source
2001	0 C 5 URC 0 Chris	Haines & Company, Inc.
1985	CHASCO PHIL	Pacific Bell
1980	CHASCO PHIL TORRANCE	Pacific Telephone
1975	CHASCO PHIL	Pacific Telephone
1970	CHASCO PHIL	Pacific Telephone
1964	GATES JAS A JR	Pacific Telephone
1960	GATES JAS A H	Pacific Telephone
1957	GATES JAS A JR	Pacific Telephone

1106 W 216TH ST

Year	Uses	Source
1964	LEE JAS K	Pacific Telephone
1960	THOMPSON HOWARD N	Pacific Telephone
1957	THOMPSON HOWARD N	Pacific Telephone

1112 W 216TH ST

Year	Uses	Source
2001	MEOINARodenco	Haines & Company, Inc.
1970	MACARDICAN JOE	Pacific Telephone
1964	MACARDICAN JOE	Pacific Telephone
1960	KOHL FRANK	Pacific Telephone
1957	AOHI FRANK	Pacific Telephone

FINDINGS

1116 W 216TH ST

Year	Uses	Source
2001	MEOINARodenco	Haines & Company, Inc.
1985	ALBITZ PHIL	Pacific Bell
1980	ALBITZ PHIL TORRANCE	Pacific Telephone
1957	SAUCEDA M C	Pacific Telephone

1124 W 216TH ST

Year	Uses	Source
2001	CASTORENAJose L	Haines & Company, Inc.
1975	MCWILLIAMS JOHN K	Pacific Telephone
1970	SYLVESTER JOHN S	Pacific Telephone
1964	WICKLUND REUBEN E	Pacific Telephone
1960	ROWE JAS T	Pacific Telephone
1957	ROWE JAS T	Pacific Telephone

1156 W 216TH ST

Year	Uses	Source
2001	NAGANOTsuyako	Haines & Company, Inc.

W 220TH ST

826 W 220TH ST

Year	Uses	Source
2013	GKK WORKS CONSTRUCTION SERVICE	Cole Information Services
	SERVICON SYSTEMS INC	Cole Information Services

w 220th st

826 w 220th st

Year	Uses	Source
1990		Pacific Bell
	100 CREDIT UNION AUTO HOTLINE	Pacific Bell

W CARSON

1001 W CARSON

Year	Uses	Source
1986	SUNSHINE REALTY TORRANCE	Pacific Bell

FINDINGS

W CARSON ST

1001 W CARSON ST

Year	Uses	Source
2013	WONDER TOUCH MASSAGE	Cole Information Services
	UNIVERSAL CARE	Cole Information Services
	VILLARUBIA ISAYAS INS	Cole Information Services
	ROYAL HAIR & NAIL SALON	Cole Information Services
	UCLA ISAP TORRANCE CLINIC	Cole Information Services
	FOOT REFLEXOLOGY	Cole Information Services
	LI ZHANG CNA ACUPUNCTURE	Cole Information Services
	REGAL MEDICAL CENTER	Cole Information Services
	DUDLEY JOHN T	Cole Information Services
	C & C DONUTS	Cole Information Services
	FATBURGER	Cole Information Services
	DYNAMICS ORTHOTICS & PROSTHETICS	Cole Information Services
	HARBOR OUTPATIENT COMMUNITY PHARMACY	Cole Information Services
2008	BENETE MEDICAL SUPPLY	Cole Information Services
	JOHN T DUDLEY	Cole Information Services
	LUIS CENDANA INSURANCE AGENCY	Cole Information Services
	PATHWAY REALTY	Cole Information Services
	REFLEXOLOGY NERVE & MUSCULAR THERAPY	Cole Information Services
	ROYAL HAIR & NAIL SALON	Cole Information Services
	UNIVERSAL CARE	Cole Information Services
	RADIOSHACK CORP	Cole Information Services
	C & C DONUTS	Cole Information Services

1009 W CARSON ST

Year	Uses	Source
1970	CIMINO S	Pacific Telephone
	FARRELL S FLOWERS	Pacific Telephone

1013 W CARSON ST

Year	Uses	Source
2013	HOLIDAY FLOWERS & PARTY SUPPLIES	Cole Information Services
2008	HOLIDAY FLOWERS & PARTY SUPPLIES	Cole Information Services

FINDINGS

Year	Uses	Source
1970	MODERN INVESTIGATION & SECURITY PATROL INC	Pacific Telephone

1015 W CARSON ST

Year	Uses	Source
1970	BLUE POODLE THE	Pacific Telephone

1019 W CARSON ST

Year	Uses	Source
2013	LOS ALTOS MEAT MARKET	Cole Information Services
2008	PAYLESS SHOESOURCE	Cole Information Services
	LOS ALTOS MEAT MARKET	Cole Information Services

1029 W CARSON ST

Year	Uses	Source
2013	FORTUNE BOWL	Cole Information Services
	FORTUNE BOWL	Cole Information Services

w carson st

1029 w carson st

Year	Uses	Source
1970	HICKORY BELL BBQ	Pacific Telephone

W CARSON ST

1037 W CARSON ST

Year	Uses	Source
2013	ANCHORAGE LIQUOR	Cole Information Services
	ANCHORAGE LIQUOR	Cole Information Services
2008	ANCHORAGE LIQUOR	Cole Information Services
	ANCHORAGE LIQUOR	Cole Information Services

w carson st

1037 w carson st

Year	Uses	Source
1970	ANCHOR LIQUORS OFC AND WHSE	Pacific Telephone

FINDINGS

W CARSON ST

1039 W CARSON ST

Year	Uses	Source
2013	BELLA VIDA	Cole Information Services

1047 W CARSON ST

Year	Uses	Source
2013	ODYSSEY INVESTMENTS	Cole Information Services
	COMIC CULT	Cole Information Services
2008	LUISITO LOPEZ ATTORNEY AT LAW	Cole Information Services
	DSD HEALTH & BEAUTY PRODUCTS	Cole Information Services
	MOUNTAIN BEACH MATERIALS INC	Cole Information Services
	ACE PROMOTIONS UNLIMITED INC	Cole Information Services
	GLOBAL HEALTH SERVICES INC	Cole Information Services
	MEDICAL MARKETING SERVICES LLC	Cole Information Services
	HOUSE OF MOVIES	Cole Information Services
	ADVANTAGE NURSES INTERNATIONAL INC	Cole Information Services
1975	General Offices	Pacific Telephone
1971	Den Wienerschnitzel General Offices	Pacific Telephone
1970	DER WIENERSCHNITZEL	Pacific Telephone
	DER WIENERSCHNITZEL	Pacific Telephone

1055 W CARSON ST

Year	Uses	Source
2013	DEANS CAMERA REPAIR	Cole Information Services
2008	DEANS CAMERA REPAIR	Cole Information Services

1077 W CARSON ST

Year	Uses	Source
2013	KAM WAH LAU RESTAURANT	Cole Information Services
2008	GOLDEN PHEASANT CHINESE RESTAURANT	Cole Information Services
1970	PIE PLACE	Pacific Telephone

1101 W CARSON ST

Year	Uses	Source
2013	TSHIRT WAREHOUSE NO 11	Cole Information Services
2008	COAT SPORTS WEAR CO	Cole Information Services
	TOTAL SPORTSWEAR CO	Cole Information Services

Year	Uses	Source
1970	KINNEYS SHOES	Pacific Telephone

1113 W CARSON ST

Year	Uses	Source
1970	GINNIE S HAIR STYLES	Pacific Telephone

1119 W CARSON ST

Year	Uses	Source
1970	JEAN S YARDAGE	Pacific Telephone

1153 W CARSON ST

Year	Uses	Source
2013	FIESTA GRILL	Cole Information Services

w carson st

1153 w carson st

Year	Uses	Source
1995	CARSON VIDEO CENTER	Pacific Bell
1990	CARSON VIDEO CENTER	Pacific Bell

W CARSON ST

835 W CARSON ST

Year	Uses	Source
2013	JACK IN THE BOX	Cole Information Services
2008	JACK IN THE BOX	Cole Information Services

w carson st

835 w carson st

Year	Uses	Source
1995	JACK IN THE BOX FAMILY RESTAURANTS	Pacific Bell
1990	JACK-IN-THE-BOX FAMILY RESTAURANTS	Pacific Bell

W CARSON ST

911 W CARSON ST

Year	Uses	Source
2013	SHELL	Cole Information Services

Year	Uses	Source
2008	SHELL CARSON	Cole Information Services

w carson st

911 w carson st

Year	Uses	Source
1995	TORRANCE HARBOR SHELL	Pacific Bell
1990	HARBOR GENERAL SHELL	Pacific Bell
1970	HARBOR GENERAL SHELL SERVICE	Pacific Telephone

W CARSON ST

923 W CARSON ST

Year	Uses	Source
2013	SMILECARE DENTAL GROUP	Cole Information Services
2008	COMMUNITY DENTAL SERVICES	Cole Information Services

937 W CARSON ST

Year	Uses	Source
1970	MC AVOY LENA	Pacific Telephone

941 W CARSON ST

Year	Uses	Source
2013	HARBOR MANOR CONDO & ASSOCIATION	Cole Information Services
	GENEVIEVE CATON	Cole Information Services
2008	R & B GROUP SERVICES INC	Cole Information Services
1970	GRIFFITH ADA	Pacific Telephone

943 W CARSON ST

Year	Uses	Source
2013	HARBOR COVE APARTMENTS	Cole Information Services
2008	HARBOR COVE APARTMENTS	Cole Information Services
	TRANSILVANIA CONSTRUCTION	Cole Information Services
1970	CARRILLO LUIS C	Pacific Telephone

945 W CARSON ST

Year	Uses	Source
2013	LAUNDRY USA	Cole Information Services
2008	MOKETA INC	Cole Information Services
	SHIMANCHU TRADING	Cole Information Services

FINDINGS

Year	Uses	Source
2008	REHAN VIRENDER	Cole Information Services

975 W CARSON ST

Year	Uses	Source
2013	HARBORUCLA CHILDRENS CTR	Cole Information Services
2008	KNOWLEDGE LEARNING CORP	Cole Information Services

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
1000 West Carson Street	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1976, 1972, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
1001 W CARSON	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1001 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1009 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1013 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1013 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1015 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1019 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1025 E CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1029 w carson st	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1029 W CARSON ST	2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1029 W CARSON ST	2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1037 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1037 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1037 w carson st	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1039 W CARSON ST	2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1045 CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1047 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1047 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
1055 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1077 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1077 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1101 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1101 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1102 216TH W	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1102 W 216TH ST	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1106 W 216TH ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1112 W 216TH ST	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1113 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1116 216TH W	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
1116 W 216TH ST	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1119 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1124 W 216TH ST	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1153 w carson st	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1153 W CARSON ST	2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
1156 W 216TH ST	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21403 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21409 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21412 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21424 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21425 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
21500 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21501 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21502 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21505 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21506 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21512 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21513 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21514 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21515 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21516 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21517 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
21518 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21520 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21524 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21527 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1945, 1944, 1942, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21527 BERENDO AVE	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21530 BROADWELL AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1992, 1991, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21534 MEYLER AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21534 MEYLER ST	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21602 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21603 1/2 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21603 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1949, 1948, 1947, 1945, 1944, 1942, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
21605 1/2 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21605 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21606 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21607 1/2 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21607 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21609 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1985, 1981, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1949, 1948, 1947, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21610 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21611 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21611 s vermont ave	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21612 1/2 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21612 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
21613 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1945, 1944, 1942, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21614 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21615 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2000, 1999, 1996, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21615 BERENDO AVE	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21618 BERENDO AVE	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
2170 s vermont ave	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21730 s vermont ave	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
21730 S VERMONT AVE	2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
826 W 220TH ST	2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
826 w 220th st	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
835 w carson st	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
835 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
911 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
911 w carson st	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
923 CARSON W	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
923 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
933 E CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
937 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
941 CARSON W	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
941 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
941 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
943 CARSON W	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
943 W CARSON ST	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
943 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
945 CARSON W	2013, 2008, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
945 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
975 W CARSON ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

1000 West Carson Street
1000 West Carson Street
Torrance, CA 90502

Inquiry Number: 3776452.4
November 05, 2013

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

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Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

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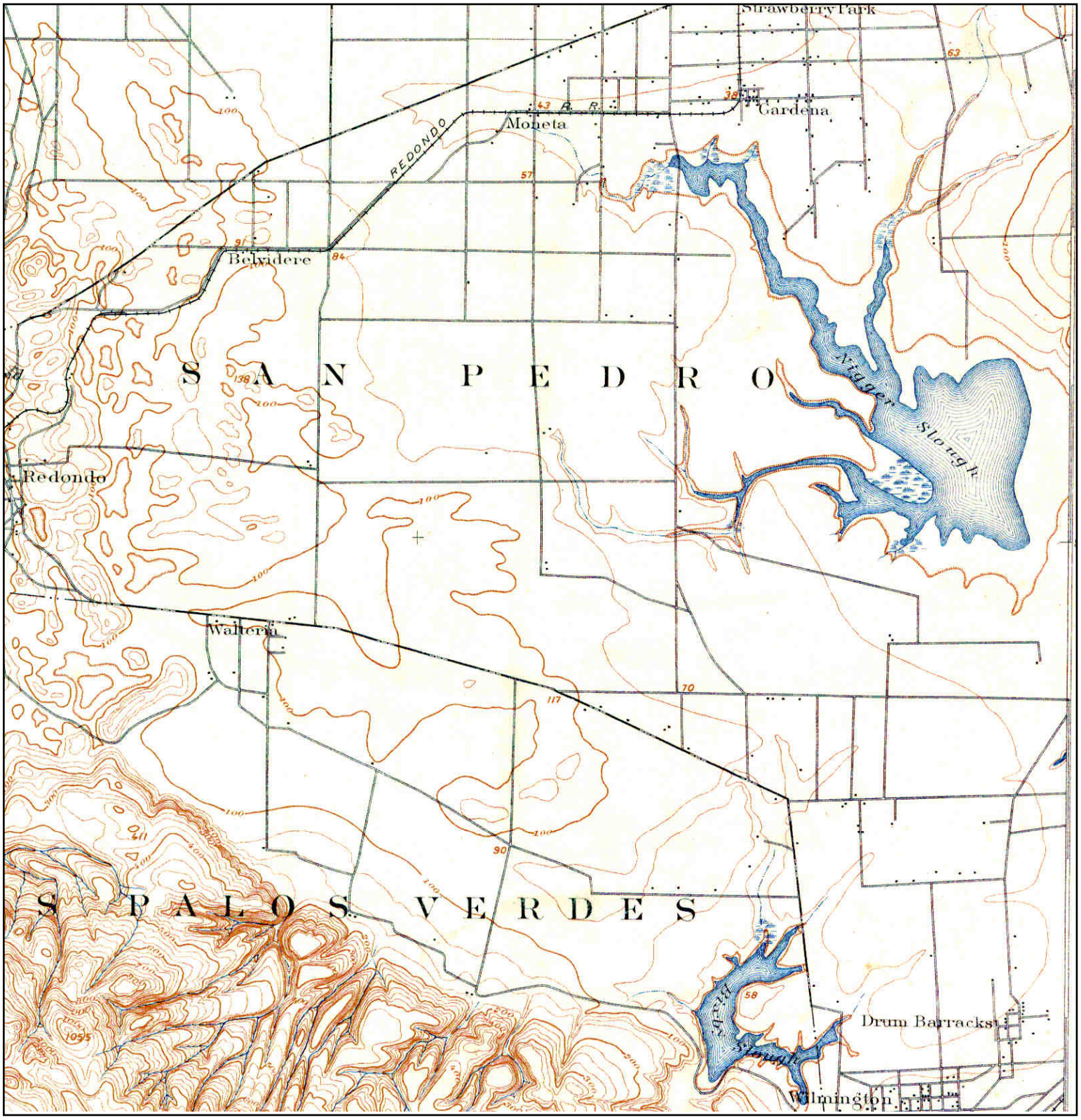
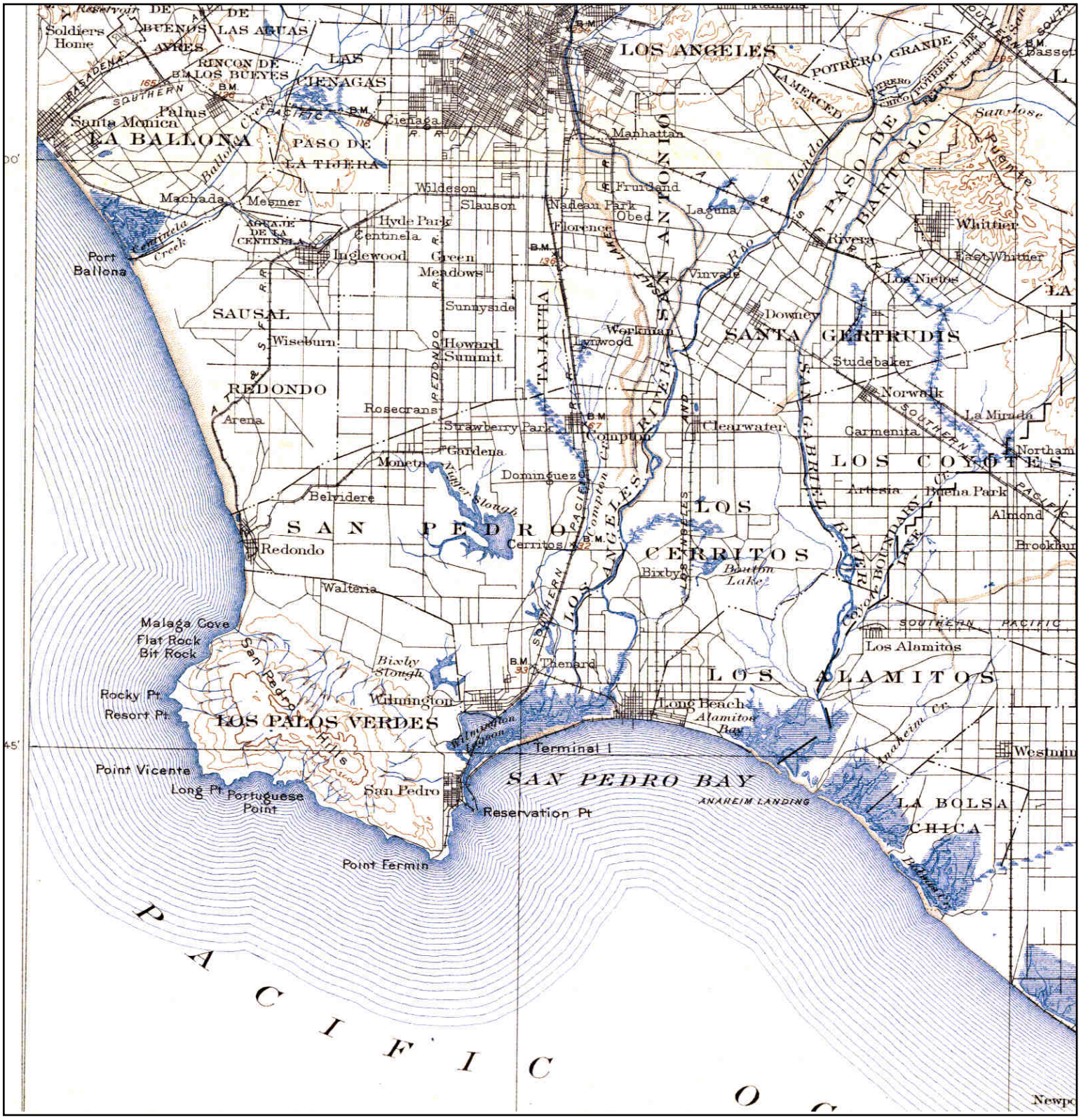
Historical Topographic Map



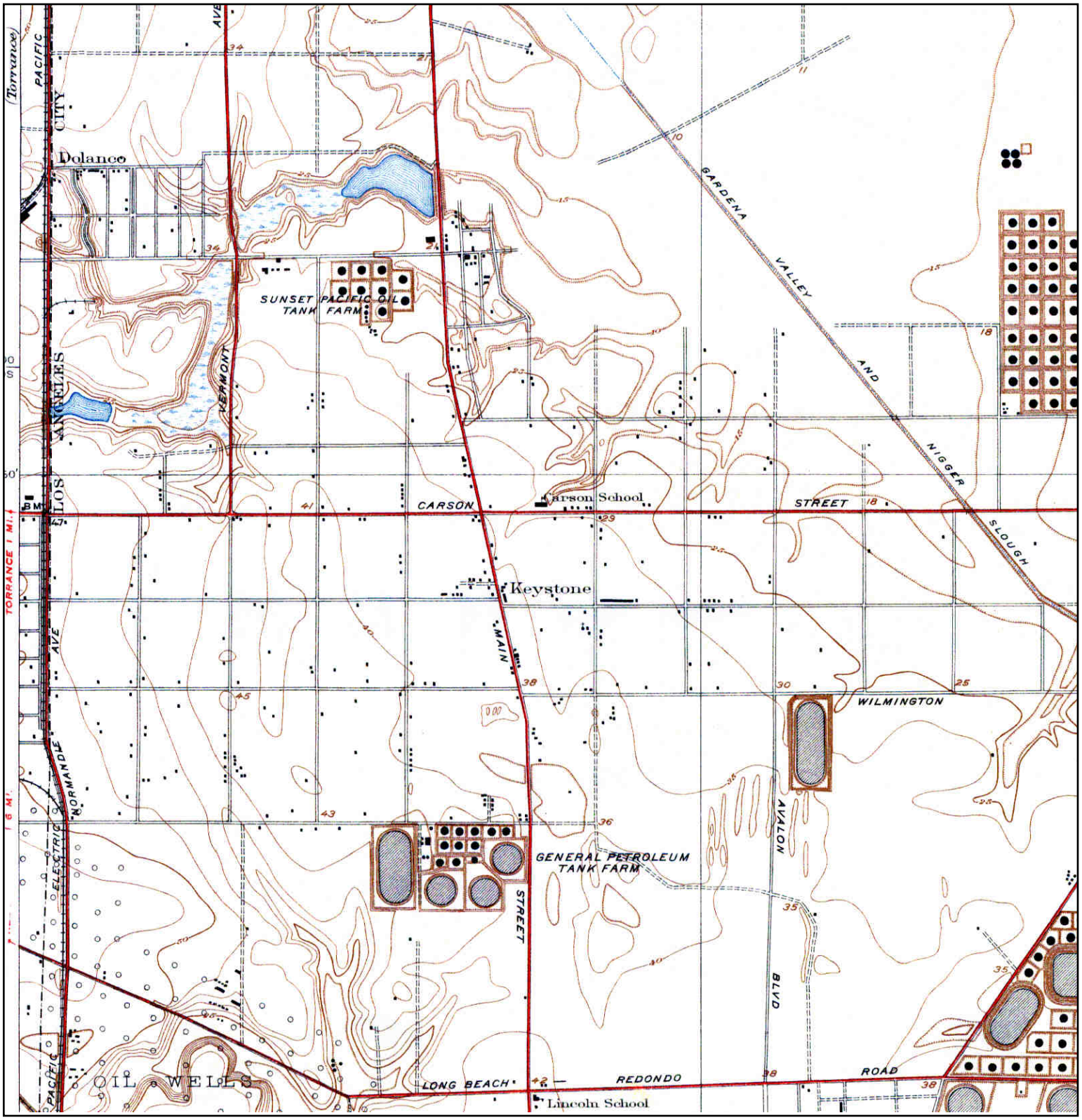
N	TARGET QUAD NAME: REDONDO MAP YEAR: 1896 SERIES: 15 SCALE: 1:62500	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



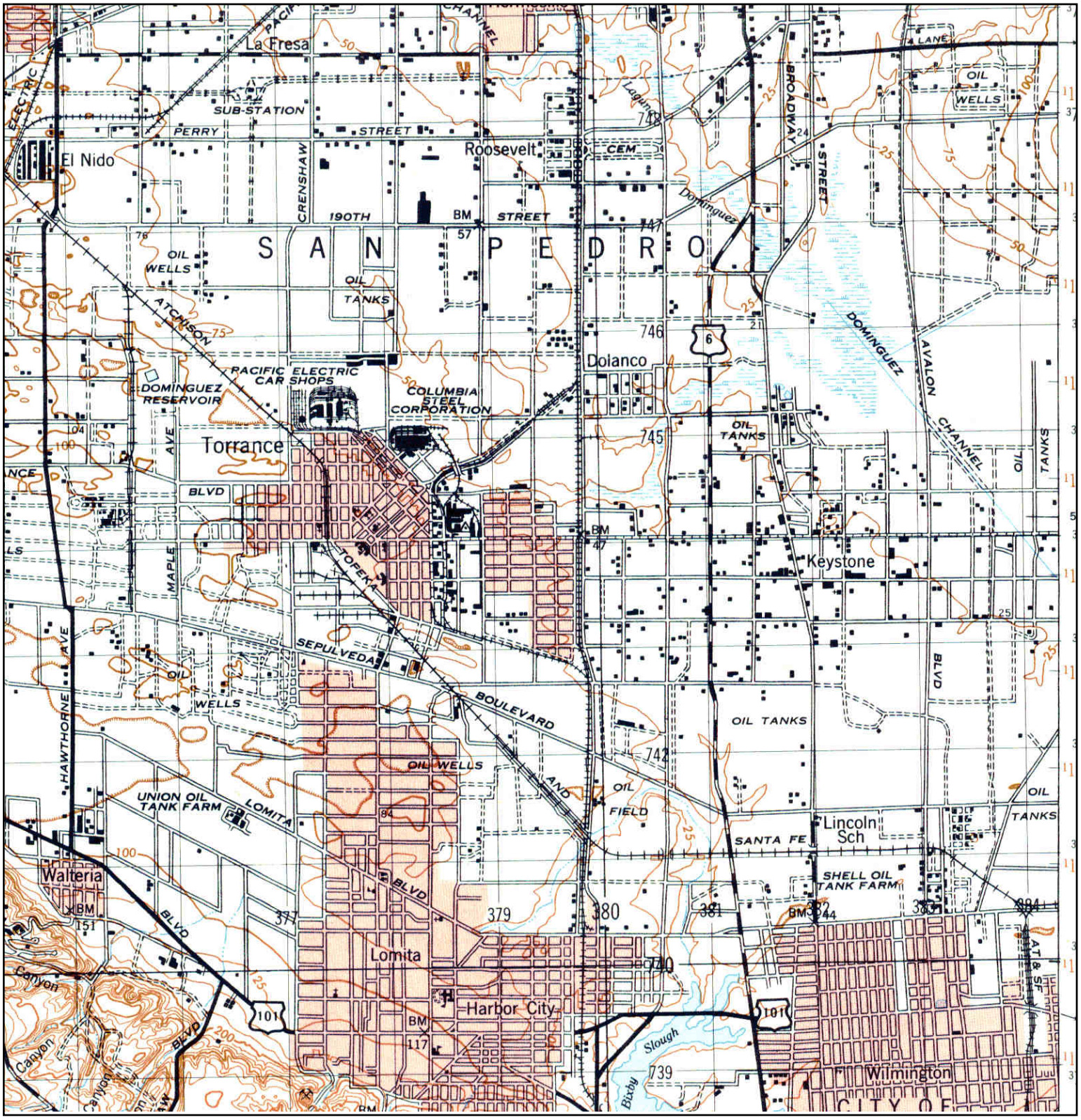
N	TARGET QUAD NAME: SOUTHERN CA SHEET 1 MAP YEAR: 1901 SERIES: 60 SCALE: 1:250000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



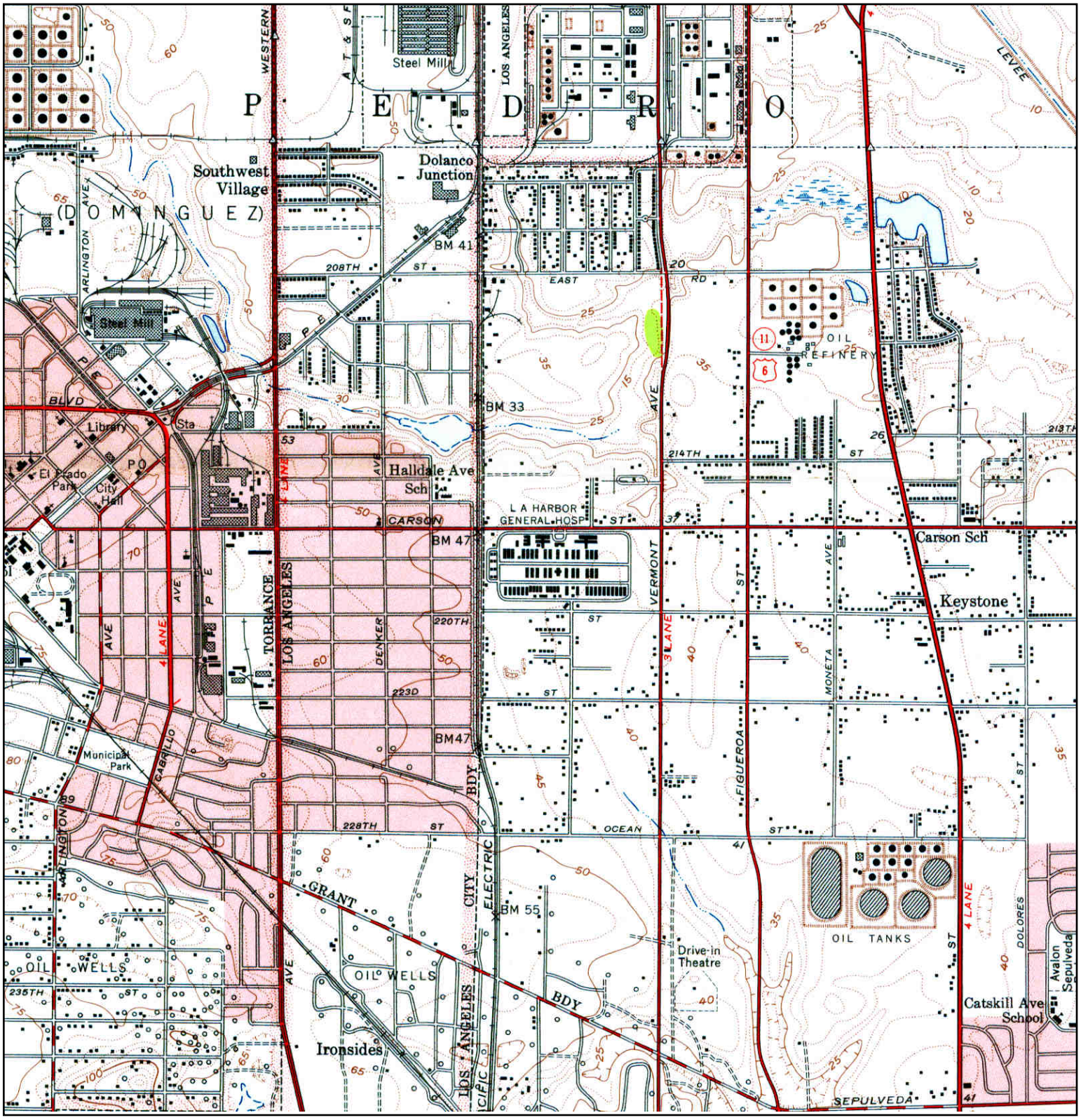
N	TARGET QUAD NAME: COMPTON MAP YEAR: 1930 SERIES: 6 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



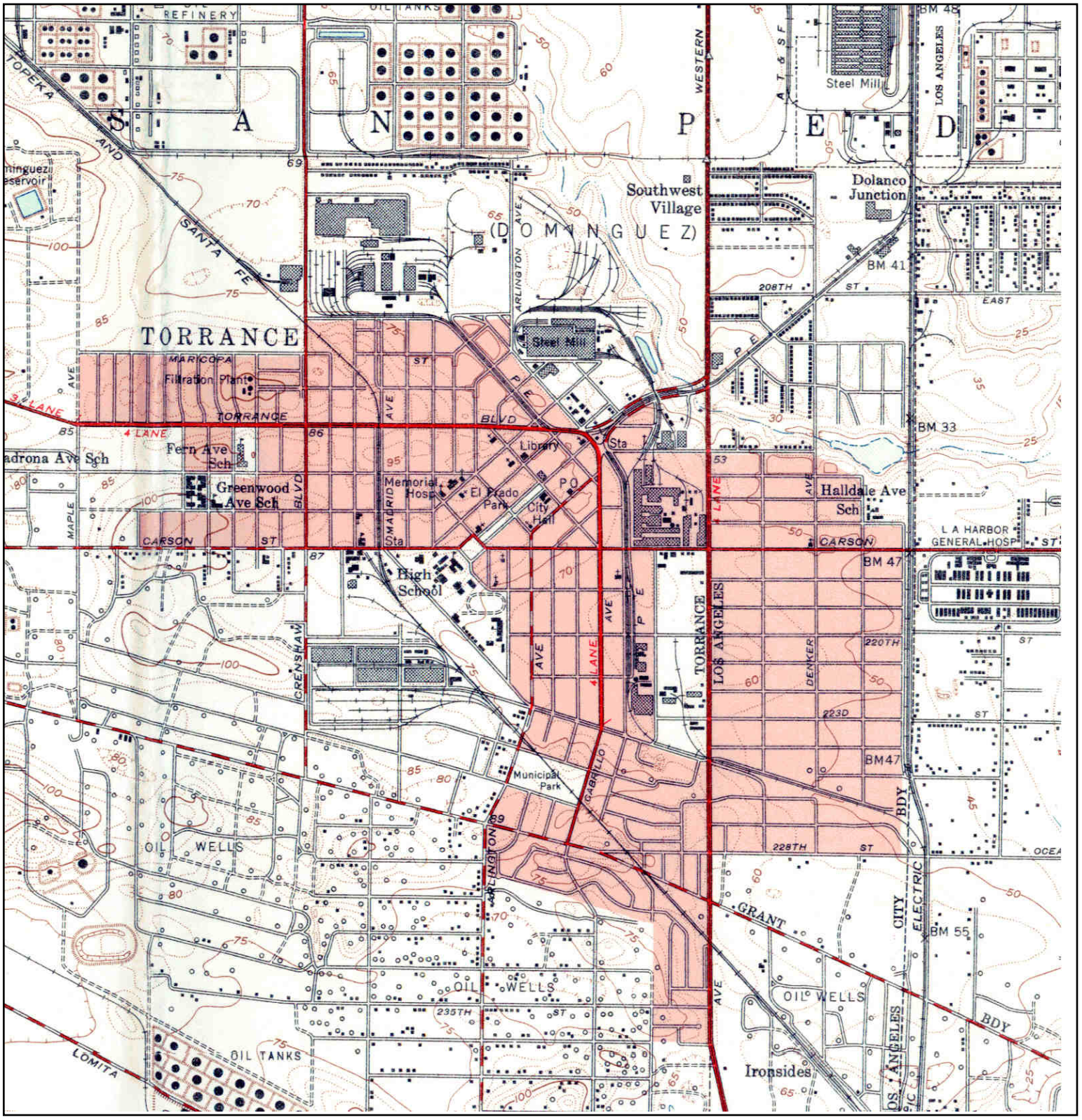
N	TARGET QUAD NAME: REDONDO MAP YEAR: 1948 SERIES: 15 SCALE: 1:50000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



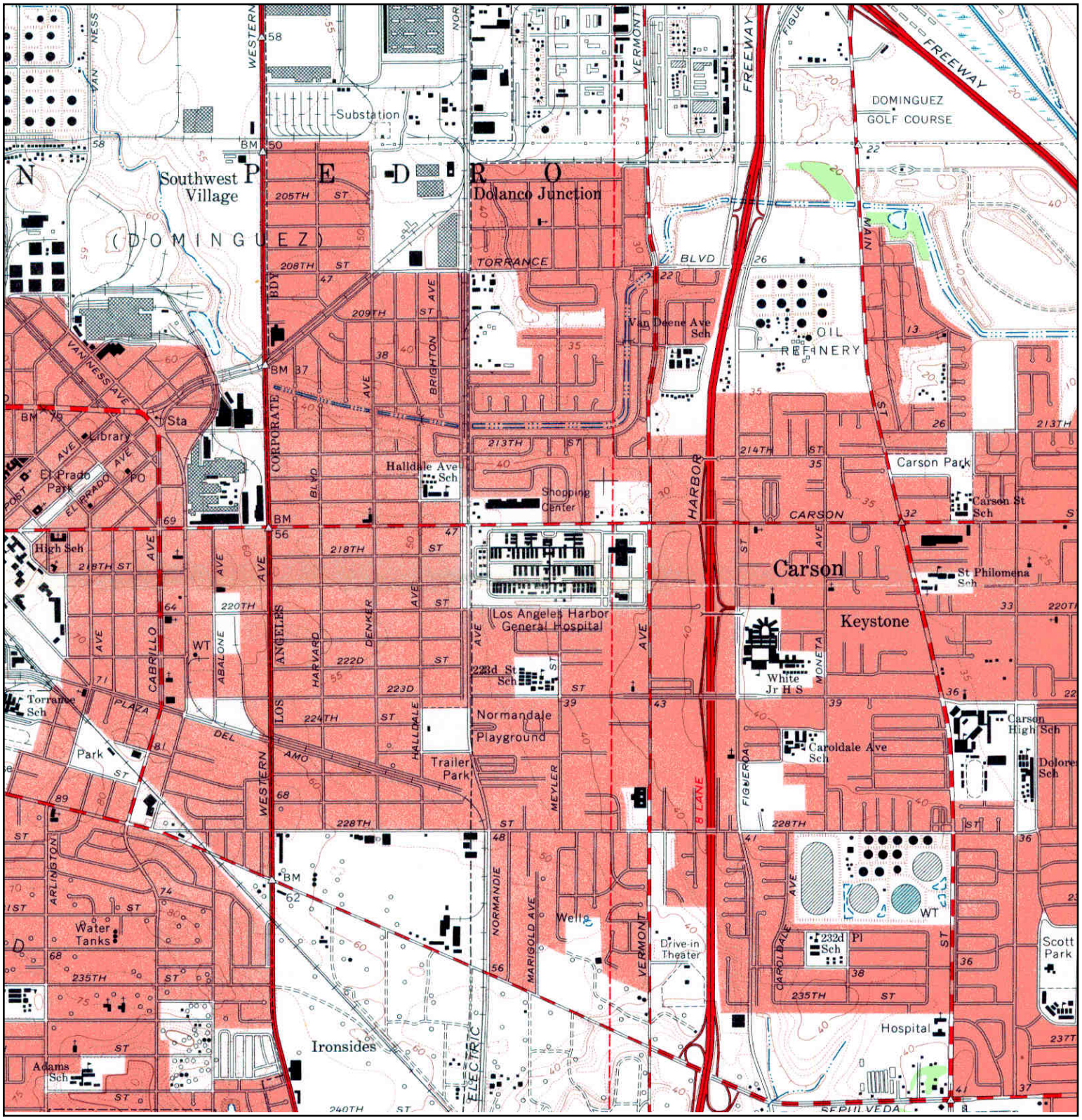
N	TARGET QUAD NAME: TORRANCE MAP YEAR: 1951 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



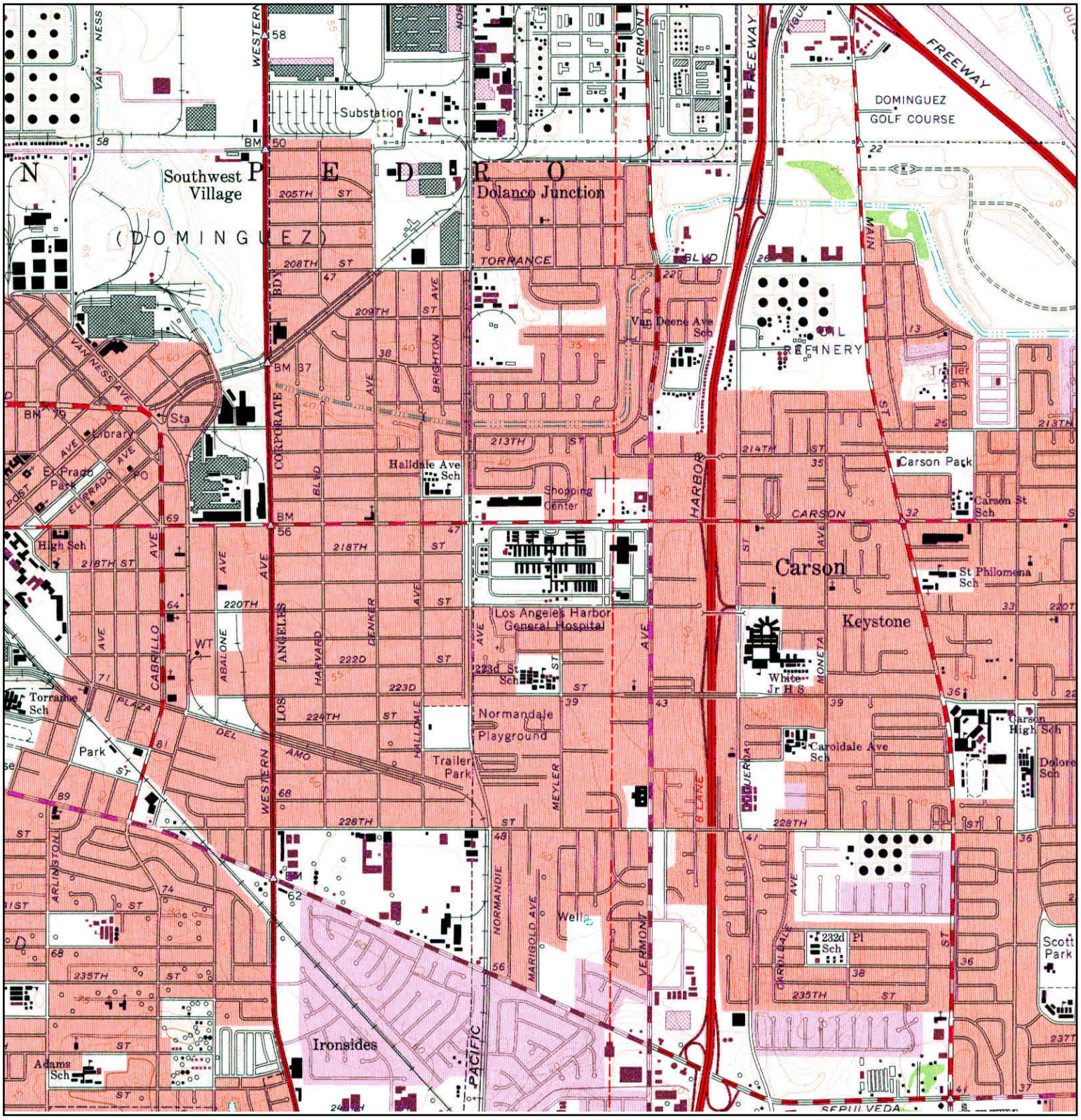
N	TARGET QUAD NAME: LONGBEACH VICINITY 3OF3 MAP YEAR: 1951 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



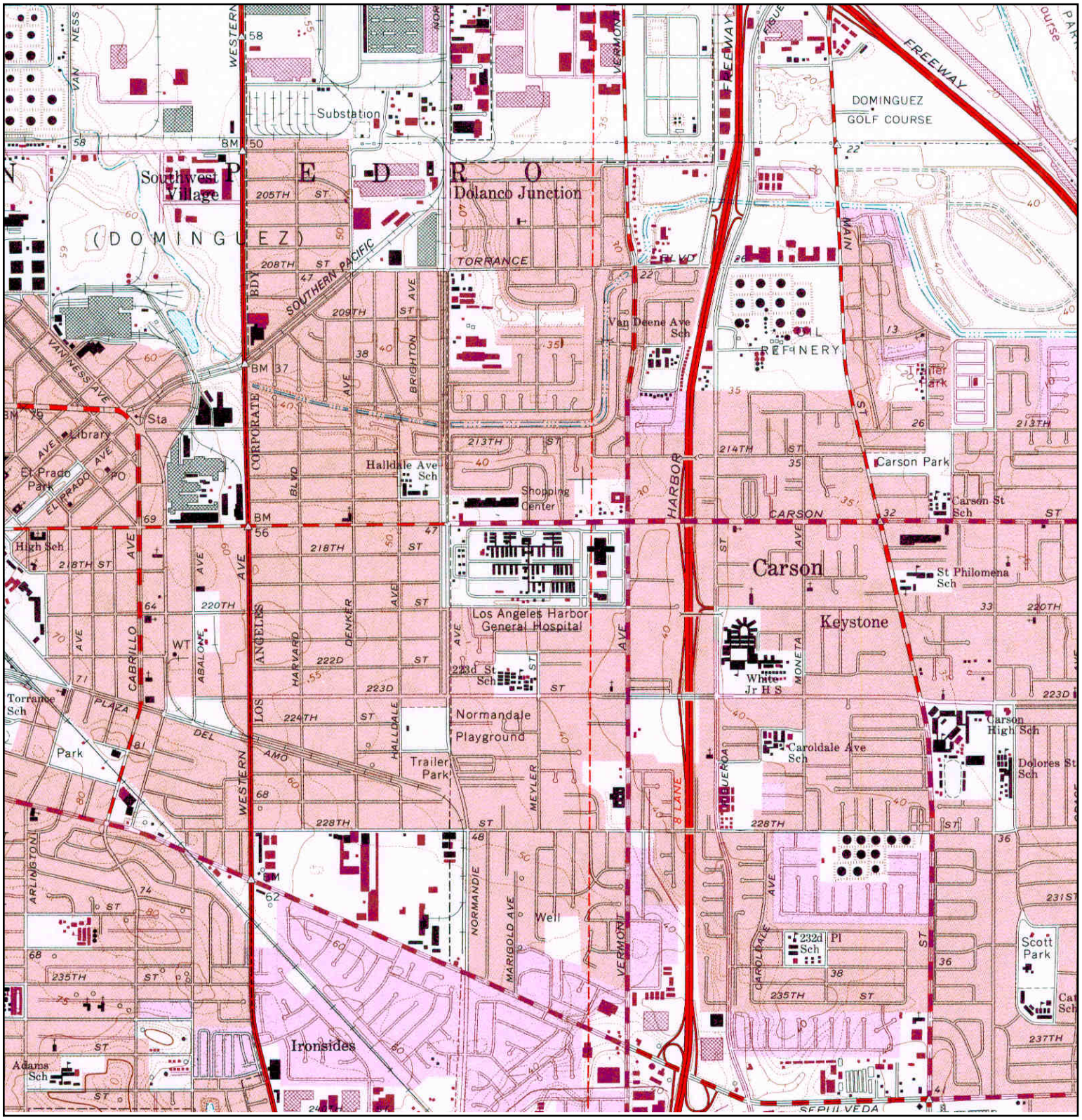
N	TARGET QUAD NAME: TORRANCE MAP YEAR: 1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



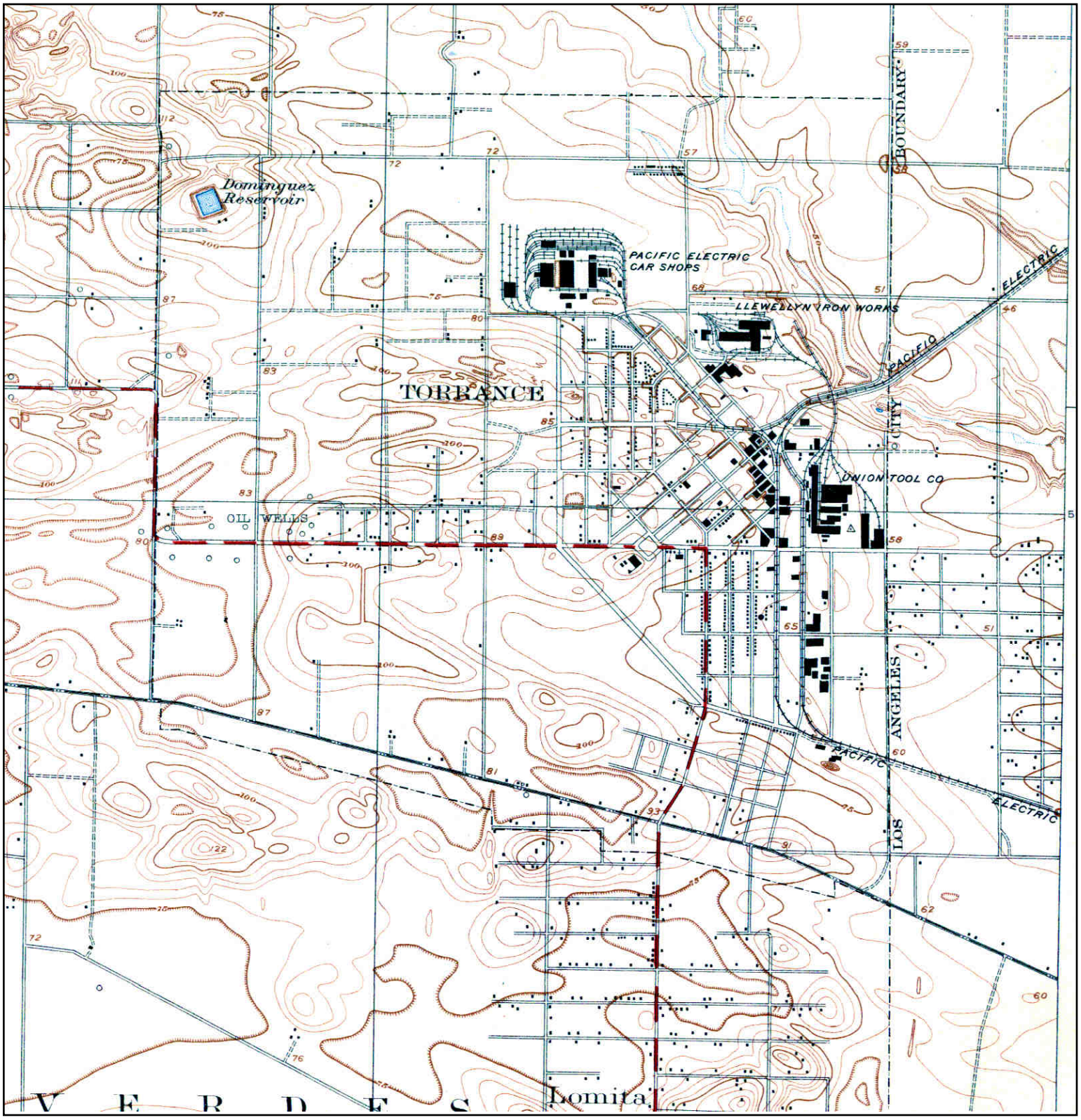
N	TARGET QUAD NAME: TORRANCE MAP YEAR: 1972 PHOTOREVISED FROM :1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



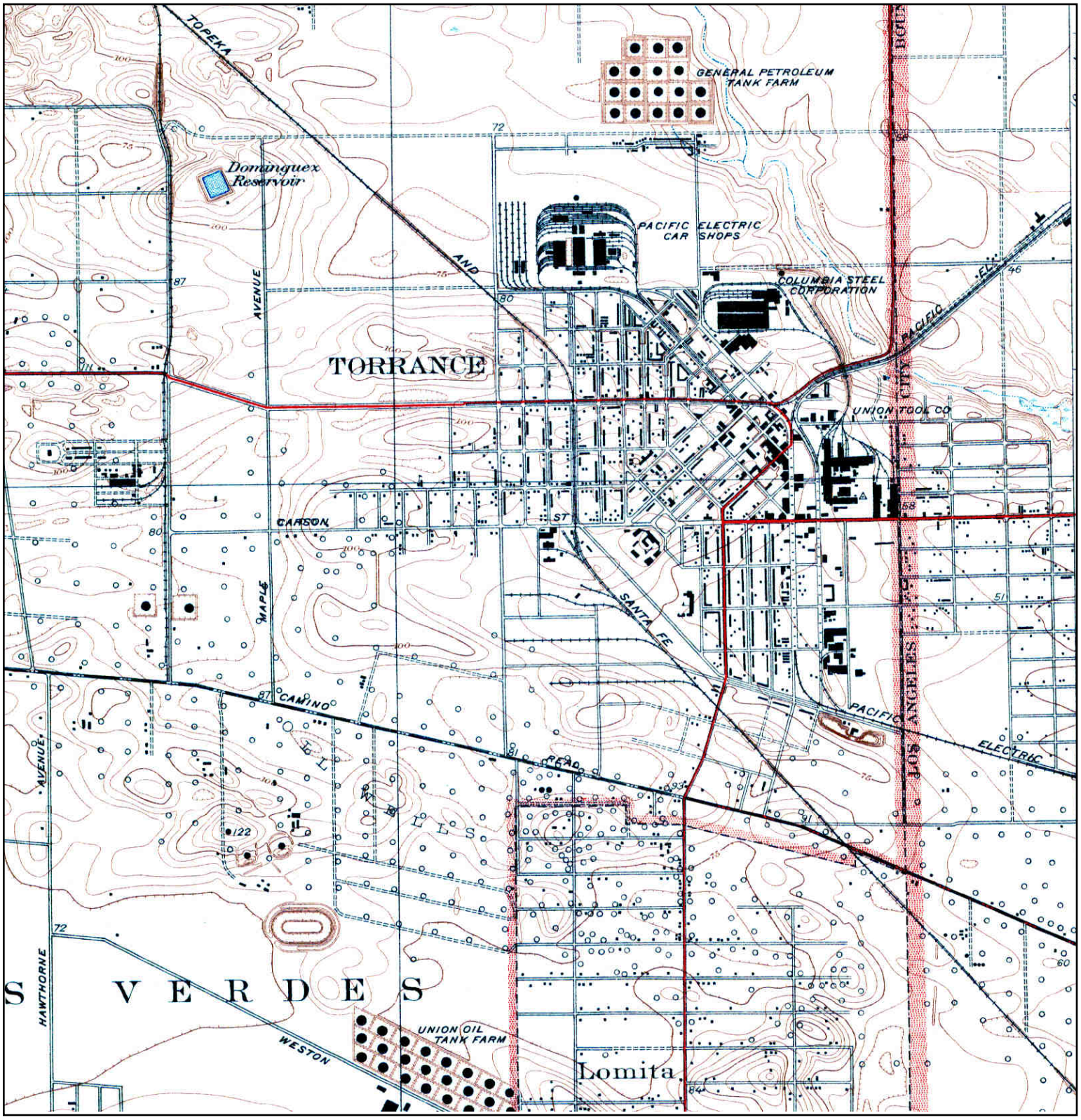
N	TARGET QUAD NAME: TORRANCE MAP YEAR: 1981 PHOTOREVISED FROM :1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



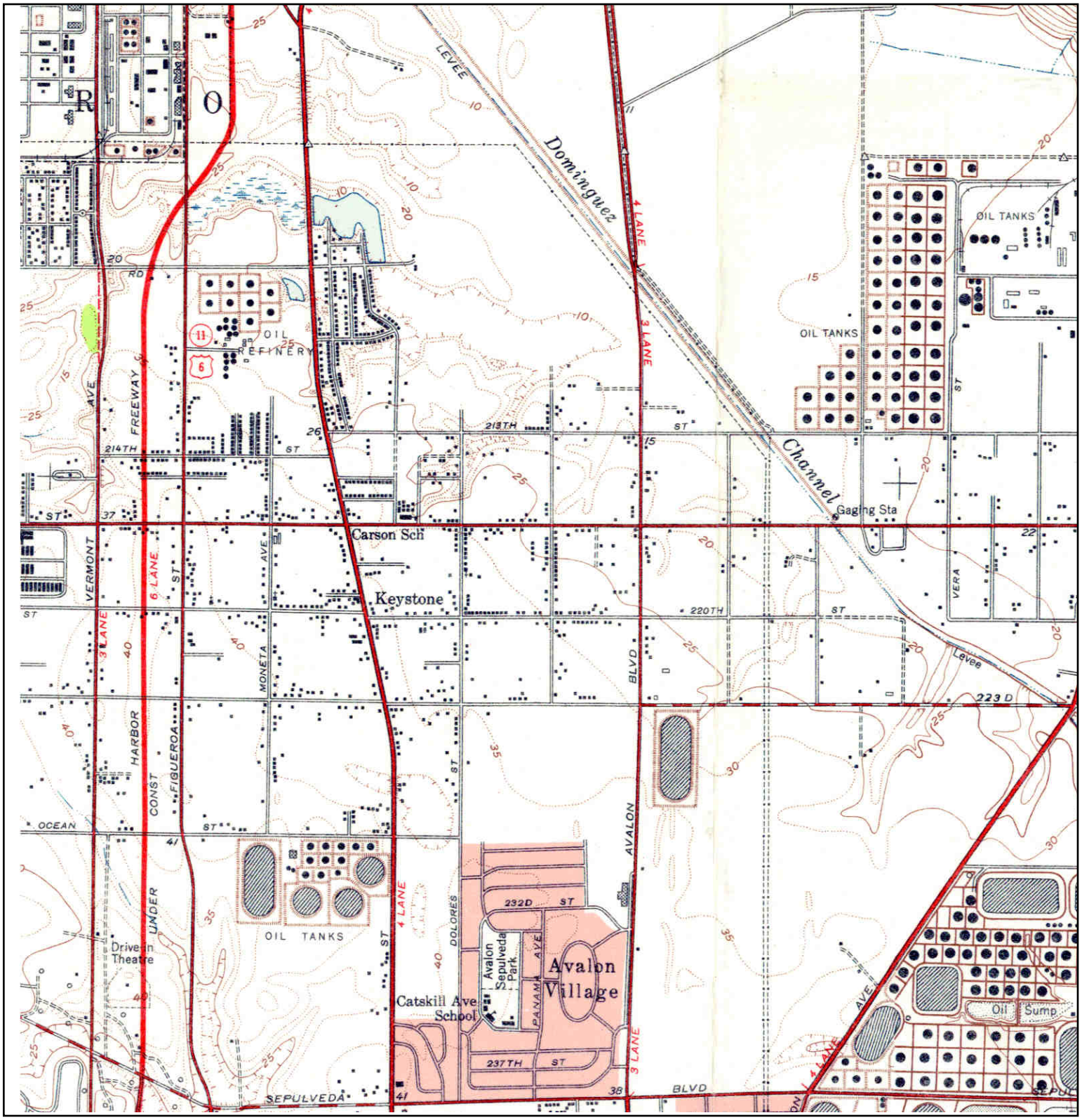
N	ADJOINING QUAD NAME: TORRANCE MAP YEAR: 1924 SERIES: 6 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



N	ADJOINING QUAD NAME: TORRANCE MAP YEAR: 1934 SERIES: 6 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

Historical Topographic Map



N	ADJOINING QUAD NAME: LONGBEACH VICINITY 2OF3 MAP YEAR: 1951 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance, CA 90502 LAT/LONG: 33.83 / -118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY#: 3776452.4 RESEARCH DATE: 11/05/2013

APPENDIX D

EDR ENVIRONMENTAL DATABASE REPORT

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Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Records Searched	A-10

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EXECUTIVE SUMMARY

A search of the environmental records was conducted by Environmental Data Resources, Inc. (EDR). NINYO & MOORE used the EDR FieldCheck System to review and/or revise the results of this search, based on independent data verification by NINYO & MOORE. The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1000 WEST CARSON STREET
TORRANCE, CA 90502

COORDINATES

Latitude (North):	33.8300000 - 33° 49' 48.00''
Longitude (West):	118.2948000 - 118° 17' 41.28''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	380183.8
UTM Y (Meters):	3743866.8
Elevation:	44 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33118-G3 TORRANCE, CA
Most Recent Revision:	1981

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 6.

Site	Database(s)	EPA ID
HARBOR U.C.L.A. MEDICAL CENTER 1000 W CARSON ST TORRANCE, CA 90063	HIST UST	N/A
LA CO HARBOR-UCLA MEDICAL CENTER 1000 W CARSON ST TORRANCE, CA 90502	RCRA-LQG	CAD079605366
1000 W. CARSON ST 1000 W. CARSON ST TORRANCE, CA 90519	CHMIRS	N/A

LOS ANGELES CO HARBOR-UCLA MEDICA 1000 W CARSON ST TORRANCE, CA 90509	HAZNET	N/A
LA CO HARBOR UCLA MEDICAL CTR 1000 W CARSON ST TORRANCE, CA 90502	UST	N/A
LA HEALTH SERVICES HARBOR/UCLA ME 1000 W CARSON ST TORRANCE, CA 90509	HAZNET	N/A
LACH/UCLA MEDICAL CENTER 1000 W CARSON AVE TORRANCE, CA 90509	LUST Status: Open - Site Assessment CA FID UST SWEEPS UST	N/A
1000 W. CARSON ST 1000 W. CARSON ST TORRANCE, CA 90519	ERNS	N/A
1000 W. CARSON ST 1000 W. CARSON ST TORRANCE, CA 90519	ERNS	N/A

DATABASES WITH NO MAPPED SITES

No sites were identified in following databases.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL ---------- Proposed National Priority List Sites

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

EXECUTIVE SUMMARY

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database

Local Lists of Hazardous waste / Contaminated Sites

HIST Cal-Sites ---------- Historical Calsites Database
Toxic Pits ---------- Toxic Pits Cleanup Act Sites

Local Land Records

LIENS 2 ---------- CERCLA Lien Information
LIENS ---------- Environmental Liens Listing
DEED ---------- Deed Restriction Listing

Other Ascertainable Records

TRIS ---------- Toxic Chemical Release Inventory System
CA BOND EXP. PLAN ---------- Bond Expenditure Plan
Cortese ---------- "Cortese" Hazardous Waste & Substances Sites List
Notify 65 ---------- Proposition 65 Records

INDIAN RESERV---------- Indian Reservations

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

An online review and analysis by NINYO & MOORE of the NPL list,
as provided by EDR, and dated 04/26/2013 has revealed that there is 1 NPL site
within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***

Federal CERCLIS list

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

An online review and analysis by NINYO & MOORE of the CERCLIS list,
as provided by EDR, and dated 04/26/2013 has revealed that there is 1 CERCLIS site
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

An online review and analysis by NINYO & MOORE of the RCRA-LQG list, as provided by EDR, and dated 07/11/2013 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
EXXONMOBIL OIL CORP.	21700 S VERMONT AVE	ENE 0 - 1/8 (0.002 mi.)	E34	86

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

An online review and analysis by NINYO & MOORE of the RCRA-SQG list, as provided by EDR, and dated 07/11/2013 has revealed that there are 9 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HARBOR UCLA DIAGNOSTIC IMAGING	***21828 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***13***	***60***
NORGE VILLAGE CLEANERS	1161 W CARSON ST	NW 0 - 1/8 (0.003 mi.)	C49	100
K & K AUTO PARTS	1407 W CARSON STREET	WNW 1/8 - 1/4 (0.150 mi.)	K80	128
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
EXXONMOBIL OIL CORP 10164	***21700 S VERMONT AVE***	***ENE 0 - 1/8 (0.002 mi.)***	***E36***	***87***
SHELL SERVICE STATION	***911 W CARSON***	***ENE 0 - 1/8 (0.003 mi.)***	***E53***	***103***
HERTZ EQUIPMENT RENTAL	***21600 S VERMONT AVE***	***ENE 0 - 1/8 (0.102 mi.)***	***I64***	***111***
X PERT REBUILD & MACHINE UNIT	22102 S VERMONT AVE	SE 0 - 1/8 (0.103 mi.)	J67	115
PARAGON ENGINEERING INC	22106 S VERMONT AVE	SE 0 - 1/8 (0.107 mi.)	J68	117
BYROM RADIATOR SERVICE	22208 SO VERMONT AVE	SE 1/8 - 1/4 (0.196 mi.)	L99	141

Federal institutional controls / engineering controls registries

US ENG CONTROLS: A listing of sites with engineering controls in place.

An online review and analysis by NINYO & MOORE of the US ENG CONTROLS list, as provided by EDR, and dated 06/17/2013 has revealed that there is 1 US ENG CONTROLS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***

US INST CONTROL: A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

An online review and analysis by NINYO & MOORE of the US INST CONTROL list,
as provided by EDR, and dated 06/17/2013 has revealed that there is 1 US INST CONTROL site
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***

Federal ERNS list

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

An online review and analysis by NINYO & MOORE of the ERNS list,
as provided by EDR, and dated 12/31/2012 has revealed that there are 4 ERNS sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1259 WEST CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B29	82

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	945 WEST CARSON	ENE 0 - 1/8 (0.001 mi.)	F32	85
Not reported	22104 S.VERMONT	SE 0 - 1/8 (0.107 mi.)	J70	119
Not reported	925 W. 223RD STREET	SSE 1/8 - 1/4 (0.245 mi.)	N111	155

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

An online review and analysis by NINYO & MOORE of the ENVIROSTOR list,
as provided by EDR, and dated 09/05/2013 has revealed that there is 1 ENVIROSTOR site
within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LA PORT O EMB STATION HOSP Status: Inactive - Needs Evaluation		0 - 1/8 (0.000 mi.)	A10	54

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

An online review and analysis by NINYO & MOORE of the LUST list,
as provided by EDR, and dated 09/16/2013 has revealed that there are 10 LUST sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL #4944 Status: Completed - Case Closed	1259 CARSON ST. W.	0 - 1/8 (0.000 mi.)	B11	55
TONYS UNOCAL	***1259 W CARSON ST***	***WNW 0 - 1/8 (0.001 mi.)***	***B23***	***77***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL #11-MAF Status: Open - Site Assessment	21700 VERMONT AVE S	0 - 1/8 (0.001 mi.)	E18	68
SHELL Status: Completed - Case Closed	911 CARSON ST. W	ENE 0 - 1/8 (0.001 mi.)	E20	72
JOHN BATES Status: Completed - Case Closed	21600 VERMONT AVE S	ENE 0 - 1/8 (0.102 mi.)	I65	113
JOHN BATES	21600 VERMONT AVE S	ENE 0 - 1/8 (0.102 mi.)	I66	114
DOYLE BROTHERS INC. Status: Completed - Case Closed	22203 VERMONT AVE S	SE 1/8 - 1/4 (0.176 mi.)	L86	131
UNOCAL #2529 Status: Completed - Case Closed	***600 CARSON***	***ENE 1/8 - 1/4 (0.222 mi.)***	***M103***	***145***
SO-CAL Status: Completed - Case Closed	21629 FIGUEROA ST S	ENE 1/8 - 1/4 (0.241 mi.)	M105	149
ARCO #5108 Status: Completed - Case Closed	***21704 FIGUEROA***	***E 1/8 - 1/4 (0.249 mi.)***	***M116***	***160***

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

An online review and analysis by NINYO & MOORE of the SLIC list,
as provided by EDR, and dated 09/16/2013 has revealed that there is 1 SLIC site
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARSON-NORMANDIE PLAZA, LLC Facility Status: Open - Remediation	1141 CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C47	98

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

An online review and analysis by NINYO & MOORE of the UST list,
as provided by EDR, and dated 09/16/2013 has revealed that there are 3 UST sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TOSCO/UNOCAL #30769	1259 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B24	79

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL OIL CORP S/S #18-MAF	21700 S VERMONT AVE	ENE 0 - 1/8 (0.002 mi.)	E35	87
TORRANCE HARBOR SHELL	911 W CARSON ST	ENE 0 - 1/8 (0.003 mi.)	E51	101

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

An online review and analysis by NINYO & MOORE of the SWRCY list,
as provided by EDR, and dated 09/16/2013 has revealed that there is 1 SWRCY site
within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TORRANCE RECYCLING CENTER #2	1037 W CARSON ST	NNE 0 - 1/8 (0.002 mi.)	39	92

Local Lists of Registered Storage Tanks

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

An online review and analysis by NINYO & MOORE of the CA FID UST list,
as provided by EDR, and dated 10/31/1994 has revealed that there are 3 CA FID UST sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TONYS UNOCAL	***1259 W CARSON ST***	***WNW 0 - 1/8 (0.001 mi.)***	***B23***	***77***

Lower Elevation	Address	Direction / Distance	Map ID	Page
UNITED INSTALLER	***22208 S VERMONT AVE***	***SE 1/8 - 1/4 (0.196 mi.)***	***L94***	***138***
SO-CAL RACING FUEL CO	***21629 S FIGUEROA ST***	***ENE 1/8 - 1/4 (0.241 mi.)***	***M107***	***151***

HIST UST: Historical UST Registered Database.

An online review and analysis by NINYO & MOORE of the HIST UST list,
as provided by EDR, and dated 10/15/1990 has revealed that there are 11 HIST UST sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HARBOR GENERAL HOSPITAL STEAM	1124 W CARSON ST	0 - 1/8 (0.000 mi.)	C14	63
UNION OIL SERVICE STATION #494	1259 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B27	80
SERVICE STATION 4944	1259 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B31	84

Lower Elevation	Address	Direction / Distance	Map ID	Page
IL-SUN KIM	21700 S VERMONT AVE	ENE 0 - 1/8 (0.002 mi.)	E33	85
AT&T INFORMATION SYSTEMS	826 W 220TH ST	ESE 0 - 1/8 (0.047 mi.)	G55	107
HERTZ EQUIPMENT RENTAL	***21600 S VERMONT AVE***	***ENE 0 - 1/8 (0.102 mi.)***	***I64***	***111***
DOYLE BROS, INC.	22203 S VERMONT AVE	SE 1/8 - 1/4 (0.174 mi.)	L84	130
D.C. DECKER CO. INC.	22208 S VERMONT AVE	SE 1/8 - 1/4 (0.196 mi.)	L97	140
SERVICE STATION 2529	600 W CARSON ST	ENE 1/8 - 1/4 (0.220 mi.)	M100	142
SO-CAL RACING PRODUCTS INC	21629 FIGUEROA ST	ENE 1/8 - 1/4 (0.241 mi.)	M104	148
CLIFFORD E MALONE	21704 FIGUEROA ST	E 1/8 - 1/4 (0.249 mi.)	M115	159

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

An online review and analysis by NINYO & MOORE of the SWEEPS UST list,
as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TONYS UNOCAL	***1259 W CARSON ST***	***WNW 0 - 1/8 (0.001 mi.)***	***B23***	***77***

Lower Elevation	Address	Direction / Distance	Map ID	Page
BICKERTON INDUSTRIES INC	22118 S VERMONT AVE	SE 0 - 1/8 (0.115 mi.)	J72	120
UNITED INSTALLER	***22208 S VERMONT AVE***	***SE 1/8 - 1/4 (0.196 mi.)***	***L94***	***138***
UNOCAL CORP SS 2529	600 W CARSON ST	ENE 1/8 - 1/4 (0.220 mi.)	M101	143
SO-CAL RACING FUEL CO	***21629 S FIGUEROA ST***	***ENE 1/8 - 1/4 (0.241 mi.)***	***M107***	***151***

Records of Emergency Release Reports

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

An online review and analysis by NINYO & MOORE of the CHMIRS list,
as provided by EDR, and dated 03/12/2013 has revealed that there are 4 CHMIRS sites
within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	21804 SOUTH VERMONT	0 - 1/8 (0.001 mi.)	15	64

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	21700 S. VERMONT	0 - 1/8 (0.001 mi.)	E17	67
Not reported	21414 VERMONT AVE, UNIN	NE 1/8 - 1/4 (0.180 mi.)	88	134
Not reported	925 WEST 223RD STREET	SSE 1/8 - 1/4 (0.245 mi.)	N110	153

Other Ascertainable Records

CONSENT: Major Legal settlements that establish responsibility and standards for cleanup at NPL (superfund) sites. Released periodically by U.S. District Courts after settlement by parties to litigation matters.

An online review and analysis by NINYO & MOORE of the CONSENT list,
as provided by EDR, and dated 06/30/2013 has revealed that there is 1 CONSENT site
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

An online review and analysis by NINYO & MOORE of the ROD list,
as provided by EDR, and dated 04/26/2013 has revealed that there is 1 ROD site
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MONTROSE CHEMICAL CORP.	***20201 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***0***	***17***

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

An online review and analysis by NINYO & MOORE of the HIST CORTESE list,
as provided by EDR, and dated 04/01/2001 has revealed that there are 7 HIST CORTESE sites
within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL #4944	1259 CARSON	0 - 1/8 (0.000 mi.)	B12	60

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL #11-MAF	21700 VERMONT	ENE 0 - 1/8 (0.002 mi.)	E38	92
JOHN BATES	21600 VERMONT	ENE 0 - 1/8 (0.102 mi.)	I63	111
DOYLE BROTHERS INC.	22203 VERMONT	SE 1/8 - 1/4 (0.176 mi.)	L87	133
UNOCAL #2529	***600 CARSON***	***ENE 1/8 - 1/4 (0.222 mi.)***	***M103***	***145***
SO-CAL	21629 FIGUEROA	ENE 1/8 - 1/4 (0.241 mi.)	M106	151
ARCO #5108	***21704 FIGUEROA***	***E 1/8 - 1/4 (0.249 mi.)***	***M116***	***160***

EXECUTIVE SUMMARY

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

An online review and analysis by NINYO & MOORE of the HAZNET list, as provided by EDR, and dated 12/31/2012 has revealed that there are 58 HAZNET sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HARBOR UCLA DIAGNOSTIC IMAGING	***21828 S NORMANDIE AVE***	***0 - 1/8 (0.000 mi.)***	***13***	***60***
KRAGEN AUTO PARTS STORE #1564	1213 W CARSON ST	0 - 1/8 (0.001 mi.)	D16	65
RITE AID STORE #5492	1237 N CARSON ST	WNW 0 - 1/8 (0.001 mi.)	D19	71
C AND S PHOTO EXPRESS	1255 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B21	76
TONY'S UNOCAL #1	1259 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B25	79
TOSCO CORPORATION STATION #307	1259 W CARSON	WNW 0 - 1/8 (0.001 mi.)	B26	80
CONOCO PHILLIPS #254944	1259 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B28	81
TONY'S 76	1259 W CARSON ST	WNW 0 - 1/8 (0.001 mi.)	B30	82
B M A LOS ANGELES	1123 W CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C41	93
BIOMARIN	1123 CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C42	94
LOS ANGELES BIOMEDICAL RESERAC	1124 W CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C43	95
B M A LOS ANGELES	1123 WEST CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C44	96
BIOMARIN PHARMACEUTICAL INC	1123 W CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C45	97
MERONA ENTERPRISES DBA CARSON	1141 W CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C46	98
MERONA ENTERPRISES DBA CARSON-	1141 W CARSON ST	NNW 0 - 1/8 (0.002 mi.)	C48	99
NAWAID RANA	22114 KENWOOD AVE	SW 0 - 1/8 (0.090 mi.)	61	110
SK AUTO PARTS INC	1407 CARSON ST	WNW 1/8 - 1/4 (0.150 mi.)	K78	126
K K & T AUTO PARTS	1407 W CARSON STREET	WNW 1/8 - 1/4 (0.150 mi.)	K79	127
JANSEN ANIMAL HOSPITAL	22231 S VERMONT AVE	SE 1/8 - 1/4 (0.195 mi.)	L92	138

Lower Elevation	Address	Direction / Distance	Map ID	Page
CARLOS M V FAUSTO DDS	21720 S VERMONT AVE SUI	ENE 0 - 1/8 (0.001 mi.)	E22	76
EXXONMOBIL OIL CORP 10164	***21700 S VERMONT AVE***	***ENE 0 - 1/8 (0.002 mi.)***	***E36***	***87***
MOBIL OIL CORPORATION 18-MAF	21700 VERMONT AVE	ENE 0 - 1/8 (0.002 mi.)	E37	90
T SHIRT WAREHOUSE	1101 WEST CARSON	N 0 - 1/8 (0.002 mi.)	C40	93
SHELL	911 W CARSON	ENE 0 - 1/8 (0.003 mi.)	E50	101
TESORO REFINING & MARKETING/CA	911 W CARSON ST	ENE 0 - 1/8 (0.003 mi.)	E52	101
SHELL SERVICE STATION	***911 W CARSON***	***ENE 0 - 1/8 (0.003 mi.)***	***E53***	***103***
SMILE CARE DENTAL GROUP	923 W CARSON ST	ENE 0 - 1/8 (0.003 mi.)	F54	105
BEPO AUTO REPAIR	802 W 220TH ST	ESE 0 - 1/8 (0.063 mi.)	G56	107
VISION AUTO SERVICE CENTER	800 W CARSON ST STE 32	ENE 0 - 1/8 (0.088 mi.)	H57	108
MISSION STORAGE	735 W CARSON ST	ENE 0 - 1/8 (0.088 mi.)	H58	108
CAR TECH MG AUTO SPECIALIST	800 W CARSON ST STE 35	ENE 0 - 1/8 (0.088 mi.)	H59	109
TORRANCE BUSINESS PLAZA	800 W CARSON ST STE 35	ENE 0 - 1/8 (0.088 mi.)	H60	109
THE 21600 VERMONT GROUP	21600 VERMONT	ENE 0 - 1/8 (0.102 mi.)	I62	111
HERTZ EQUIPMENT RENTAL	***21600 S VERMONT AVE***	***ENE 0 - 1/8 (0.102 mi.)***	***I64***	***111***
PARAGON ENGINEERING INC	22106 S VERMONT AVE	SE 0 - 1/8 (0.107 mi.)	J69	118
DRAKE RCD INC	22106 S VERMONT AVE STE	SE 0 - 1/8 (0.107 mi.)	J71	119
BICKERTON IRON WORKS	22118 S VERMONT AVE	SE 0 - 1/8 (0.119 mi.)	J73	121
VERMONT INDUSTRIAL CTR	22122 S VERMONT AVE STE	SE 0 - 1/8 (0.125 mi.)	J74	122
MECHANICAL SEAL REPAIR	22122 S VERMONT	SE 0 - 1/8 (0.125 mi.)	J75	123
UNITED MICROWAVE PRODUCTS INC	22129 S VERMONT AVE	SE 1/8 - 1/4 (0.134 mi.)	J76	123
ALFRA INDUSTRIES INC	22134 S VERMONT AVE,UNI	SE 1/8 - 1/4 (0.148 mi.)	J77	125
CARLILE MANUFACTURING INC	22138 S VERMONT #D	SE 1/8 - 1/4 (0.150 mi.)	J81	129
U.S. POWER CONVERTING	22138 S VERMONT AVE	SE 1/8 - 1/4 (0.150 mi.)	J82	129

EXECUTIVE SUMMARY

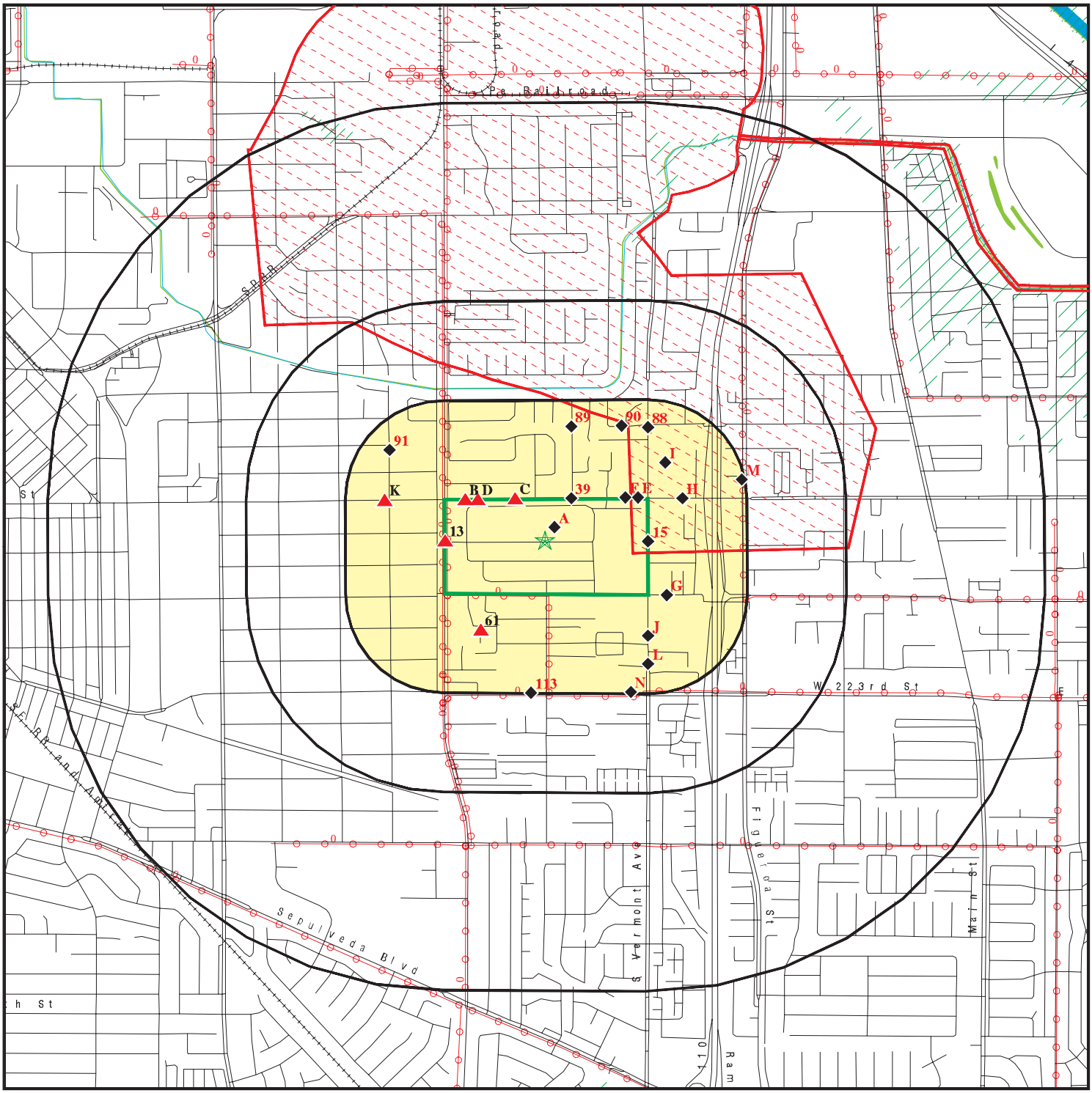
Lower Elevation	Address	Direction / Distance	Map ID	Page
UNIFIED PROPERTY MGMT INC	22203 VERMONT AVE	SE 1/8 - 1/4 (0.174 mi.)	L83	130
DELTA CONVERSION SHOP	22203 SO VERMONT STE B	SE 1/8 - 1/4 (0.174 mi.)	L85	131
PETE MAMEA	21403 BERENDO AVE	NNE 1/8 - 1/4 (0.183 mi.)	89	135
DALE KANESHIRO	941 W. 214TH ST.	NNE 1/8 - 1/4 (0.184 mi.)	90	136
LAUSD/ HALLDALE AVE ELEM	21514 HALLDALE AVE	WNW 1/8 - 1/4 (0.187 mi.)	91	136
DECOCAL INC	22208 S VERMONT AVE	SE 1/8 - 1/4 (0.196 mi.)	L93	138
JUAN CARLOS MAILLAND	22208 S VERMONT AVE	SE 1/8 - 1/4 (0.196 mi.)	L95	139
DECOCAL INC	22208 SOUTH VERMONT AVE	SE 1/8 - 1/4 (0.196 mi.)	L96	140
BYROM RADIATOR SERVICE	22208 S VERMONT AVE	SE 1/8 - 1/4 (0.196 mi.)	L98	141
UNOCAL SERVICE STATION #2529	600 W CARSON	ENE 1/8 - 1/4 (0.220 mi.)	M102	144
TORRANCE ANIMAL HOSPITAL	21617 SO FIGUEROA ST	ENE 1/8 - 1/4 (0.243 mi.)	M108	152
CENTURY PARTS INC	913 W 223RD ST	SSE 1/8 - 1/4 (0.245 mi.)	N109	152
ADVANCED CONTRACTORS INC.	935 W 223RD ST	SSE 1/8 - 1/4 (0.247 mi.)	N112	155
LAUSD/ MEYLER ST ELEM	1123 W 223RD ST	S 1/8 - 1/4 (0.248 mi.)	113	156
ARCO PRODUCTS COMPANY	21704 S FIGUEROA STREET	E 1/8 - 1/4 (0.249 mi.)	M114	157

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 17 records.

Site Name	Database(s)
CHEVRON-ALAMITOS BAY PART	HIST CORTESE
SOIL MGMT METHOD INC	CERC-NFRAP
VERMONT AVENUE & KNOX STREET DUMP	SWF/LF
GREEN HOG RANCH	SWF/LF
H.M. GUENSER	SWF/LF
SOUTH TORRANCE DUMP	SWF/LF
ROYAL BOULEVARD LAND RECLAMATION S	SWF/LF
CARSON	WMUDS/SWAT
PACIFIC SMELTING-TORRANCE	WMUDS/SWAT
COLUMBIA STEEL-TORRANCE	WMUDS/SWAT
DOMINGUEZ CHANNEL SOUTH OF CARSON	HAZNET
SILIKAL RESIN SYSTEMS	HAZNET
DOMINGUEZ CHANNEL SOUTH OF CARSON	RCRA-SQG
VISION GRAPHICS	RCRA-SQG
EAST CARSON STREET	US BROWNFIELDS
GOLDEN EAGLE REFINERY	CA BOND EXP. PLAN
DEL AMO BOULEVARD	CA BOND EXP. PLAN

OVERVIEW MAP - 3776452.2s



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 1000 West Carson Street ADDRESS: 1000 West Carson Street Torrance CA 90502 LAT/LONG: 33.83 / 118.2948	CLIENT: Ninyo & Moore CONTACT: Andrew Luong INQUIRY #: 3776452.2s DATE: November 05, 2013 6:08 pm

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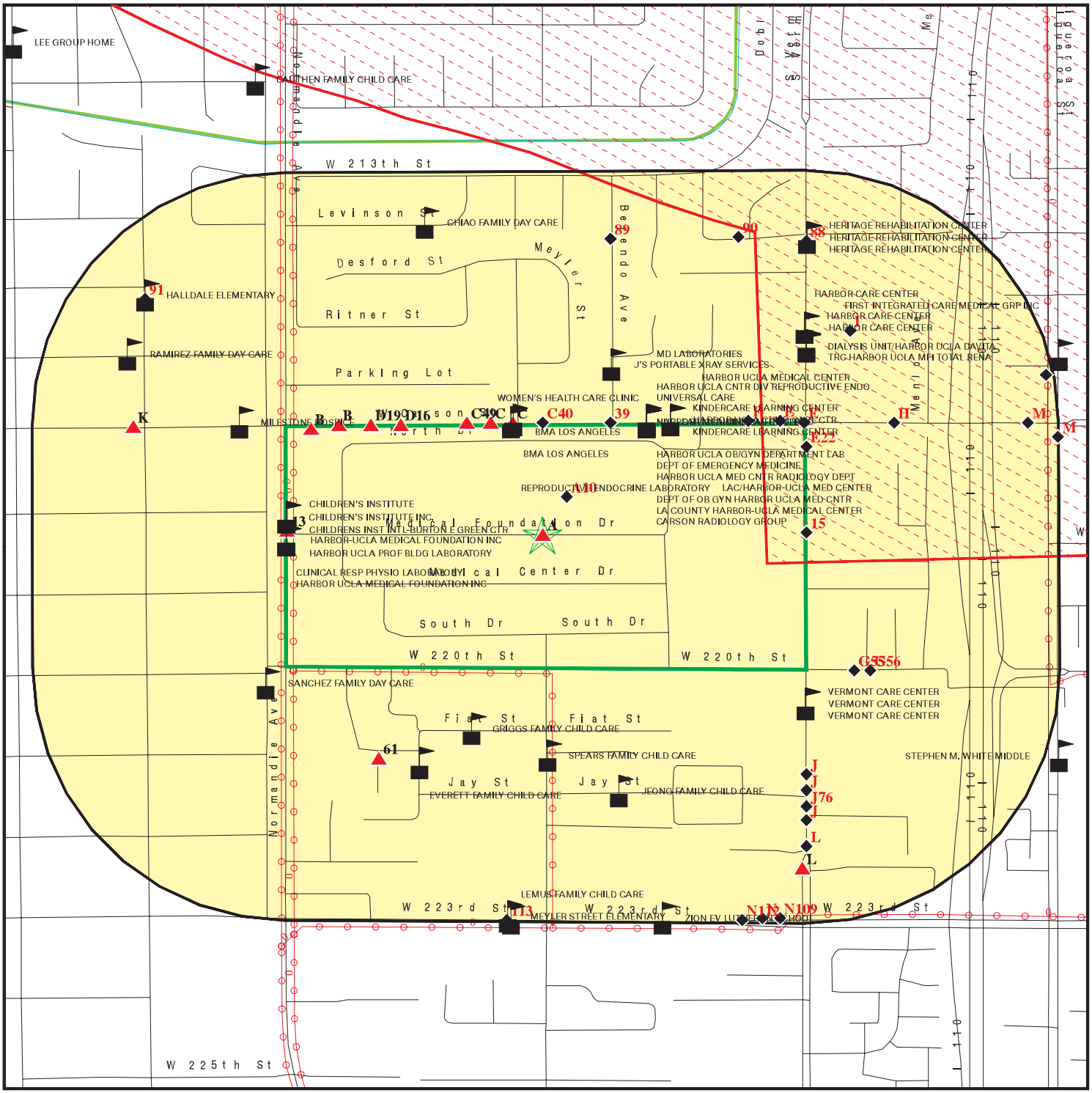
DETAIL MAP - 3776452.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Sensitive Receptors

National Priority List Sites

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 1000 West Carson Street	CLIENT: Ninyo & Moore
ADDRESS: 1000 West Carson Street Torrance CA 90502	CONTACT: Andrew Luong
LAT/LONG: 33.83 / 118.2948	INQUIRY #: 3776452.2s DATE: November 05, 2013 6:09 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		1	0	0	0	NR	1
Proposed NPL	0.250		0	0	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	0.250		0	0	NR	NR	NR	0
Federal CERCLIS list								
CERCLIS	0.250		1	0	NR	NR	NR	1
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.250		0	0	NR	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	0.250		0	0	NR	NR	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250	1	2	0	NR	NR	NR	3
RCRA-SQG	0.250		7	2	NR	NR	NR	9
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.250		1	0	NR	NR	NR	1
US INST CONTROL	0.250		1	0	NR	NR	NR	1
Federal ERNS list								
ERNS	0.250	2	3	1	NR	NR	NR	6
State- and tribal - equivalent NPL								
RESPONSE	0.250		0	0	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	0.250		1	0	NR	NR	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.250		0	0	NR	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.250	1	6	4	NR	NR	NR	11
SLIC	0.250		1	0	NR	NR	NR	1
INDIAN LUST	0.250		0	0	NR	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250	1	3	0	NR	NR	NR	4

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.250		0	0	NR	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.250		0	0	NR	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.250		0	0	NR	NR	NR	0
SWRCY	0.250		1	0	NR	NR	NR	1
Local Lists of Hazardous waste / Contaminated Sites								
HIST Cal-Sites	0.250		0	0	NR	NR	NR	0
Toxic Pits	0.250		0	0	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250	1	1	2	NR	NR	NR	4
HIST UST	0.250	1	6	5	NR	NR	NR	12
SWEEPS UST	0.250	1	2	3	NR	NR	NR	6
Local Land Records								
LIENS 2	0.250		0	0	NR	NR	NR	0
LIENS	0.250		0	0	NR	NR	NR	0
DEED	0.250		0	0	NR	NR	NR	0
Records of Emergency Release Reports								
CHMIRS	0.250	1	2	2	NR	NR	NR	5
Other Ascertainable Records								
CONSENT	0.250		1	0	NR	NR	NR	1
ROD	0.250		1	0	NR	NR	NR	1
TRIS	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	0.250		0	0	NR	NR	NR	0
Cortese	0.250		0	0	NR	NR	NR	0
HIST CORTESE	0.250		3	4	NR	NR	NR	7
Notify 65	0.250		0	0	NR	NR	NR	0
HAZNET	0.250	2	36	22	NR	NR	NR	60
INDIAN RESERV	0.250		0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **HARBOR U.C.L.A. MEDICAL CENTER** **HIST UST** **U001562311**
Target **1000 W CARSON ST** **N/A**
Property **TORRANCE, CA 90063**

Site 1 of 10 in cluster A

Actual:
44 ft.

HIST UST:

Region:	STATE
Facility ID:	00000020702
Facility Type:	Other
Other Type:	UCLA
Total Tanks:	0002
Contact Name:	L.A. COUNTY MECHANICAL DEPARTM
Telephone:	2132672242
Owner Name:	LOS ANGELES COUNTY MECHANICAL
Owner Address:	1100 NORTH EASTERN AVENUE
Owner City,St,Zip:	LOS ANGELES, CA 90063
Tank Num:	001
Container Num:	#1
Year Installed:	Not reported
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	#2
Year Installed:	Not reported
Tank Capacity:	00004000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

A2 **LA CO HARBOR-UCLA MEDICAL CENTER** **RCRA-LQG** **1000102042**
Target **1000 W CARSON ST** **CAD079605366**
Property **TORRANCE, CA 90502**

Site 2 of 10 in cluster A

Actual:
44 ft.

RCRA-LQG:

Date form received by agency:	03/31/2008
Facility name:	LA COUNTY HARBOR - UCLA MEDICAL CENTER
Facility address:	1000 W. CARSON STREET TORRANCE, CA 90509
EPA ID:	CAD079605366
Contact:	MARIANNE H FROLICH
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	(310) 222-2835
Contact email:	MFROLICH@LADHS.ORG
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the

LA CO HARBOR-UCLA MEDICAL CENTER (Continued) **1000102042**

cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	LA COUNTY
Owner/operator address:	1000 W. CARSON STREET
	TORRANCE, CA 90509
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	County
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1933
Owner/Op end date:	Not reported
Owner/operator name:	MIGUEL ORTIZ MARROQUIN
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	County
Owner/Operator Type:	Operator
Owner/Op start date:	06/01/2006
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/17/2006
Facility name:	LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name:	LA COUNTY HARBOR-UCLA MEDICAL CENTER
Classification:	Large Quantity Generator
Date form received by agency:	03/19/2004
Facility name:	LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name:	LA COUNTY HARBOR-UCLA MEDICAL CENTER

LA CO HARBOR-UCLA MEDICAL CENTER (Continued) **1000102042**

Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: HARBOR-UCLA MEDICAL CENTER
Classification: Large Quantity Generator

Date form received by agency: 01/13/1998
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: HARBOR U C L A MEDICAL CTR
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: HARBOR U C L A MEDICAL CTR
Classification: Large Quantity Generator

Date form received by agency: 07/08/1996
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: HARBOR-UCLA MEDICAL CENTER
Classification: Large Quantity Generator

Date form received by agency: 03/31/1994
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: HARBOR-UCLA MED. CENT. BLDG. N-32
Classification: Large Quantity Generator

Date form received by agency: 06/07/1990
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: LOS ANGELES CO MEDICAL CENTER
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Facility name: LA COUNTY HARBOR - UCLA MEDICAL CENTER
Site name: HARBOR U C L A MEDICAL CTR
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D003

LA CO HARBOR-UCLA MEDICAL CENTER (Continued) **1000102042**

Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D004
Waste name: ARSENIC

Waste code: D005
Waste name: BARIUM

Waste code: D006
Waste name: CADMIUM

Waste code: D009
Waste name: MERCURY

Waste code: D010
Waste name: SELENIUM

Waste code: D011
Waste name: SILVER

Waste code: D028
Waste name: 1,2-DICHLOROETHANE

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: P042
Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)-

Waste code: P081
Waste name: NITROGLYCERINE (R)

Waste code: U001
Waste name: ACETALDEHYDE (I)

Waste code: U010
Waste name: AZIRINO[2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-METHOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA,8AALPHA,8BALPHA)]-

Waste code: U122
Waste name: FORMALDEHYDE

LA CO HARBOR-UCLA MEDICAL CENTER (Continued) **1000102042**

Violation Status: No violations found

A3 **CHMIRS** **S105635985**
Target Property **1000 W. CARSON ST** **N/A**
TORRANCE, CA 90519

Site 3 of 10 in cluster A

Actual: 44 ft.

CHMIRS:

OES Incident Number:	1974
OES notification:	Not reported
OES Date:	4/29/1994
OES Time:	12:59:57 PM
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	YES
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	united pumping co
Containment:	Not reported
What Happened:	Not reported
Type:	PETROLEUM
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1994
Agency:	harbor ucla med center
Incident Date:	4/29/94 1000

(Continued) **S105635985**

Admin Agency:	Not reported
Amount:	est 30gals
Contained:	NO
Site Type:	OTHER
E Date:	Not reported
Substance:	gasoline
Quantity Released:	Not reported
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	NO
Number of Injuries:	NO
Number of Fatalities:	NO
Description:	leaked from storage tank during removal of tank.

A4 **LOS ANGELES CO HARBOR-UCLA MEDICAL CENTER** **HAZNET** **S113001864**
Target **1000 W CARSON ST** **N/A**
Property **TORRANCE, CA 90509**

Site 4 of 10 in cluster A

Actual:
44 ft.

HAZNET:

Year:	2012
Gepaid:	CAD079605366
Contact:	LOUISE FLOWERS, SAFETY DIR
Telephone:	3102222835
Mailing Name:	Not reported
Mailing Address:	1000 W CARSON ST BLDG N32
Mailing City,St,Zip:	TORRANCE, CA 905092004
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.2926
Facility County:	Los Angeles

Year:	2012
Gepaid:	CAD079605366
Contact:	LOUISE FLOWERS, SAFETY DIR
Telephone:	3102222835
Mailing Name:	Not reported
Mailing Address:	1000 W CARSON ST BLDG N32
Mailing City,St,Zip:	TORRANCE, CA 905092004
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles

LOS ANGELES CO HARBOR-UCLA MEDICAL CENTER (Continued) **S113001864**

Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.2926
Facility County: Los Angeles

Year: 2012
Gepaid: CAD079605366
Contact: LOUISE FLOWERS, SAFETY DIR
Telephone: 3102222835
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST BLDG N32
Mailing City,St,Zip: TORRANCE, CA 905092004
Gen County: Los Angeles
TSD EPA ID: CAD982444481
TSD County: San Bernardino
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.415
Facility County: Los Angeles

Year: 2012
Gepaid: CAD079605366
Contact: LOUISE FLOWERS, SAFETY DIR
Telephone: 3102222835
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST BLDG N32
Mailing City,St,Zip: TORRANCE, CA 905092004
Gen County: Los Angeles
TSD EPA ID: CAD982444481
TSD County: San Bernardino
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.415
Facility County: Los Angeles

Year: 2012
Gepaid: CAD079605366
Contact: LOUISE FLOWERS, SAFETY DIR
Telephone: 3102222835
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST BLDG N32
Mailing City,St,Zip: TORRANCE, CA 905092004
Gen County: Los Angeles
TSD EPA ID: CAD982444481
TSD County: San Bernardino
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.84
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
1081 additional CA_HAZNET: record(s) in the EDR Site Report.

A5 **LA CO HARBOR UCLA MEDICAL CTR** **UST** **U003775866**
Target Property **1000 W CARSON ST** **N/A**
TORRANCE, CA 90502

Site 5 of 10 in cluster A

Actual: 44 ft.

UST:
Facility ID: 1171
Latitude: 33.83157
Longitude: -118.29328

A6 **LA HEALTH SERVICES HARBOR/UCLA MED CTR** **HAZNET** **S113180189**
Target Property **1000 W CARSON ST** **N/A**
TORRANCE, CA 90509

Site 6 of 10 in cluster A

Actual: 44 ft.

HAZNET:
Year: 1997
Gepaid: CAT080030919
Contact: MUNICIPAL GOVERNMENT
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905022004
Gen County: Not reported
TSD EPA ID: FLD980711071
TSD County: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: Recycler
Tons: 1.6170
Facility County: Los Angeles

Year: 1995
Gepaid: CAT080030919
Contact: MUNICIPAL GOVERNMENT
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905022004
Gen County: Not reported
TSD EPA ID: FLD980711071
TSD County: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: Recycler
Tons: .9000
Facility County: Los Angeles

Year: 1994
Gepaid: CAT080030919
Contact: MUNICIPAL GOVERNMENT
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905022004
Gen County: Not reported
TSD EPA ID: FLD980711071
TSD County: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: Recycler

LA HEALTH SERVICES HARBOR/UCLA MED CTR (Continued) **S113180189**

Tons: .4440
Facility County: Los Angeles

Year: 1993
Gepaid: CAT080030919
Contact: MUNICIPAL GOVERNMENT
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905022004
Gen County: Not reported
TSD EPA ID: FLD980711071
TSD County: Not reported
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Not reported
Tons: 1.3165
Facility County: Los Angeles

Year: 1993
Gepaid: CAT080030919
Contact: MUNICIPAL GOVERNMENT
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1000 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905022004
Gen County: Not reported
TSD EPA ID: FLD980711071
TSD County: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: Recycler
Tons: 1.3165
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

A7 **LACH/UCLA MEDICAL CENTER** **LUST** **S101583864**
Target **1000 W CARSON AVE** **CA FID UST** **N/A**
Property **TORRANCE, CA 90509** **SWEEPS UST**

Site 7 of 10 in cluster A

Actual:
44 ft.

LUST:
Region: STATE
Global Id: T0603754521
Latitude: 33.830444
Longitude: -118.291748
Case Type: LUST Cleanup Site
Status: Open - Site Assessment
Status Date: 01/17/2002
Lead Agency: SWRCB
Case Worker: MC
Local Agency: LOS ANGELES COUNTY
RB Case Number: Not reported
LOC Case Number: TT001114-001171
File Location: Not reported
Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Gasoline

LACH/UCLA MEDICAL CENTER (Continued) **S101583864**

Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603754521
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0603754521
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603754521
Contact Type: Regional Board Caseworker
Contact Name: MATTHEW COHEN
Organization Name: SWRCB
Address: 1001 I Street
City: SACRAMENTO
Email: mcohen@waterboards.ca.gov
Phone Number: 9163415751

Status History:
Global Id: T0603754521
Status: Open - Case Begin Date
Status Date: 04/21/1999

Global Id: T0603754521
Status: Open - Site Assessment
Status Date: 01/17/2002

Regulatory Activities:
Global Id: T0603754521
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0603754521
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

CA FID UST:
Facility ID: 19006921
Regulated By: UTNKA

LACH/UCLA MEDICAL CENTER (Continued) **S101583864**

Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	2135333303
Mail To:	Not reported
Mailing Address:	1000 W CARSON AVE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	TORRANCE 90509
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	1171
Number:	9
Board Of Equalization:	Not reported
Referral Date:	02-01-91
Action Date:	02-01-91
Created Date:	02-01-91
Tank Status:	A
Owner Tank Id:	FOT-1
Swrcb Tank Id:	19-000-001171-000001
Actv Date:	02-01-91
Capacity:	2500
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	2

Status:	Active
Comp Number:	1171
Number:	9
Board Of Equalization:	Not reported
Referral Date:	02-01-91
Action Date:	02-01-91
Created Date:	02-01-91
Tank Status:	A
Owner Tank Id:	FOT-2
Swrcb Tank Id:	19-000-001171-000002
Actv Date:	02-01-91
Capacity:	2500
Tank Use:	UNKNOWN
Stg:	P
Content:	Not reported
Number Of Tanks:	Not reported

A8
Target Property **1000 W. CARSON ST**
TORRANCE, CA 90519

Site 8 of 10 in cluster A

Actual: 44 ft.

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

ERNS **94373716**
N/A

A9
Target Property **1000 W. CARSON ST**
TORRANCE, CA 90519

Site 9 of 10 in cluster A

Actual: 44 ft.

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

ERNS **94374056**
N/A

NPL
Region

< 1/8
1 ft.

MONTROSE CHEMICAL CORP.
20201 S NORMANDIE AVE
TORRANCE, CA 90502

NPL **1000420366**
CERCLIS **CAD008242711**
RCRA-LQG
US ENG CONTROLS
US INST CONTROL
CONSENT
ROD

NPL:
EPA ID: CAD008242711
EPA Region: 09
Federal: N
Final Date: 1989-10-04 00:00:00

Category Details:
NPL Status: Currently on the Final NPL
Category Description: Depth To Aquifer-> 100 Feet
Category Value: 400

NPL Status: Currently on the Final NPL
Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value: 100

Site Details:
Site Name: MONTROSE CHEMICAL CORP.
Site Status: Final
Site Zip: 90502
Site City: TORRANCE
Site State: CA
Federal Site: No
Site County: LOS ANGELES
EPA Region: 09
Date Proposed: 10/15/84
Date Deleted: Not reported
Date Finalized: 10/04/89

Substance Details:
NPL Status: Currently on the Final NPL
Substance ID: Not reported
Substance: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

CAS #: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: A023
Substance: DDE
CAS #: 72-55-9
Pathway: AIR PATHWAY
Scoring: 2

NPL Status: Currently on the Final NPL
Substance ID: U060
Substance: DDD
CAS #: 72-54-8
Pathway: AIR PATHWAY
Scoring: 2

NPL Status: Currently on the Final NPL
Substance ID: U061
Substance: DDT
CAS #: 50-29-3
Pathway: AIR PATHWAY
Scoring: 4

NPL Status: Currently on the Final NPL
Substance ID: U061
Substance: DDT
CAS #: 50-29-3
Pathway: GROUND WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: U061
Substance: DDT
CAS #: 50-29-3
Pathway: SURFACE WATER PATHWAY
Scoring: 3

Summary Details:

Conditions at proposal October 15, 1984): Montrose Chemical Corp. manufactured DDT on a l3-acre site in a light industrial/residential area of Torrance, Los Angeles County, California, from 1947 until 1982. About 3,000 people live or work within 0.25 mile of the site. The company s operations included formulation, grinding, packaging, and distribution of DDT. According to analyses conducted by EPA, Montrose, and various State and local agencies, on- and off-site soils, surface water, and sediments are contaminated with DDT. The major transport mechanisms identified were storm water run-off and aerial emissions. On May 6, 1983, EPA issued an Administrative Order under CERCLA Section 106 requiring Montrose Chemical to cease all discharges of DDT and to initiate a study to determine the nature and extent of contamination. After a more detailed review of the Montrose site, EPA determined that further work was necessary to characteri e the site andevaluate alternatives. Therefore, EPA prepared a workplan for a remedial investigation/feasibility study RI/FS). This second phase of investigation will assess all areas of contamination, both on- and off-site, and any public health and environmental impacts. Status June 1986): In February 1985,

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Montrose installed a temporary asphalt cover over the site. EPA did not endorse this activity. In the summer of 1985, EPA conducted Part I of the RI. On-site sampling foundhigh levels of contamination at 77-foot depths in soil and in shallow ground water. In October 1985, Montrose and EPA signed an Administrative Order under CERCLA Section 106 requiring Montrose to conduct Part II of the RI, which includes on-site sampling of ground water and off-site sampling of soil, sediments, surface water, and ground water. Status November 1988): During July 1986, EPA sampled off-site dust and soil and verified that DDT migrated off-site via aerial dispersion.In November 1986, Montrose completed Phase I sampling under Part II of the RI. Results indicated that soils near the site are contaminated with high levels of DDT, and that the two shallower aquifers in the four-aquifer system underlying the site are contaminated with DDT and monochloroben ene. In October 1987, EPA and Montrose signed an amendment to the October 1985 Administrative Order, calling for both on- and off-site sampling of the two deeper aquifers in the four-aquifer system. Status October 4, 1989): In July 1989, EPA and Montrose signed a second amendment to the original order, under which Montrose will conduct the FS for the overall site and evaluate options for removing DDT-contaminated sediments in the sanitary sewer lines near the site. Sampling conducted under the first amended order indicates that ground water is contaminated with high levels of monochloroben ene 0.25 mile downgradient from the site. Deep wells and additional downgradient wells will be constructed and sampled.

Site Status Details:

NPL Status:	Final
Proposed Date:	10/15/1984
Final Date:	10/04/1989
Deleted Date:	Not reported

Narratives Details:

NPL Name:	MONTROSE CHEMICAL CORP.
City:	TORRANCE
State:	CA

CERCLIS:

Site ID:	0900993
EPA ID:	CAD008242711
Facility County:	LOS ANGELES
Short Name:	MONTROSE CHEMICAL CORP
Congressional District:	37,36
IFMS ID:	0926
SMSA Number:	4480
USGC Hydro Unit:	18070104
Federal Facility:	Not a Federal Facility
DMNSN Number:	13.00000
Site Orphan Flag:	N
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	Not reported
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	P
EPA Region:	09
Classification:	Manufacturing Plant
Site Settings Code:	UR

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

NPL Status: Currently on the Final NPL
DMNSN Unit Code: ACRE
RBRAC Code: Not reported
RResp Fed Agency Code: Not reported
Non NPL Status: Not reported
Non NPL Status Date: / /
Site Fips Code: 06037
CC Concurrence Date: / /
CC Concurrence FY: Not reported
Alias EPA ID: Not reported
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):
Contact ID: 9271140.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: On-Scene Coordinator (OSC)
Contact Email: Not reported

Contact ID: 9271184.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 9270421.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 9271118.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 13003791.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 13003854.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 13003858.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 13004003.00000
Contact Name: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 9271193.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 13004194.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 9271138.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 9270408.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

Contact ID: 9270063.00000
Contact Name: Not reported
Contact Tel: Not reported
Contact Title: Remedial Project Manager (RPM)
Contact Email: Not reported

CERCLIS Site Alias Name(s):
Alias ID: 101
Alias Name: MONTROSE CHEMICAL CORP
Alias Address: Not reported
Not reported
Alias ID: 102
Alias Name: MONTROSE CHEMICAL CORP.
Alias Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
Alias Comments: Not reported
Site Description: The Montrose Chemical Corporation site is located in Los Angeles County, California, with portions of the site within the City of Los Angeles, and adjacent to the City of Torrance, California. The Montrose site and the Del Amo site are separate, but adjacent, Superfund sites that have commingled groundwater contamination. The Harbor Gateway is a half-mile-wide strip of the City of Los Angeles that extends south from Los Angeles proper and provides the City a contiguous jurisdiction to Los Angeles Harbor. The former Montrose Chemical and Del Amo plants were located in the Harbor Gateway between the Cities of Torrance and Carson. Overall groundwater contamination associated with these two sites has come to be located over an area extending more than 1.3 miles in length, but its extent differs widely with the depth of the water-bearing unit as well as the lateral location being considered.

Montrose Chemical Corporation operated a technical grade

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

dichloro-diphenyltrichloroethane (DDT) pesticide manufacturing plant in Los Angeles, California from 1947 to 1982. During its 35 years of operation, the Montrose plant released hazardous substances, pollutants or contaminants, into the surrounding environment, including surface soils, surface drainage and storm water pathways, sanitary sewers, the Pacific Ocean, and groundwater.

In 1982, the Environmental Protection Agency (EPA) conducted an inspection of the Montrose property and determined that DDT was present in surface drainages leading from the Montrose property. In 1983, EPA and the State issued enforcement orders to Montrose, requiring them to cease and desist their discharge of hazardous wastes to the storm drain and surface water drainages. The site was listed final on the National Priorities List in October 1989. In October 1985 Montrose and EPA entered into an Administrative Order on Consent (AOC) which obligated Montrose to perform a remedial investigation and feasibility study (RI/FS) of the entire Montrose Chemical site. This AOC was subsequently amended twice, once in 1987 and again in 1989. Because the investigation of the Montrose Chemical Site had begun earlier than that for the Del Amo Site, originally there had been insufficient data to determine (1) the degree to which groundwater contamination from the Montrose and Del Amo sites were commingled, and (2) the degree to which contamination from the Montrose Chemical Site might be affected by remedial actions that were being considered in feasibility studies for groundwater at the Montrose Chemical Site. The Montrose remedial investigation had identified the existence of extensive Del Amo-related groundwater contamination, but initially the remedial investigation at the Del Amo Site had not progressed to the point that this contamination was adequately defined. Accordingly, EPA considered selecting limited interim groundwater remedies for the Montrose Chemical Site until these factors could be resolved. Operable Unit 3 (OU3): By late 1995 sufficient data had been obtained from the Del Amo groundwater investigation to determine that (1) the groundwater contamination from the Del Amo and Montrose Chemical Superfund sites was commingled, and (2) the evaluation of remedial alternatives related to groundwater contamination at one site was inseparable from the same evaluation at the other site. Groundwater contamination at both sites had to be considered together in order to properly evaluate and select groundwater alternatives for the two sites. In later 1995 and early 1996, EPA informed and opened a dialogue with Montrose Chemical and the Del Amo Respondents that EPA intended to unite the remedial selection processes with respect to groundwater, thereby leading to a single feasibility study and a dual-site groundwater Record of Decision (ROD). EPA initiated a process to generate a single feasibility study, called a Joint Groundwater Feasibility Study (JGWFS) to provide analysis for this ROD. While the separate AOC documents did not directly discuss a JGWFS, the parties agreed to proceed with the joint work as envisioned by EPA on a voluntary basis. A ROD addressing the groundwater operable unit at the Montrose Chemical and Del Amo Superfund sites was completed in March 1999. The Montrose Chemical Corporation site is located in Los Angeles County, California, with portions of the site within the City of Los Angeles, and adjacent to the City of Torrance, California. The Montrose site and the Del Amo site are separate, but adjacent, Superfund sites that have commingled groundwater contamination. The Harbor Gateway is a half-mile-wide strip of the City of Los Angeles that extends south from Los Angeles proper and provides the City a contiguous jurisdiction to Los Angeles Harbor. The former Montrose Chemical and Del Amo plants were located in the Harbor Gateway between the Cities of Torrance and Carson. Overall groundwater contamination associated with these two sites has come to be located over an area extending more than 1.3 miles in length, but its extent differs widely with the depth of the water-bearing unit as well as the lateral location being considered.

Montrose Chemical Corporation operated a technical grade dichloro-diphenyltrichloroethane (DDT) pesticide manufacturing plant in Los

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Angeles, California from 1947 to 1982. During its 35 years of operation, the Montrose plant released hazardous substances, pollutants or contaminants, into the surrounding environment, including surface soils, surface drainage and storm water pathways, sanitary sewers, the Pacific Ocean, and groundwater.
In 1982, the Environmental Protection Agency (EPA) conducted an inspection of the Montrose property and determined that DDT was present in surface drainages leading from the Montrose property. In 1983, EPA and the State issued enforcement orders to Montrose, requiring them to cease and desist their discharge of hazardous wastes to the storm drain and surface water drainages. The site was listed final on the National Priorities List in October 1989. In October 1985 Montrose and EPA entered into an Administrative Order on Consent (AOC) which obligated Montrose to perform a remedial investigation and feasibility study (RI/FS) of the entire Montrose Chemical site. This AOC was subsequently amended twice, once in 1987 and again in 1989. Because the investigation of the Montrose Chemical Site had begun earlier than that for the Del Amo Site, originally there had been insufficient data to determine (1) the degree to which groundwater contamination from the Montrose and Del Amo sites were commingled, and (2) the degree to which contamination from the Montrose Chemical Site might be affected by remedial actions that were being considered in feasibility studies for groundwater at the Montrose Chemical Site. The Montrose remedial investigation had identified the existence of extensive Del Amo-related groundwater contamination, but initially the remedial investigation at the Del Amo Site had not progressed to the point that this contamination was adequately defined. Accordingly, EPA considered selecting limited interim groundwater remedies for the Montrose Chemical Site until these factors could be resolved. Operable Unit 3 (OU3): By late 1995 sufficient data had been obtained from the Del Amo groundwater investigation to determine that (1) the groundwater contamination from the Del Amo and Montrose Chemical Superfund sites was commingled, and (2) the evaluation of remedial alternatives related to groundwater contamination at one site was inseparable from the same evaluation at the other site. Groundwater contamination at both sites had to be considered together in order to properly evaluate and select groundwater alternatives for the two sites. In later 1995 and early 1996, EPA informed and opened a dialogue with Montrose Chemical and the Del Amo Respondents that EPA intended to unite the remedial selection processes with respect to groundwater, thereby leading to a single feasibility study and a dual-site groundwater Record of Decision (ROD). EPA initiated a process to generate a single feasibility study, called a Joint Groundwater Feasibility Study (JGWFS) to provide analysis for this ROD. While the separate AOC documents did not directly discuss a JGWFS, the parties agreed to proceed with the joint work as envisioned by EPA on a voluntary basis. A ROD addressing the groundwater operable unit at the Montrose Chemical and Del Amo Superfund sites was completed in March 1999. Operable Unit 5: The Palos Verdes Shelf Superfund site (PV Shelf) is an 88 square kilometer (km2) area of sediment on the continental shelf and slope off the coast of the Palos Verdes Peninsula, Los Angeles County, California, that has been contaminated with DDT and polychlorinated biphenyls (PCBs). PV Shelf is Operable Unit 5 of the Montrose Chemical Corporation Superfund site. Its national Superfund electronic database (i.e., CERCLIS) identification number is CAD008242711. EPA Region 9 is the lead agency for site remediation, and is using special account funds from various Consent Decrees entered into with the potentially responsible parties to clean up the site. The California coast from Pt. Conception to the Mexican border curves inward, forming a large bay called the "Southern California Bight." The Palos Verdes Peninsula is a small but prominent land mass extending into the Southern California Bight (SCB). It is bordered by Santa Monica Bay to the north and the San Pedro Shelf to the south. The Channel Islands lie to the west and northwest. The narrow underwater shelf off the

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Palos Verdes Peninsula is called the Palos Verdes Shelf. It is approximately 14.5 kilometers (km) long and 2.4 km wide. The seabed over most of the shelf slopes at a gentle 1 to 3 degrees. The shelf breaks at a depth of 70 to 100 meters (m), then drops steeply over 800 m to the ocean floor. The primary historical source of chemical contaminants on the PV Shelf is effluent discharged through submarine outfalls at White Point on the Palos Verdes Peninsula. Since 1937, wastewaters have been discharged to the ocean off Palos Verdes Peninsula from submarine outfalls of the JWPCP, operated by the Sanitation Districts of Los Angeles County (LACSD). Contaminants in the effluent included chlorinated hydrocarbons (e.g., DDTs and PCBs) as well as trace metals (e.g., cadmium, copper, lead, zinc, and other metals), and organic matter. The total discharge of suspended solids from 1937 to 1995 has been estimated to be 4.1 million metric tons. It is estimated that approximately 1,000 metric tons (mtons) of DDT were discharged from the outfalls from the 1950s through 1971. Traces of DDT can be found throughout the Southern California Bight; however, approximately 10 percent of the discharge settled on PV Shelf, forming an identifiable layer of contaminated sediment from 5 centimeters (cm) to 60 cm thick over a 44 km2 area. From 1947 until 1982, Montrose Chemical Corp. of California, Inc. (Montrose) operated a DDT-manufacturing plant on 13 acres at 20201 Normandie Avenue in Los Angeles County, California. The land was owned by Stauffer Chemical Company. The Montrose plant operated 24 hours a day, seven days a week, 365 days a year. During its 35 years of operation, Montrose produced approximately 800,000 tons of DDT. When the plant first opened, it discharged DDT-contaminated wastewater from its production operations to a city sewer line via a private pressure sewer line owned by Stauffer Chemical. This connecting line periodically clogged, resulting in the discharge of Montrose DDT-contaminated wastewater to the natural stormwater drainage. When EPA investigated the natural stormwater drain in the 1990s, residual levels of DDT in the drainage immediately downstream of the Montrose plant property were in excess of 8,000 parts per million (ppm). The Normandie Avenue plant property itself was contaminated by Montrose operations. Investigations directed by EPA beginning in 1985 found significant contamination (primarily DDT and chlorobenzene) in the shallow and deep soil at the Montrose plant property, groundwater beneath and downgradient from the Montrose plant property, soil adjacent to and in the vicinity of the property, the sewer line adjacent to and downstream of the Montrose plant property, and, as mentioned above, portions of the stormwater pathway leading from the Montrose plant to the Consolidated Slip in Los Angeles Harbor. Groundwater at the Montrose site is contaminated with monochlorobenzene and other contaminants across six hydrostratigraphic units and to distances up to 1.3 miles from the former Montrose plant site. From 1953 until 1971, Montrose discharged DDT-contaminated wastewater from its operations at the Montrose plant to two sewers operated by the LACSD. These sewers conveyed the wastewater to the JWPCP, where it received primary treatment and was discharged through the White Point outfalls located on the PV Shelf. In the early 1970s, LACSD initiated an investigation to identify and eliminate discharge of DDTs and PCBs into their sewer system. LACSD identified the Montrose plant as the only significant source of DDT in sewer flows to the JWPCP. PCBs entered the LACSD sewer system from several industrial sources in the Los Angeles area, most notably from the Westinghouse Electric Corporation, which manufactured and repaired electrical equipment at its Los Angles County plant; from a paper-manufacturing plant in Pomona owned by Potlatch Corporation; and from Simpson Paper Company. Like DDT from the Montrose plant, PCBs from these plants were sent to the JWPCP and, after treatment, were discharged from the White Point outfalls onto the PV Shelf. LACSD estimated that the discharge from the Montrose plant was contributing 654 pounds (lbs) of DDT per day to the LACSD system. The peak annual mass emissions of effluent solids (167,000 metric

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

tons [mt]), DDT (21.1 mt), and PCBs (5.2 mt) occurred in 1971. Montrose ceased discharging waste into the county sewer system in 1971. LACSD conducted cleaning operations in the two sewer lines adjacent to and downstream of the Montrose property. Sediments in the two sewer lines contained in excess of 7,700 lbs of DDT, according to LACSD. Despite these efforts by LACSD, significant quantities of DDT-contaminated sediment remained in the sewer line. After the plant closure in 1983, under EPA order, Montrose removed approximately 162,000 lbs of sediment from the sewer line downstream from the plant. Sewer sediment samples from this removal operation showed levels of DDT in the sediment at 490,000 milligrams per kilogram (mg/kg) and chlorobenzene at 2,200 mg/kg. PV Shelf enforcement activities occurred along two parallel paths: litigation and response actions. In 1989, CERCLA natural resource trustees1 determined that DDT and PCB contamination of the marine environment off the southern California coast, including the Palos Verdes Shelf, could be causing significant damage to natural resources. In June 1990, the United States and the State of California filed suit in the case of United States v. Montrose et al. The suit contained two claims: - A claim by the natural resource trustees ("Trustees") for natural resource damages caused by the release of DDT and PCBs, through sanitary sewer and stormwater runoff pathways, into the environment off the Los Angeles coast, i.e., the Natural Resource Damage (NRD) site, and - EPA's claim for response costs with respect to the Montrose NPL Site. The named defendants in the Montrose case were Potlatch Corporation and Simpson Paper Corporation, owners and operators of a paper mill that released PCBs into the LACSD sewer system; Westinghouse Electric Corporation, owner and operator of a facility that released PCBs into the LACSD sewer system; the Los Angeles County Sanitation Districts, owners and operators of the municipal sewer system that discharges wastewater to the PV Shelf through the White Point outfalls; and Montrose Chemical Corporation, owner and operator of the facility at the Montrose plant property. Named along with Montrose were several other corporations that were related to Montrose as corporate parents, successors and/or owners of the real property EPA entered into Consent Decrees with LACSD/Municipalities in 1997, with Central Broadcasting System (CBS) Corporation in 1998, with Potlatch Simpson Paper in 1998, and Montrose offshore in 2000. The first Consent Decree established a special account to be used for response and remedial actions on PV Shelf. Monies from the other settlements were added to the special account. Funds from the consent decrees were also allotted to the natural resource trustees. The Trustees formed the Montrose Settlements Restoration Program (MSRP) to restore or replace injured resources and lost services Federal and state natural resource trustees, with NOAA as the lead trustee, completed a CERCLA natural resource damage assessment (NRDA) for the Southern California Bight, including PV Shelf. As part of the NRDA, the U.S. Geological Survey (USGS) collected sediment cores in 1992-1993 from 56 stations at the PV Shelf. Core samples from discrete 2 or 4 cm intervals were analyzed for total DDT and total PCBs, as well as several physical parameters. The results of this sampling indicated that DDT and PCBs were present throughout the effluent-affected sediment deposit and that trends in PCB levels tended to follow trends in DDT concentrations. The NRDA also found that the DDT and PCBs in contaminated sediment were entering the food chain and posed a variety of threats to sediment dwelling organisms, fish and higher predator species, including some protected by state or federal endangered species laws. The NRDA expert reports were issued in October 1994, confirming that DDT and PCBs in sediment on the PV Shelf have caused and continue to cause major damage to the marine environment. Given the breadth and depth of information contained in these reports, EPA decided in December 1994 to consider whether to initiate EPA Superfund response actions with regard to DDT and PCB contamination on the PV Shelf. In July 1996, EPA initiated a noontime critical removal action to

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

evaluate risks posed by the DDT and PCB effluent-affected sediment on PV Shelf and the feasibility of response actions that could reduce threats to human health and the environment. In July 1996, EPA determined that the elevated concentrations of DDT and PCBs in sediment on the PV Shelf represented a threat to human health, welfare and the environment, and initiated a non-time-critical removal action under CERCLA to further investigate the threats. Non-time critical removal actions are defined in the National Oil and Hazardous Substances Pollution Contingency Plan as response actions that can start later than six months after the need for action has been established. 40 CFR subsection 300.415(b) (4). The National Contingency Plan requires an EE/CA for all non-time critical removal actions. The EE/CA for PV Shelf was issued in 2000. As an initial step in the EE/CA process, EPA identified and screened possible response action technologies for contaminated sediment on the PV Shelf. Based on the results of the initial screening, a subset of actions was selected for further evaluation and comparison in the EE/CA. Response actions were screened using three criteria: effectiveness, implementability, and cost. The EE/CA Proposed Plan identified Institutional Controls (ICs) as the preferred alternative. In September 2001, EPA issued an Action Memorandum to implement the ICs program. Public comment on the proposed plan shaped the ICs program to rely more substantively on outreach and education. Institutional Controls (ICs) would serve as an interim removal action (with a limited duration of 10 years) while EPA completed its investigation of PV Shelf. As an interim removal action, EPA waived the applicable or relevant and appropriate requirements (ARARs) for surface water quality standards for DDT and PCBs. In 2000, EPA conducted a pilot study to assess the feasibility of using capping to clean up the site. Three 45-acre cells at different depths were capped with sand from two different sources, using different placement methods. Post-cap monitoring in 2002 showed that contaminant levels over the capped areas were comparable to uncapped areas. Additionally, the LACSD collected sediment cores across the PV Shelf in 2001 and noted that the peak concentration of contaminated sediment in one core collected from a capped cell was closer to the surface than it had been historically. The surface recontamination and possible sediment scouring prompted EPA to conduct four field studies in 2004 to evaluate 1) sediment geotechnical properties, 2) impacts of large, deep-burrowing worms and shrimp, 3) resuspension of sediment from capping, and 4) oceanographic conditions during winter storms. The study reports were completed in 2005 and posted on EPA's website under "Site Documents and Reports." The results of these and other studies were used to develop the Remedial Investigation and Feasibility Study for PV Shelf. EPA issued a Human Health Risk Evaluation for PV Shelf in 1999. The EE/CA acknowledged the need to gather additional information on the extent of contaminants of concern in fishes. From 2002 to 2004, EPA and MSRP collected 23 species of fish from 30 locations along the Southern California coast and analyzed them for DDT, PCBs and other contaminants. White croaker from the vicinity of PV Shelf was generally the most highly contaminated species. In most cases, DDT concentrations were higher than PCBs, particularly in the PV Shelf area. EPA used the survey to recalculate the health hazards from consumption of certain species of fish. An Interim ROD for OU5 was completed in September 2009.

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	/ /
Date Completed:	01/01/80
Priority Level:	Not reported
Operable Unit:	SITEWIDE

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 05/06/83
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 04/01/84
Priority Level: Higher priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: SITE INSPECTION
Date Started: / /
Date Completed: 04/01/84
Priority Level: Higher priority for further assessment
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORKPLAN APPROVAL BY HQ
Date Started: / /
Date Completed: 10/01/84
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 10/15/84
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMEDIAL INVESTIGATION/FEASIBILITY STUDY NEGOTIATIONS
Date Started: 02/15/84
Date Completed: 11/15/84
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: NATIONAL PRIORITIES LIST RESPONSIBLE PARTY SEARCH
Date Started: / /
Date Completed: 02/15/85
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Alternate
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: / /
Date Completed: 10/28/85
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Alternate
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Code: 001
Action: PREPARATION OF COST DOCUMENT PACKAGE
Date Started: / /
Date Completed: 10/28/85
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: PREPARATION OF COST DOCUMENT PACKAGE
Date Started: / /
Date Completed: 10/28/85
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: PREPARATION OF COST DOCUMENT PACKAGE
Date Started: / /
Date Completed: 10/28/85
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMEDIAL INVESTIGATION
Date Started: 01/01/85
Date Completed: 04/30/86
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 02/19/88
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: / /
Date Completed: 06/01/88
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMOVAL
Date Started: 02/19/88
Date Completed: 06/21/89
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 10/04/89
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMOVAL ASSESSMENT
Date Started: 08/01/90
Date Completed: 08/01/90
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ADMINISTRATIVE RECORDS
Date Started: 06/05/91
Date Completed: 06/05/91
Priority Level: Admin Record Compiled for a Removal Event
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: REMOVAL ASSESSMENT
Date Started: 12/11/91
Date Completed: 12/11/91
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: Lodged By DOJ
Date Started: / /
Date Completed: 11/05/92
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: CONSENT DECREE
Date Started: / /
Date Completed: 04/26/93
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 06/22/94
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: ADMINISTRATIVE RECORDS
Date Started: 06/28/94
Date Completed: 06/28/94
Priority Level: Admin Record Compiled for a Removal Event
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: TREATABILITY STUDY
Date Started: 06/01/92
Date Completed: 08/12/94
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 06/07/95
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 10/16/96
Priority Level: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: SECTION 107 LITIGATION
Date Started: 06/13/90
Date Completed: 02/27/97
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ALTERNATIVE DISPUTE RESOLUTION
Date Started: 10/01/95
Date Completed: 03/03/97
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: Lodged By DOJ
Date Started: / /
Date Completed: 03/25/97
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: POTENTIALLY RESPONSIBLE PARTY FEASIBILITY STUDY
Date Started: 10/28/85
Date Completed: 08/14/97
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Anomaly: Original Action Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 10/10/86
Date Completed: 01/08/98
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Original Action Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: REMEDIAL INVESTIGATION
Date Started: 01/08/98
Date Completed: 05/18/98
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: New Action Resulting from Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: ADMINISTRATIVE RECORDS
Date Started: 05/01/98
Date Completed: 06/30/98
Priority Level: Admin Record Compiled for a Remedial Event
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMOVAL COMMUNITY RELATIONS
Date Started: 04/11/94
Date Completed: 09/24/98
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action: Lodged By DOJ
Date Started: / /
Date Completed: 11/16/98
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: Lodged By DOJ
Date Started: / /
Date Completed: 11/16/98
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: FEASIBILITY STUDY
Date Started: 08/14/97
Date Completed: 03/30/99
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: New Action Resulting from Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 03/30/99
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: POTENTIALLY RESPONSIBLE PARTY REMOVAL
Date Started: 06/17/96
Date Completed: 03/31/99
Priority Level: Cleaned up

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Operable Unit: SITEWIDE
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: COMBINED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 08/14/97
Date Completed: 03/31/99
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Other Start and Completion Anomaly

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMOVAL
Date Started: 04/11/94
Date Completed: 06/30/99
Priority Level: Cleaned up
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: CONSENT DECREE
Date Started: / /
Date Completed: 08/20/99
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: CONSENT DECREE
Date Started: / /
Date Completed: 08/20/99
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: CONSENT DECREE
Date Started: / /
Date Completed: 08/20/99
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005
Action: Lodged By DOJ
Date Started: / /
Date Completed: 10/19/00
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 006
Action: CONSENT DECREE
Date Started: / /
Date Completed: 10/20/00
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 006
Action: Lodged By DOJ
Date Started: / /
Date Completed: 12/19/00
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Code: 004
Action: PREPARATION OF COST DOCUMENT PACKAGE
Date Started: / /
Date Completed: 12/30/00
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005
Action: CONSENT DECREE
Date Started: 12/14/00
Date Completed: 03/15/01
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 008
Action: Lodged By DOJ
Date Started: / /
Date Completed: 07/19/01
Priority Level: Not reported
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: 07/09/96
Date Completed: 09/28/01
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007
Action: Lodged By DOJ
Date Started: / /
Date Completed: 12/21/01
Priority Level: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Operable Unit: STORMWATER PATHWAY
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: REMOVAL
Date Started: 04/12/01
Date Completed: 03/06/02
Priority Level: Cleaned up
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 008
Action: CONSENT DECREE
Date Started: 07/19/01
Date Completed: 06/24/02
Priority Level: Not reported
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007
Action: CONSENT DECREE
Date Started: 12/20/01
Date Completed: 06/24/02
Priority Level: Not reported
Operable Unit: STORMWATER PATHWAY
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: REMOVAL
Date Started: 05/08/01
Date Completed: 09/26/02
Priority Level: Cleaned up
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 006
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 05/08/03
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: REMEDIAL DESIGN
Date Started: 08/01/99
Date Completed: 05/27/03
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Original Action Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: Notice of Intent by All Parties
Date Started: / /
Date Completed: 05/27/03
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Not reported
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: NATIONAL PRIORITIES LIST RESPONSIBLE PARTY SEARCH
Date Started: 10/26/04
Date Completed: 08/29/05
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 11/21/05
Priority Level: Not reported
Operable Unit: HISTORIC SW PATHWAY SOUTH
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: Notice of Intent by All Parties
Date Started: / /
Date Completed: 12/19/05
Priority Level: Not reported
Operable Unit: HISTORIC SW PATHWAY SOUTH
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 008
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 06/23/06
Priority Level: Not reported
Operable Unit: HISTORIC SW PATHWAY SOUTH
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: / /
Date Completed: 11/02/07
Priority Level: Not reported
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 009
Action: UNILATERAL ADMIN ORDER
Date Started: / /
Date Completed: 02/20/08

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Priority Level: Multi-Site-First Site
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005
Action: REMOVAL
Date Started: 12/03/07
Date Completed: 02/21/08
Priority Level: Cleaned up
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: EPA Fund-Financed
Planning Status: Approved
Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: / /
Date Completed: 09/24/08
Priority Level: Not reported
Operable Unit: JONES CHEMICALS
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: COMBINED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 07/17/03
Date Completed: 05/27/09
Priority Level: Not reported
Operable Unit: PALOS VERDES SHELF
Primary Responsibility: Special Account Financed Action - EPA
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: REMOVAL
Date Started: 12/18/01
Date Completed: 09/30/09
Priority Level: Stabilized
Operable Unit: SITEWIDE
Primary Responsibility: Special Account Financed Action - EPA
Planning Status: Primary
Urgency Indicator: Non-Time Critical

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 09/30/09
Priority Level: Not reported
Operable Unit: PALOS VERDES SHELF
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMEDIAL DESIGN/REMEDIAL ACTION NEGOTIATIONS
Date Started: 01/20/11
Date Completed: 06/29/12
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 009
Action: Lodged By DOJ
Date Started: / /
Date Completed: 07/09/12
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 009
Action: CONSENT DECREE
Date Started: 06/29/12
Date Completed: 08/22/12
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Code: 002
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL DESIGN
Date Started: 05/27/03
Date Completed: 09/19/12
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: New Action Resulting from Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: REMEDIAL INVESTIGATION
Date Started: 01/01/85
Date Completed: / /
Priority Level: Not reported
Operable Unit: STORMWATER PATHWAY
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: COMBINED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 03/02/94
Date Completed: / /
Priority Level: Not reported
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: 03/02/94
Date Completed: / /
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Other Completion Anomaly

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: POTENTIALLY RESPONSIBLE PARTY FEASIBILITY STUDY
Date Started: 01/08/98
Date Completed: / /
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Responsible Party

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: New Action Resulting from Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: POTENTIALLY RESPONSIBLE PARTY FEASIBILITY STUDY
Date Started: 01/08/98
Date Completed: / /
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: New Action Resulting from Take Over

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007
Action: OPERATIONS AND MAINTENANCE
Date Started: 03/06/02
Date Completed: / /
Priority Level: Not reported
Operable Unit: ON/NEAR PROPERTY SOIL
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: COMBINED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 10/01/05
Date Completed: / /
Priority Level: Not reported
Operable Unit: HISTORIC SW PATHWAY SOUTH
Primary Responsibility: Special Account Financed Action - EPA
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: POTENTIALLY RESPONSIBLE PARTY REMOVAL
Date Started: 01/17/06
Date Completed: / /
Priority Level: Stabilized
Operable Unit: HISTORIC SW PATHWAY SOUTH
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Time Critical
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL INVESTIGATION
Date Started: 07/05/06
Date Completed: / /
Priority Level: Not reported
Operable Unit: HISTORIC SW PATHWAY SOUTH
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: ENGINEERING EVALUATION/COST ANALYSIS
Date Started: 06/04/08
Date Completed: / /
Priority Level: Not reported
Operable Unit: STORMWATER PATHWAY
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: SITE SECURITY AND MAINTENANCE
Date Started: 08/29/08
Date Completed: / /
Priority Level: Not reported
Operable Unit: RESIDENTIAL SOILS
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/24/08
Date Completed: / /
Priority Level: Not reported
Operable Unit: JONES CHEMICALS
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005
Action: REMEDIAL DESIGN
Date Started: 07/22/09
Date Completed: / /
Priority Level: Not reported
Operable Unit: PALOS VERDES SHELF
Primary Responsibility: Special Account Financed Action - EPA

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL ACTION
Date Started: 09/19/12
Date Completed: / /
Priority Level: Not reported
Operable Unit: GROUNDWATER/NAPL
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Federal Register Details:
Fed Register Date: 10/04/89
Fed Register Volume: 54
Page Number: 41015

Fed Register Date: 10/15/84
Fed Register Volume: 49
Page Number: 40320

Click this hyperlink while viewing on your computer to access
6556 additional US CERCLIS Financial: record(s) in the EDR Site Report.

RCRA-LQG:
Date form received by agency: 06/15/2010
Facility name: MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
Facility address: 20201 SOUTH NORMANDIE AVE
LOS ANGELES, CA 90502
EPA ID: CAD008242711
Mailing address: ERICKSON AVE, NE, SUITE 380
BAINBRIDGE ISLAND, WA 98110
Contact: PAUL SUNDBERG
Contact address: WAVE CREST COURT
STOCKTON, CA 95209
Contact country: Not reported
Contact telephone: (209) 474-3417
Contact email: PVSMRS@PACBELL.NET
EPA Region: 09
Land type: Private
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	MONTROSE CHEMICAL CORP. OF CALIFORNIA
Owner/operator address:	ERICKSON AVE, NE, SUITE 380
	BAINBRIDGE ISLAND, WA 98110
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1947
Owner/Op end date:	Not reported

Owner/operator name:	MONTROSE CHEMICAL CORP OF CALIFORNIA
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1947
Owner/Op end date:	Not reported

Owner/operator name:	MONTROSE CHEMICAL CORP. OF CALIFORNIA
Owner/operator address:	P O BOX E
	UNION, NJ 07083
Owner/operator country:	Not reported
Owner/operator telephone:	(201) 964-3250
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MONTROSE CHEMICAL CORP. OF CALIFORNIA
Owner/operator address:	P O BOX E
	CITY NOT REPORTED, NJ 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(201) 964-3250
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/01/1996
Facility name: MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
Site name: MONTROSE CHEM CORP OF CA
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Facility name: MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
Site name: MONTROSE CHEM CORP OF CA
Classification: Small Quantity Generator

Date form received by agency: 08/07/1980
Facility name: MONTROSE CHEMICAL CORPORATION OF CALIFORNIA
Site name: MONTROSE CHEM CORP OF CA
Classification: Large Quantity Generator

Hazardous Waste Summary:
Waste code: 135
Waste name: 135

Waste code: 343
Waste name: 343

Waste code: 351
Waste name: 351

Waste code: 611
Waste name: 611

Waste code: D018
Waste name: BENZENE

Waste code: D021
Waste name: CHLOROBENZENE

Waste code: D022
Waste name: CHLOROFORM

Waste code: U060
Waste name: BENZENE, 1,1'-(2,2-DICHLOROETHYLIDENE)BIS[4-CHLORO-

Waste code: U061
Waste name: BENZENE, 1,1'-(2,2,2-TRICHLOROETHYLIDENE)BIS[4-CHLORO-

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/17/1982
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Date achieved compliance: Not reported
Evaluation lead agency: EPA

Evaluation date: 12/22/1980
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

US ENG CONTROLS:
EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Actual Date: 6/30/2015

EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Actual Date: 6/30/2015

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: Not reported
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Aeration

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Air Stripping

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Carbon Adsorption

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Containment, (N.O.S.)

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Discharge

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Extraction

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Natural Attenuation

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Precipitation

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 9/30/2009
Operable Unit: 05
Contaminated Media : Fish Tissue
Engineering Control: Monitored Natural Attenuation

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 9/30/2009
Operable Unit: 05
Contaminated Media : Sediment
Engineering Control: Cap

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 9/30/2009
Operable Unit: 05
Contaminated Media : Sediment
Engineering Control: Monitored Natural Recovery

Action ID: 004

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Action Name: RECORD OF DECISION
Action Completion date: 9/30/2009
Operable Unit: 05
Contaminated Media : Sediment
Engineering Control: Monitoring

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 9/30/2009
Operable Unit: 05
Contaminated Media : Sediment
Engineering Control: Subaqueous Sediment Cap

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 9/30/2009
Operable Unit: 05
Contaminated Media : Surface Water
Engineering Control: Monitoring

US INST CONTROL:
EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Action Name: RECORD OF DECISION
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Inst. Control: Access Restriction
Actual Date: Not reported
Complet. Date: Not reported
Operable Unit: 01
Contaminated Media : Groundwater

EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Action Name: RECORD OF DECISION
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Inst. Control: Deed Restriction
Actual Date: Not reported
Complet. Date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater

EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Action Name: RECORD OF DECISION
Address: 20201 S NORMANDIE AVE

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Inst. Control: Drilling Restriction
Actual Date: Not reported
Complet. Date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater

EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Action Name: RECORD OF DECISION
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Inst. Control: Notices to State Regulators Before Changes in Land Ownership
Actual Date: Not reported
Complet. Date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater

EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Action Name: RECORD OF DECISION
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Inst. Control: Water Supply Use Restriction
Actual Date: Not reported
Complet. Date: 3/30/1999
Operable Unit: 03
Contaminated Media : Groundwater

EPA ID: CAD008242711
Site ID: 0900993
Name: MONTROSE CHEMICAL CORP.
Action Name: RECORD OF DECISION
Address: 20201 S NORMANDIE AVE
TORRANCE, CA 90502
EPA Region: 09
County: LOS ANGELES
Event Code: Not reported
Inst. Control: Fishing Restriction
Actual Date: Not reported
Complet. Date: 9/30/2009
Operable Unit: 05
Contaminated Media : Sediment

CONSENT:
EPA ID: CAD008242711

MONTROSE CHEMICAL CORP. (Continued) **1000420366**

Site ID: Not reported
Case Title: Not reported
Court Num: Not reported
District: Not reported
Entered Date: Not reported
Full-text of the consent decree for this site issued by the United States District Court is available from EDR. Contact your EDR Account Executive.

ROD:
Full-text of USEPA Record of Decision(s) is available from EDR.

A10 **LA PORT O EMB STATION HOSP** **ENVIROSTOR** **S107736572**
N/A

< 1/8 **CARSON, CA**
1 ft.

Site 10 of 10 in cluster A

Relative:
Lower

Actual:
43 ft.

ENVIROSTOR:
Site Type: Military Evaluation
Site Type Detailed: FUDS
Acres: Not reported
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Douglas Bautista
Division Branch: Cleanup Cypress
Facility ID: 80000293
Site Code: Not reported
Assembly: 66
Senate: 35
Special Program: Not reported
Status: Inactive - Needs Evaluation
Status Date: 07/01/2005
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: DERA
Latitude: 33.83055
Longitude: -118.2944
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED, NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CA99799F549200
Alias Type: Federal Facility ID
Alias Name: J09CA0433
Alias Type: INPR
Alias Name: 80000293
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

LA PORT O EMB STATION HOSP (Continued) **S107736572**

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

B11 **UNOCAL #4944** **LUST** **S110654485**
1259 CARSON ST. W. **N/A**
< 1/8 **TORRANCE, CA 90502**
1 ft.

Site 1 of 12 in cluster B

Relative: Higher

Actual: 48 ft.

LUST:

Region:	STATE
Global Id:	T0603703067
Latitude:	33.8316366
Longitude:	-118.2982917
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/09/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-05372
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603703067
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0603703067
Contact Type:	Local Agency Caseworker
Contact Name:	JOHN AWUJO
Organization Name:	LOS ANGELES COUNTY
Address:	900 S FREMONT AVE
City:	ALHAMBRA
Email:	jawujo@dpw.lacounty.gov
Phone Number:	6264583507

Status History:

Global Id:	T0603703067
Status:	Completed - Case Closed

UNOCAL #4944 (Continued) **S110654485**

Status Date: 09/09/1996

Global Id: T0603703067
Status: Open - Case Begin Date
Status Date: 09/14/1992

Global Id: T0603703067
Status: Open - Site Assessment
Status Date: 10/13/1992

Regulatory Activities:
Global Id: T0603703067
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0603703067
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Region: STATE
Global Id: T0603714288
Latitude: 33.831883
Longitude: -118.298867
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 09/23/2010
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: JW
Local Agency: LOS ANGELES COUNTY
RB Case Number: I-05372A
LOC Case Number: 025753
File Location: Regional Board
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603714288
Contact Type: Local Agency Caseworker
Contact Name: RANI IYER
Organization Name: LOS ANGELES COUNTY
Address: 900 S. FREMONT AVE.
City: ALHAMBRA
Email: Not reported
Phone Number: Not reported

Global Id: T0603714288
Contact Type: Regional Board Caseworker
Contact Name: JIMMIE WOO
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 WEST 4TH STREET, SUITE 200
City: LOS ANGELES

UNOCAL #4944 (Continued) **S110654485**

Email: jwoo@waterboards.ca.gov
Phone Number: 2135766600

Status History:
Global Id: T0603714288
Status: Completed - Case Closed
Status Date: 09/23/2010

Global Id: T0603714288
Status: Open - Case Begin Date
Status Date: 12/22/1998

Global Id: T0603714288
Status: Open - Site Assessment
Status Date: 04/13/1999

Global Id: T0603714288
Status: Open - Site Assessment
Status Date: 04/04/2006

Global Id: T0603714288
Status: Open - Site Assessment
Status Date: 09/04/2008

Regulatory Activities:
Global Id: T0603714288
Action Type: ENFORCEMENT
Date: 11/30/2009
Action: Staff Letter

Global Id: T0603714288
Action Type: RESPONSE
Date: 04/15/2010
Action: Soil and Water Investigation Report

Global Id: T0603714288
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603714288
Action Type: ENFORCEMENT
Date: 10/20/2006
Action: Staff Letter

Global Id: T0603714288
Action Type: ENFORCEMENT
Date: 08/27/2010
Action: Notification - Preclosure

Global Id: T0603714288
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Staff Letter

Global Id: T0603714288

UNOCAL #4944 (Continued) **S110654485**

Action Type: ENFORCEMENT
Date: 09/04/2008
Action: Staff Letter

Global Id: T0603714288
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603714288
Action Type: RESPONSE
Date: 11/30/2006
Action: Other Report / Document

Global Id: T0603714288
Action Type: RESPONSE
Date: 02/28/2009
Action: Well Installation Report

Global Id: T0603714288
Action Type: RESPONSE
Date: 11/17/2009
Action: Soil and Water Investigation Workplan

Global Id: T0603714288
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603714288
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603714288
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0603714288
Action Type: RESPONSE
Date: 02/03/2010
Action: Well Destruction Report

Global Id: T0603714288
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

Global Id: T0603714288
Action Type: RESPONSE
Date: 01/16/2007
Action: Well Installation Report

Global Id: T0603714288
Action Type: RESPONSE
Date: 01/15/2008

UNOCAL #4944 (Continued) **S110654485**

Action:	Monitoring Report - Quarterly
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	07/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	07/25/2008
Action:	Well Installation Workplan
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	07/14/2009
Action:	Well Installation Report
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	05/04/2009
Action:	Other Report / Document
Global Id:	T0603714288
Action Type:	ENFORCEMENT
Date:	09/23/2010
Action:	Closure/No Further Action Letter
Global Id:	T0603714288
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	07/15/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	04/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	04/15/2010
Action:	Request for Closure
Global Id:	T0603714288
Action Type:	RESPONSE
Date:	10/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0603714288
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Pump & Treat (P&T) Groundwater

UNOCAL #4944 (Continued) **S110654485**

Global Id: T0603714288
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603714288
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603714288
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

B12 **UNOCAL #4944** **HIST CORTESE** **S105027083**
1259 CARSON **N/A**
< 1/8 **TORRANCE, CA 90502**
1 ft.

Site 2 of 12 in cluster B

Relative:
Higher

Actual:
48 ft.

CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-05372

---

13 **HARBOR UCLA DIAGNOSTIC IMAGING** **RCRA-SQG** **1000597953**
21828 S NORMANDIE AVE **HAZNET** **CAD983619883**
< 1/8 **TORRANCE, CA 90502**
1 ft.

Relative:
Higher

Actual:
48 ft.

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: HARBOR UCLA DIAGNOSTIC IMAGING
Facility address: 21828 S NORMANDIE AVE
TORRANCE, CA 90502
EPA ID: CAD983619883
Mailing address: S NORMANDIE AVE
TORRANCE, CA 90502
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

HARBOR UCLA DIAGNOSTIC IMAGING (Continued) **1000597953**

Owner/Operator Summary:
Owner/operator name: AMERICAN HEALTH SERVICES CORP
Owner/operator address: 4440 VON KARMAN AVE
NEWPORT BEACH, CA 92660
Owner/operator country: Not reported
Owner/operator telephone: (714) 476-0733
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/01/1996
Facility name: HARBOR UCLA DIAGNOSTIC IMAGING
Classification: Small Quantity Generator

Date form received by agency: 03/31/1994
Facility name: HARBOR UCLA DIAGNOSTIC IMAGING
Site name: HARBOR UCLA MEDICAL CENTER
Classification: Large Quantity Generator

Violation Status: No violations found

HAZNET:
Year: 1997
Gepaid: CAD983619883
Contact: INSIGHT HEALTH SERVICES
Telephone: 8008748634
Mailing Name: Not reported
Mailing Address: 21828 NORMANDIE AVE
Mailing City,St,Zip: TORRANCE, CA 905022047
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0471
Facility County: Los Angeles

HARBOR UCLA DIAGNOSTIC IMAGING (Continued) **1000597953**

Year: 1996
Gepaid: CAD983619883
Contact: INSIGHT HEALTH SERVICES
Telephone: 8008748634
Mailing Name: Not reported
Mailing Address: 21828 NORMANDIE AVE
Mailing City,St,Zip: TORRANCE, CA 905022047
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Disposal Method: Recycler
Tons: .1084
Facility County: Los Angeles

Year: 1996
Gepaid: CAD983619883
Contact: INSIGHT HEALTH SERVICES
Telephone: 8008748634
Mailing Name: Not reported
Mailing Address: 21828 NORMANDIE AVE
Mailing City,St,Zip: TORRANCE, CA 905022047
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Recycler
Tons: .0045
Facility County: Los Angeles

Year: 1995
Gepaid: CAD983619883
Contact: INSIGHT HEALTH SERVICES
Telephone: 8008748634
Mailing Name: Not reported
Mailing Address: 21828 NORMANDIE AVE
Mailing City,St,Zip: TORRANCE, CA 905022047
Gen County: Not reported
TSD EPA ID: CAD982433575
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Recycler
Tons: .0000
Facility County: Los Angeles

Year: 1995
Gepaid: CAD983619883
Contact: INSIGHT HEALTH SERVICES
Telephone: 8008748634
Mailing Name: Not reported
Mailing Address: 21828 NORMANDIE AVE
Mailing City,St,Zip: TORRANCE, CA 905022047
Gen County: Not reported
TSD EPA ID: CAD982433575
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Recycler

HARBOR UCLA DIAGNOSTIC IMAGING (Continued) **1000597953**

Tons: .0070
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
4 additional CA_HAZNET: record(s) in the EDR Site Report.

C14 **HARBOR GENERAL HOSPITAL STEAM** **HIST UST** **U001562310**
1124 W CARSON ST **N/A**
< 1/8 **TORRANCE, CA 90063**
0.000 mi.
2 ft. **Site 1 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

HIST UST:
Region: STATE
Facility ID: 00000020688
Facility Type: Other
Other Type: HOSPITAL
Total Tanks: 0004
Contact Name: L.A. COUNTY MECHANICAL DEPT.
Telephone: 2132672242
Owner Name: LOS ANGELES COUNTY MECHANICAL
Owner Address: 1100 NORTH EASTERN AVENUE
Owner City,St,Zip: LOS ANGELES, CA 90063

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported

HARBOR GENERAL HOSPITAL STEAM (Continued) **U001562310**

Leak Detection: Stock Inventor

---

15 **CHMIRS** **S109037333**
N/A

21804 SOUTH VERMONT
< 1/8 **CARSON, CA 91770**
0.001 mi.
4 ft.

Relative:
Lower

Actual:
42 ft.

CHMIRS:

OES Incident Number:	06-0542
OES notification:	01/23/2006
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Not reported
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2006
Agency:	Southern Calif Edison

(Continued) **S109037333**

Incident Date:	1/23/2006 12:00:00 AM
Admin Agency:	L. A. County Fire Prevention
Amount:	Not reported
Contained:	Yes
Site Type:	Road
E Date:	Not reported
Substance:	Mineral Oil (Unk PCB)
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	2
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Wind blew the pole mounted transformer off and hit the ground spilling contents.

D16 **KRAGEN AUTO PARTS STORE #1564** **HAZNET** **S113098352**
1213 W CARSON ST **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
5 ft. **Site 1 of 2 in cluster D**

Relative:
Higher

Actual:
47 ft.

HAZNET:

Year:	2009
Gepaid:	CAL000187971
Contact:	JAMI GAY
Telephone:	4175204589
Mailing Name:	Not reported
Mailing Address:	PO BOX 1156
Mailing City,St,Zip:	SPRINGFIELD, MO 658011156
Gen County:	Not reported
TSD EPA ID:	WIR000029751
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.05
Facility County:	Los Angeles

Year:	2009
Gepaid:	CAL000187971
Contact:	JAMI GAY
Telephone:	4175204589
Mailing Name:	Not reported
Mailing Address:	PO BOX 1156
Mailing City,St,Zip:	SPRINGFIELD, MO 658011156
Gen County:	Not reported

KRAGEN AUTO PARTS STORE #1564 (Continued) **S113098352**

TSD EPA ID: WIR000029751
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.05
Facility County: Los Angeles

Year: 2008
Gepaid: CAL000187971
Contact: BOB GILLESPIE-REG/ENVMNTAL MGR
Telephone: 4178747257
Mailing Name: Not reported
Mailing Address: PO BOX 1156
Mailing City,St,Zip: SPRINGFIELD, MO 65801
Gen County: Not reported
TSD EPA ID: WIR000029751
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.3375
Facility County: Los Angeles

Year: 2008
Gepaid: CAL000187971
Contact: BOB GILLESPIE-REG/ENVMNTAL MGR
Telephone: 4178747257
Mailing Name: Not reported
Mailing Address: PO BOX 1156
Mailing City,St,Zip: SPRINGFIELD, MO 65801
Gen County: Not reported
TSD EPA ID: WIR000029751
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.3375
Facility County: Los Angeles

Year: 2007
Gepaid: CAL000187971
Contact: K M BOWLES HAZMAT
Telephone: 6022659200
Mailing Name: Not reported
Mailing Address: DEPT 9216 PO BOX 6030
Mailing City,St,Zip: PHOENIX, AZ 850056030
Gen County: Not reported
TSD EPA ID: WIR000029751
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.13
Facility County: Los Angeles

KRAGEN AUTO PARTS STORE #1564 (Continued) **S113098352**

Click this hyperlink while viewing on your computer to access
13 additional CA_HAZNET: record(s) in the EDR Site Report.

E17 **CHMIRS** **S105673871**
21700 S. VERMONT **N/A**
< 1/8 **TORRANCE, CA**
0.001 mi.
5 ft. **Site 1 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

CHMIRS:

OES Incident Number:	01-3516	
OES notification:	06/18/2001	
OES Date:	Not reported	
OES Time:	Not reported	
Incident Date:	Not reported	
Date Completed:	**Not reported**	
Property Use:	Not reported	
Agency Id Number:	Not reported	
Agency Incident Number:	Not reported	
Time Notified:	Not reported	
Time Completed:	Not reported	
Surrounding Area:	Not reported	
Estimated Temperature:	Not reported	
Property Management:	Not reported	
Special Studies 1:	Not reported	
Special Studies 2:	Not reported	
Special Studies 3:	Not reported	
Special Studies 4:	Not reported	
Special Studies 5:	Not reported	
Special Studies 6:	Not reported	
More Than Two Substances Involved?:		Not reported
Resp Agncy Personel # Of Decontaminated:		Not reported
Responding Agency Personel # Of Injuries:		Not reported
Responding Agency Personel # Of Fatalities:		Not reported
Others Number Of Decontaminated:		Not reported
Others Number Of Injuries:		Not reported
Others Number Of Fatalities:		Not reported
Vehicle Make/year:	Not reported	
Vehicle License Number:	Not reported	
Vehicle State:	Not reported	
Vehicle Id Number:	Not reported	
CA/DOT/PUC/ICC Number:	Not reported	
Company Name:	Not reported	
Reporting Officer Name/ID:	Not reported	
Report Date:	Not reported	
Comments:	Not reported	
Facility Telephone:	Not reported	
Waterway Involved:	Not reported	
Waterway:	Not reported	
Spill Site:	Not reported	
Cleanup By:	Responsible Party	
Containment:	Not reported	
What Happened:	Not reported	
Type:	Not reported	
Measure:	Not reported	
Other:	Not reported	
Date/Time:	Not reported	
Year:	2001	

(Continued) **S105673871**

Agency:	Veeder Root
Incident Date:	6/18/200112:00:00 AM
Admin Agency:	Not reported
Amount:	Not reported
Contained:	Yes
Site Type:	Service Station
E Date:	Not reported
Substance:	Soil Contamination
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	0
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	Unk
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Contamination found during a repiping project.

E18 **MOBIL #11-MAF** **LUST** **S102433619**
21700 VERMONT AVE S **N/A**
< 1/8 **CARSON, CA 90502**
0.001 mi.
5 ft. **Site 2 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

LUST:

Region:	STATE
Global Id:	T0603704641
Latitude:	33.8315157
Longitude:	-118.2901756
Case Type:	LUST Cleanup Site
Status:	Open - Site Assessment
Status Date:	09/18/1990
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YL
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	R-04331
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704641
Contact Type:	Local Agency Caseworker
Contact Name:	JOHN AWUJO
Organization Name:	LOS ANGELES COUNTY

MOBIL #11-MAF (Continued) **S102433619**

Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Global Id: T0603704641
Contact Type: Regional Board Caseworker
Contact Name: MAGDY BAIADY
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: LOS ANGELES
Email: mbaiady@waterboards.ca.gov
Phone Number: 2135766699

Status History:
Global Id: T0603704641
Status: Open - Case Begin Date
Status Date: 09/18/1990

Global Id: T0603704641
Status: Open - Site Assessment
Status Date: 09/18/1990

Regulatory Activities:
Global Id: T0603704641
Action Type: RESPONSE
Date: 07/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603704641
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603704641
Action Type: RESPONSE
Date: 12/14/2011
Action: Well Installation Report

Global Id: T0603704641
Action Type: RESPONSE
Date: 02/17/2011
Action: Well Installation Workplan

Global Id: T0603704641
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0603704641
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603704641
Action Type: RESPONSE

MOBIL #11-MAF (Continued) **S102433619**

Date: 01/20/2011
Action: Site Assessment Report

Global Id: T0603704641
Action Type: RESPONSE
Date: 05/30/2012
Action: Well Installation Report

Global Id: T0603704641
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0603704641
Action Type: RESPONSE
Date: 07/15/2013
Action: Monitoring Report - Semi-Annually

Global Id: T0603704641
Action Type: RESPONSE
Date: 12/04/2010
Action: Other Report / Document

Global Id: T0603704641
Action Type: ENFORCEMENT
Date: 11/04/2010
Action: Staff Letter

Global Id: T0603704641
Action Type: ENFORCEMENT
Date: 10/14/2010
Action: Referral to Regional Board

Global Id: T0603704641
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0603704641
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: R-04331
Status: Leak being confirmed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603704641
W Global ID: Not reported

MOBIL #11-MAF (Continued) **S102433619**

Staff:	UNK	
Local Agency:	19000	
Cross Street:	Not reported	
Enforcement Type:	Not reported	
Date Leak Discovered:	9/18/1990	
Date Leak First Reported:		9/18/1990
Date Leak Record Entered:	12/6/1990	
Date Confirmation Began:	9/18/1990	
Date Leak Stopped:	9/18/1990	
Date Case Last Changed on Database:		12/7/1990
Date the Case was Closed:		Not reported
How Leak Discovered:	Subsurface Monitoring	
How Leak Stopped:	Not reported	
Cause of Leak:	Structure Failure	
Leak Source:	Other Source	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		7148.14917245304855955327 34727
Source of Cleanup Funding:		Other Source
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		Not reported
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Groundwater:		Not reported
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	MOBIL	
RP Address:	Not reported	
Program:	LUST	
Lat/Long:	33.8315157 / -1	
Local Agency Staff:	Not reported	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	
Assigned Name:	Not reported	
Summary:	Not reported	

D19 **RITE AID STORE #5492** **HAZNET** **S113083034**
WNW **1237 N CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
6 ft. **Site 2 of 2 in cluster D**

Relative:
Higher

Actual:
47 ft.

HAZNET:

Year:	1999
Gepaid:	CAL000153172
Contact:	RITE AID CORPORATION
Telephone:	7177612633

RITE AID STORE #5492 (Continued) **S113083034**

Mailing Name: Not reported
Mailing Address: 4020 STIRRUP CREEK DRIVE SUITE 211
Mailing City,St,Zip: DURHAM, NC 277033165
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0208
Facility County: Los Angeles

Year: 1998
Gepaid: CAL000153172
Contact: RITE AID CORPORATION
Telephone: 7177612633
Mailing Name: Not reported
Mailing Address: 4020 STIRRUP CREEK DRIVE SUITE 211
Mailing City,St,Zip: DURHAM, NC 277033165
Gen County: Not reported
TSD EPA ID: CAT000613976
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Transfer Station
Tons: .0417
Facility County: Los Angeles

E20 **SHELL** **LUST** **S108418338**
ENE **911 CARSON ST. W** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
6 ft. **Site 3 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

LUST:
Region: STATE
Global Id: T0603759521
Latitude: 33.83159
Longitude: -118.290746
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 01/16/2013
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: YL
Local Agency: LOS ANGELES COUNTY
RB Case Number: R-26329
LOC Case Number: 004563-026329
File Location: Regional Board
Potential Media Affect: Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603759521
Contact Type: Local Agency Caseworker
Contact Name: ALBERTO GRAJEDA
Organization Name: LOS ANGELES COUNTY
Address: 900 S. FREMONT AVE.

SHELL (Continued) **S108418338**

City: ALHAMBRA
Email: algrajeda@dpw.lacounty.gov
Phone Number: Not reported

Global Id: T0603759521
Contact Type: Regional Board Caseworker
Contact Name: MARYAM TAIDY
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: LOS ANGELES
Email: mtaidy@waterboards.ca.gov
Phone Number: 2135766741

Status History:
Global Id: T0603759521
Status: Completed - Case Closed
Status Date: 01/16/2013

Global Id: T0603759521
Status: Open - Case Begin Date
Status Date: 06/10/2004

Global Id: T0603759521
Status: Open - Eligible for Closure
Status Date: 11/06/2012

Global Id: T0603759521
Status: Open - Site Assessment
Status Date: 02/05/2007

Global Id: T0603759521
Status: Open - Site Assessment
Status Date: 06/08/2009

Regulatory Activities:
Global Id: T0603759521
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0603759521
Action Type: ENFORCEMENT
Date: 11/16/2012
Action: Notification - Preclosure

Global Id: T0603759521
Action Type: RESPONSE
Date: 04/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0603759521
Action Type: RESPONSE
Date: 07/08/2009
Action: Other Report / Document

Global Id: T0603759521

SHELL (Continued) **S108418338**

Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603759521
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603759521
Action Type: RESPONSE
Date: 07/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603759521
Action Type: RESPONSE
Date: 10/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0603759521
Action Type: RESPONSE
Date: 07/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603759521
Action Type: RESPONSE
Date: 07/16/2010
Action: Remedial Progress Report

Global Id: T0603759521
Action Type: ENFORCEMENT
Date: 06/08/2009
Action: Staff Letter

Global Id: T0603759521
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0603759521
Action Type: RESPONSE
Date: 02/26/2010
Action: Soil and Water Investigation Workplan

Global Id: T0603759521
Action Type: RESPONSE
Date: 04/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603759521
Action Type: RESPONSE
Date: 01/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603759521
Action Type: RESPONSE
Date: 12/29/2010

SHELL (Continued) **S108418338**

Action:	Site Assessment Report
Global Id:	T0603759521
Action Type:	RESPONSE
Date:	04/15/2013
Action:	Well Destruction Report
Global Id:	T0603759521
Action Type:	ENFORCEMENT
Date:	04/08/2009
Action:	Referral to Regional Board
Global Id:	T0603759521
Action Type:	ENFORCEMENT
Date:	01/16/2013
Action:	Closure/No Further Action Letter
Global Id:	T0603759521
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Global Id:	T0603759521
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Not reported
Global Id:	T0603759521
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0603759521
Action Type:	RESPONSE
Date:	10/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0603759521
Action Type:	RESPONSE
Date:	04/15/2012
Action:	Monitoring Report - Quarterly
Global Id:	T0603759521
Action Type:	RESPONSE
Date:	09/26/2011
Action:	Well Installation Report
Global Id:	T0603759521
Action Type:	RESPONSE
Date:	09/06/2012
Action:	Request for Closure
Global Id:	T0603759521
Action Type:	RESPONSE
Date:	07/15/2009
Action:	Monitoring Report - Semi-Annually

B21
WNW
< 1/8
0.001 mi.
7 ft.

C AND S PHOTO EXPRESS
1255 W CARSON ST
TORRANCE, CA 90502

HAZNET **S113005743**
N/A

Site 3 of 12 in cluster B

Relative:
Higher

Actual:
48 ft.

HAZNET:

Year:	1993
Gepaid:	CAD981418841
Contact:	NANCY WU
Telephone:	3103253699
Mailing Name:	Not reported
Mailing Address:	1255 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD108040858
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.0625
Facility County:	Los Angeles

Year:	1993
Gepaid:	CAD981418841
Contact:	NANCY WU
Telephone:	3103253699
Mailing Name:	Not reported
Mailing Address:	1255 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD108040858
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Not reported
Tons:	0.1042
Facility County:	Los Angeles

E22
ENE
< 1/8
0.001 mi.
7 ft.

CARLOS M V FAUSTO DDS
21720 S VERMONT AVE SUITE 115
TORRANCE, CA 90502

HAZNET **S113060157**
N/A

Site 4 of 14 in cluster E

Relative:
Lower

Actual:
40 ft.

HAZNET:

Year:	1995
Gepaid:	CAL000100688
Contact:	CARLOS M V FAUSTO
Telephone:	3103200085
Mailing Name:	Not reported
Mailing Address:	21720 S VERMONT AVE STE 115
Mailing City,St,Zip:	TORRANCE, CA 905022127
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Not reported
Tons:	.0166
Facility County:	Los Angeles

B23 **TONYS UNOCAL** **LUST** **S101583103**
WNW **1259 W CARSON ST** **CA FID UST** **N/A**
< 1/8 **TORRANCE, CA 90502** **SWEEPS UST**
0.001 mi.
7 ft. **Site 4 of 12 in cluster B**

Relative:
Higher

Actual:
48 ft.

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	I-05372	
Status:	Case Closed	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Soil	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603703067	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	NORMANDIE	
Enforcement Type:	Not reported	
Date Leak Discovered:	9/14/1992	
Date Leak First Reported:		10/13/1992
Date Leak Record Entered:	2/19/1993	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		1/20/1997
Date the Case was Closed:		9/9/1996
How Leak Discovered:	OM	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	UNOCAL	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		5035.279827602736276521536074 1
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		10/13/1992
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Groundwater:		Not reported
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	UNOCAL CORPORATION	
RP Address:	376 S. VALENCIA AVE., BREA CA 92621	
Program:	LUST	
Lat/Long:	33.8316366 / -1	
Local Agency Staff:	Not reported	

TONYS UNOCAL (Continued) **S101583103**

Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: 10/30/96 3RD QUARTERLY REPORT

CA FID UST:
Facility ID: 19002646
Regulated By: UTNKA
Regulated ID: 00017444
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2133209351
Mail To: Not reported
Mailing Address: 13707 S BROADWAY
Mailing Address 2: Not reported
Mailing City,St,Zip: TORRANCE 90502
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 5372
Number: 2
Board Of Equalization: 44-001057
Referral Date: 10-03-90
Action Date: 10-03-90
Created Date: 06-30-89
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 19-000-005372-000001
Actv Date: 06-30-89
Capacity: Not reported
Tank Use: UNKNOWN
Stg: W
Content: Not reported
Number Of Tanks: 3

Status: Active
Comp Number: 5372
Number: 2
Board Of Equalization: 44-001057
Referral Date: 10-03-90
Action Date: 10-03-90
Created Date: 06-30-89
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 19-000-005372-000002
Actv Date: 06-30-89
Capacity: Not reported

TONYS UNOCAL (Continued) **S101583103**

Tank Use: UNKNOWN
Stg: W
Content: Not reported
Number Of Tanks: Not reported

Status: Active
Comp Number: 5372
Number: 2
Board Of Equalization: 44-001057
Referral Date: 10-03-90
Action Date: 10-03-90
Created Date: 06-30-89
Tank Status: A
Owner Tank Id: Not reported
Swrcb Tank Id: 19-000-005372-000003
Actv Date: 06-30-89
Capacity: Not reported
Tank Use: UNKNOWN
Stg: W
Content: Not reported
Number Of Tanks: Not reported

B24 **TOSCO/UNOCAL #30769** **UST** **U003942415**
WNW **1259 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 5 of 12 in cluster B**

Relative:
Higher

Actual:
48 ft.

UST:
Facility ID: 25753
Latitude: 33.83154
Longitude: -118.29841

B25 **TONY'S UNOCAL #1** **HAZNET** **S113067102**
WNW **1259 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 6 of 12 in cluster B**

Relative:
Higher

Actual:
48 ft.

HAZNET:
Year: 2001
Gepaid: CAL000117526
Contact: TONY BOU-ABSI
Telephone: 3103209351
Mailing Name: Not reported
Mailing Address: 1259 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Recycler
Tons: 0.72
Facility County: Los Angeles

Year: 1999

TONY'S UNOCAL #1 (Continued) **S113067102**

Gepaid:	CAL000117526
Contact:	TONY BOY ABSI
Telephone:	3103209351
Mailing Name:	Not reported
Mailing Address:	1259 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	.0625
Facility County:	Los Angeles

B26 **TOSCO CORPORATION STATION #30769** **HAZNET** **S113076075**
WNW **1259 W CARSON** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 7 of 12 in cluster B**

Relative:
Higher

Actual:
48 ft.

HAZNET:

Year:	2002
Gepaid:	CAL000139158
Contact:	HAZMAT SPECIALIST
Telephone:	6027284180
Mailing Name:	Not reported
Mailing Address:	PO BOX 52085
Mailing City,St,Zip:	PHOENIX, AZ 850722085
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Treatment, Tank
Tons:	0.68
Facility County:	Los Angeles

B27 **UNION OIL SERVICE STATION #494** **HIST UST** **1000166898**
WNW **1259 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 8 of 12 in cluster B**

Relative:
Higher

Actual:
48 ft.

HIST UST:

Region:	STATE
Facility ID:	00000055307
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0001
Contact Name:	EIK KUN KIM
Telephone:	2133209351
Owner Name:	UNION OIL COMPANY OF CALIFORNI
Owner Address:	3701 WILSHIRE BOULEVARD - SUIT
Owner City,St,Zip:	LOS ANGELES, CA 90010
Tank Num:	001
Container Num:	4944-00

UNION OIL SERVICE STATION #494 (Continued) **1000166898**

Year Installed: Not reported
Tank Capacity: 00000120
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: None

B28 **CONOCO PHILLIPS #254944** **HAZNET** **S113129539**
WNW **1259 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 9 of 12 in cluster B**

Relative:
Higher

Actual:
48 ft.

HAZNET:

Year: 2009
Gepaid: CAL000277138
Contact: DANELLE EICHHORST
Telephone: 2812933723
Mailing Name: Not reported
Mailing Address: 600 N DAIRY ASHFORD -US MARKETING -
Mailing City,St,Zip: HOUSTON, TX 77079
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Tank bottom waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 3.336
Facility County: Los Angeles

Year: 2008
Gepaid: CAL000277138
Contact: DANELLE EICHHORST
Telephone: 2812933723
Mailing Name: Not reported
Mailing Address: 600 N DAIRY ASHFORD -US MARKETING -
Mailing City,St,Zip: HOUSTON, TX 77079
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 4.6662
Facility County: Los Angeles

Year: 2007
Gepaid: CAL000277138
Contact: DANELLE EICHHORST
Telephone: 2812933723
Mailing Name: Not reported
Mailing Address: 600 N DAIRY ASHFORD -US MARKETING -
Mailing City,St,Zip: HOUSTON, TX 77079
Gen County: Not reported
TSD EPA ID: CAD982444481
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery

CONOCO PHILLIPS #254944 (Continued) **S113129539**

(H010-H129) Or (H131-H135)
Tons: 2.31
Facility County: Los Angeles

Year: 2006
Gepaid: CAL000277138
Contact: DANELLE EICHHORST
Telephone: 2812933723
Mailing Name: Not reported
Mailing Address: 600 N DAIRY ASHFORD-MO 1001
Mailing City,St,Zip: HOUSTON, TX 77079
Gen County: Not reported
TSD EPA ID: CAD982444481
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Recycler
Tons: 0.01
Facility County: Los Angeles

Year: 2006
Gepaid: CAL000277138
Contact: DANELLE EICHHORST
Telephone: 2812933723
Mailing Name: Not reported
Mailing Address: 600 N DAIRY ASHFORD-MO 1001
Mailing City,St,Zip: HOUSTON, TX 77079
Gen County: Not reported
TSD EPA ID: CAD982444481
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Treatment, Tank
Tons: 0.2
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

B29 **ERNS** **92291659**
WNW **1259 WEST CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 10 of 12 in cluster B**

Relative:
Higher

Click this hyperlink while viewing on your computer to access
additional ERNS detail in the EDR Site Report.

Actual:
48 ft.

B30 **TONY'S 76** **HAZNET** **S113045795**
WNW **1259 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 11 of 12 in cluster B**

Relative:
Higher

HAZNET:
Year: 2008
Gepaid: CAL000062082
Contact: TONY BOU-ABSI
Telephone: 3103209351

Actual:
48 ft.

TONY'S 76 (Continued) **S113045795**

Mailing Name:	Not reported
Mailing Address:	1301 W REDONDO BEACH BLVD
Mailing City,St,Zip:	GARDENA, CA 902473320
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	1.668
Facility County:	Los Angeles

Year:	2008
Gepaid:	CAL000062082
Contact:	TONY BOU-ABSI
Telephone:	3103209351
Mailing Name:	Not reported
Mailing Address:	1301 W REDONDO BEACH BLVD
Mailing City,St,Zip:	GARDENA, CA 902473320
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	1.668
Facility County:	Los Angeles

Year:	2007
Gepaid:	CAL000062082
Contact:	TONY BOU-ABSI
Telephone:	3103209351
Mailing Name:	Not reported
Mailing Address:	1259 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905022009
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons:	1.37
Facility County:	Los Angeles

Year:	2007
Gepaid:	CAL000062082
Contact:	TONY BOU-ABSI
Telephone:	3103209351
Mailing Name:	Not reported
Mailing Address:	1259 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905022009
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)

TONY'S 76 (Continued) **S113045795**

Tons: 1.37
Facility County: Los Angeles

Year: 1998
Gepaid: CAL000062082
Contact: TONY BOU-ABSI/OWNER
Telephone: 3103209351
Mailing Name: Not reported
Mailing Address: 1259 W CARSON ST
Mailing City,St,Zip: TORRANCE, CA 905022009
Gen County: Not reported
TSD EPA ID: CAT000613893
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: .0458
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

B31 **SERVICE STATION 4944** **HIST UST** **U001564106**
WNW **1259 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.001 mi.
7 ft. **Site 12 of 12 in cluster B**

Relative: Higher

Actual: 48 ft.

HIST UST:
Region: STATE
Facility ID: 00000017446
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0003
Contact Name: EIK KUN KIM
Telephone: 2133209351
Owner Name: UNION OIL COMPANY OF CALIFORNI
Owner Address: 3701 WILSHIRE BLVD STE 830
Owner City,St,Zip: LOS ANGELES, CA 90010

Tank Num: 001
Container Num: 4944-4
Year Installed: 1962
Tank Capacity: 00000000
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Stock Inventor, Pressure Test

Tank Num: 002
Container Num: 4944-2
Year Installed: 1962
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor, Pressure Test

Tank Num: 003

SERVICE STATION 4944 (Continued) **U001564106**

Container Num: 4944-1
Year Installed: 1962
Tank Capacity: 00007500
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor, Pressure Test

F32 **ERNS** **94397504**
ENE **945 WEST CARSON** **N/A**
< 1/8 **TORRANCE, CA -**
0.001 mi.
7 ft. **Site 1 of 2 in cluster F**

Relative:
Lower

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
38 ft.

E33 **IL-SUN KIM** **HIST UST** **U001564100**
ENE **21700 S VERMONT AVE** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
9 ft. **Site 5 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

HIST UST:
Region: STATE
Facility ID: 00000039700
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0004
Contact Name: SAME
Telephone: 2133205305
Owner Name: MOBIL OIL CORP
Owner Address: 612 S. FLOWER ST
Owner City,St,Zip: LOS ANGELES, CA 90017

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000280
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000

IL-SUN KIM (Continued) **U001564100**

Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor

E34 **EXXONMOBIL OIL CORP.** **RCRA-LQG** **1007200173**
ENE **21700 S VERMONT AVE** **CAL000056160**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
9 ft. **Site 6 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

RCRA-LQG:
Date form received by agency: 02/28/2002
Facility name: EXXONMOBIL OIL CORP.
Facility address: 21700 S VERMONT AVE
TORRANCE, CA 90502
EPA ID: CAL000056160
Mailing address: WEST BAYAUD AVE.
LAKEWOOD, CO 80228
Contact: JOHN HOOVER
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (800) 253-8054
Contact email: Not reported
EPA Region: 09
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: EXXONMOBIL OIL CORP.
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner

EXXONMOBIL OIL CORP. (Continued) **1007200173**

Owner/Op start date: 05/31/2002
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: 223
Waste name: 223

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

E35 **MOBIL OIL CORP S/S #18-MAF** **UST** **U003940699**
ENE **21700 S VERMONT AVE** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
9 ft. **Site 7 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

UST:
Facility ID: 4331
Latitude: 33.83159
Longitude: -118.29027

E36 **EXXONMOBIL OIL CORP 10164** **RCRA-SQG** **1012176328**
ENE **21700 S VERMONT AVE** **HAZNET** **CAR000202457**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
9 ft. **Site 8 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

RCRA-SQG:
Date form received by agency: 08/26/2009
Facility name: EXXONMOBIL OIL CORP 10164
Facility address: 21700 S VERMONT AVE

EXXONMOBIL OIL CORP 10164 (Continued) **1012176328**

TORRANCE, CA 90502
EPA ID: CAR000202457
Mailing address: 882 S MATLACK ST
STE C EMES CO JD2 ENV INC
WEST CHESTER, PA 19382
Contact: DONNA HYMES
Contact address: 882 S MATLACK ST STE C EMES CO JD2 ENV INC
WEST CHESTER, PA 19382
Contact country: US
Contact telephone: 610-430-8151
Contact email: DHYMES@JD2ENV.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: EXXONMOBIL OIL CORP
Owner/operator address: 3225 GALLOWS RD
FAIRFAX, VA 22037
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Owner/operator name: EXXONMOBIL OIL CORP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

EXXONMOBIL OIL CORP 10164 (Continued) **1012176328**

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

HAZNET:
Year: 2012
Gepaid: CAR000202457
Contact: DONNA HYMES
Telephone: 6104308151
Mailing Name: Not reported
Mailing Address: 800 E WASHINGTON ST
Mailing City,St,Zip: WEST CHESTER, PA 193800000
Gen County: Los Angeles
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.50457
Facility County: Los Angeles

Year: 2010
Gepaid: CAR000202457
Contact: DONNA HYMES
Telephone: 6104308151
Mailing Name: Not reported
Mailing Address: 800 E WASHINGTON ST
Mailing City,St,Zip: WEST CHESTER, PA 193800000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 6.6612
Facility County: Los Angeles

Year: 2010
Gepaid: CAR000202457
Contact: DONNA HYMES
Telephone: 6104308151
Mailing Name: Not reported
Mailing Address: 800 E WASHINGTON ST
Mailing City,St,Zip: WEST CHESTER, PA 193800000
Gen County: Not reported
TSD EPA ID: CAD028409019

EXXONMOBIL OIL CORP 10164 (Continued) **1012176328**

TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons:	0.0084
Facility County:	Los Angeles
Year:	2010
Gepaid:	CAR000202457
Contact:	DONNA HYMES
Telephone:	6104308151
Mailing Name:	Not reported
Mailing Address:	800 E WASHINGTON ST
Mailing City,St,Zip:	WEST CHESTER, PA 193800000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues 10 percent or more
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.48789
Facility County:	Los Angeles
Year:	2009
Gepaid:	CAR000202457
Contact:	DONNA HYMES
Telephone:	6104308151
Mailing Name:	Not reported
Mailing Address:	800 E WASHINGTON ST
Mailing City,St,Zip:	WEST CHESTER, PA 19380
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues 10 percent or more
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	1.03416
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

E37 **MOBIL OIL CORPORATION 18-MAF** **HAZNET** **S113043530**
ENE **21700 VERMONT AVE** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
9 ft. **Site 9 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

HAZNET:

Year:	2010
Gepaid:	CAL000056160
Contact:	DONNA HYMES
Telephone:	6104308151
Mailing Name:	Not reported
Mailing Address:	800 E WASHINGTON ST
Mailing City,St,Zip:	WEST CHESTER, PA 193800000
Gen County:	Not reported
TSD EPA ID:	TXD000838896

MOBIL OIL CORPORATION 18-MAF (Continued) **S113043530**

TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Incineration--Thermal Destruction Other Than Use As A Fuel
Tons: 0.0125
Facility County: Los Angeles

Year: 2010
Gepaid: CAL000056160
Contact: DONNA HYMES
Telephone: 6104308151
Mailing Name: Not reported
Mailing Address: 800 E WASHINGTON ST
Mailing City,St,Zip: WEST CHESTER, PA 193800000
Gen County: Not reported
TSD EPA ID: TXD000838896
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Incineration--Thermal Destruction Other Than Use As A Fuel
Tons: 0.0125
Facility County: Los Angeles

Year: 2009
Gepaid: CAL000056160
Contact: DONNA HYMES
Telephone: 6104308151
Mailing Name: Not reported
Mailing Address: 800 E WASHINGTON ST
Mailing City,St,Zip: WEST CHESTER, PA 19380
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues 10 percent or more
Disposal Method: Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons: 0.22935
Facility County: Los Angeles

Year: 2009
Gepaid: CAL000056160
Contact: DONNA HYMES
Telephone: 6104308151
Mailing Name: Not reported
Mailing Address: 800 E WASHINGTON ST
Mailing City,St,Zip: WEST CHESTER, PA 19380
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues 10 percent or more
Disposal Method: Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons: 0.22935
Facility County: Los Angeles

Year: 2008
Gepaid: CAL000056160
Contact: DALE VIATOR, ENVT'L ADVISOR
Telephone: 2816548470

MOBIL OIL CORPORATION 18-MAF (Continued) **S113043530**

Mailing Name:	Not reported
Mailing Address:	882 S MATLACK ST SUITE C
Mailing City,St,Zip:	WEST CHESTER, PA 193820000
Gen County:	Not reported
TSD EPA ID:	TXD000838896
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Incineration--Thermal Destruction Other Than Use As A Fuel
Tons:	0.004
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
29 additional CA_HAZNET: record(s) in the EDR Site Report.

E38
ENE
< 1/8
0.002 mi.
9 ft.

MOBIL #11-MAF **HIST CORTESE** **S103066104**
21700 VERMONT **N/A**
LOS ANGELES, CA 90502

Site 10 of 14 in cluster E

Relative:
Lower

Actual:
38 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	R-04331

39
NNE
< 1/8
0.002 mi.
10 ft.

TORRANCE RECYCLING CENTER #2 **SWRCY** **S109612821**
1037 W CARSON ST **N/A**
TORRANCE, CA 90502

Relative:
Lower

Actual:
42 ft.

SWRCY:

Reg Id:	39333
Cert Id:	RC14363
Mailing Address:	3249 W El Segundo Blvd
Mailing City:	Hawthorne
Mailing State:	CA
Mailing Zip Code:	90250
Website:	Not reported
Phone Number:	(310) 634-1104
Grand Father:	N
Rural:	N
Operation Begin Date:	06/01/2009
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Agency:	N/A
Monday Hours Of Operation:	8:00 am - 4:15 pm; Closed 1:00 pm - 1:30 pm
Tuesday Hours Of Operation:	CLOSED
Wednesday Hours Of Operation:	8:00 am - 4:15 pm; Closed 1:00 pm - 1:30 pm
Thursday Hours Of Operation:	CLOSED
Friday Hours Of Operation:	8:00 am - 4:15 pm; Closed 1:00 pm - 1:30 pm
Saturday Hours Of Operation:	8:00 am - 4:15 pm; Closed 1:00 pm - 1:30 pm
Sunday Hours Of Operation:	8:00 am - 4:15 pm; Closed 1:00 pm - 1:30 pm

TORRANCE RECYCLING CENTER #2 (Continued) **S109612821**

Cert Status: Operational
Organization ID: 19577
Organization Name: CA Recycling Inc
Agency Reg ID: N/A
Operation End Date: Not reported

C40 **T SHIRT WAREHOUSE** **HAZNET** **S112873553**
North **1101 WEST CARSON** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
12 ft. **Site 2 of 11 in cluster C**

Relative: **Lower**

Actual: **43 ft.**

HAZNET:
Year: 1995
Gepaid: CAC001201096
Contact: CHRIS HAN
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1101 WEST CARSON
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAD000088252
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Transfer Station
Tons: .1668
Facility County: Los Angeles

Year: 1995
Gepaid: CAC001201096
Contact: CHRIS HAN
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1101 WEST CARSON
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAD000088252
TSD County: Not reported
Waste Category: Latex waste
Disposal Method: Transfer Station
Tons: .0475
Facility County: Los Angeles

C41 **B M A LOS ANGELES** **HAZNET** **S112873564**
NNW **1123 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 3 of 11 in cluster C**

Relative: **Higher**

Actual: **44 ft.**

HAZNET:
Year: 1995
Gepaid: CAC001201264
Contact: NATIONAL MED CARE INC.
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 1123 W CARSON ST

B M A LOS ANGELES (Continued) **S112873564**

Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080022148
TSD County:	Not reported
Waste Category:	Paint sludge
Disposal Method:	Transfer Station
Tons:	.2502
Facility County:	Los Angeles

Year:	1995
Gepaid:	CAC001201264
Contact:	NATIONAL MED CARE INC.
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1123 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080022148
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	.0050
Facility County:	Los Angeles

C42 **BIOMARIN** **HAZNET** **S112907127**
NNW **1123 CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 4 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

HAZNET:

Year:	2000
Gepaid:	CAC002248897
Contact:	STEVE JUNGLES-DIRECTOR
Telephone:	4158846700
Mailing Name:	Not reported
Mailing Address:	371 BEL MARIN KEYS STE 210
Mailing City,St,Zip:	NOVATO, CA 949490000
Gen County:	Not reported
TSD EPA ID:	CAT080022148
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	0.07
Facility County:	Los Angeles

Year:	2000
Gepaid:	CAC002248897
Contact:	STEVE JUNGLES-DIRECTOR
Telephone:	4158846700
Mailing Name:	Not reported
Mailing Address:	371 BEL MARIN KEYS STE 210
Mailing City,St,Zip:	NOVATO, CA 949490000
Gen County:	Not reported
TSD EPA ID:	CAT080022148
TSD County:	Not reported
Waste Category:	Unspecified solvent mixture
Disposal Method:	Transfer Station

BIOMARIN (Continued) **S112907127**

Tons: 0.22
Facility County: Los Angeles

C43 **LOS ANGELES BIOMEDICAL RESERACH INSTITUTE** **HAZNET** **S113146254**
NNW **1124 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 5 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

HAZNET:

Year:	2012
Gepaid:	CAL000316288
Contact:	GIL ARMANGUE/SAFETY DIRECTOR
Telephone:	3102222456
Mailing Name:	Not reported
Mailing Address:	1124 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Los Angeles
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.005
Facility County:	Los Angeles

Year:	2012
Gepaid:	CAL000316288
Contact:	GIL ARMANGUE/SAFETY DIRECTOR
Telephone:	3102222456
Mailing Name:	Not reported
Mailing Address:	1124 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Los Angeles
TSD EPA ID:	ARD069748192
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Incineration--Thermal Destruction Other Than Use As A Fuel
Tons:	0.3
Facility County:	Los Angeles

Year:	2012
Gepaid:	CAL000316288
Contact:	GIL ARMANGUE/SAFETY DIRECTOR
Telephone:	3102222456
Mailing Name:	Not reported
Mailing Address:	1124 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Los Angeles
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0115
Facility County:	Los Angeles

Year: 2012

LOS ANGELES BIOMEDICAL RESERACH INSTITUTE (Continued) **S113146254**

Gepaid:	CAL000316288
Contact:	GIL ARMANGUE/SAFETY DIRECTOR
Telephone:	3102222456
Mailing Name:	Not reported
Mailing Address:	1124 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Los Angeles
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.5825
Facility County:	Los Angeles

Year:	2012
Gepaid:	CAL000316288
Contact:	GIL ARMANGUE/SAFETY DIRECTOR
Telephone:	3102222456
Mailing Name:	Not reported
Mailing Address:	1124 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Los Angeles
TSD EPA ID:	CAT080014079
TSD County:	Contra Costa
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.01
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
56 additional CA_HAZNET: record(s) in the EDR Site Report.

C44 **B M A LOS ANGELES** **HAZNET** **S112885040**
NNW **1123 WEST CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 6 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

HAZNET:

Year:	1998
Gepaid:	CAC001359520
Contact:	B M A LOS ANGELES
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1123 WEST CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD099452708
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Transfer Station
Tons:	1.6680
Facility County:	Los Angeles

C45
NNW
< 1/8
0.002 mi.
13 ft.

BIOMARIN PHARMACEUTICAL INC
1123 W CARSON ST
TORRANCE, CA 90502

Site 7 of 11 in cluster C

HAZNET **S112914408**
N/A

Relative:
Higher

Actual:
44 ft.

HAZNET:

Year:	2001
Gepaid:	CAC002349329
Contact:	JIM KROYER
Telephone:	4158508666
Mailing Name:	Not reported
Mailing Address:	46 GALLI DR
Mailing City,St,Zip:	NOVATO, CA 949490000
Gen County:	Not reported
TSD EPA ID:	CAD008302903
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus inorganics
Disposal Method:	Transfer Station
Tons:	0.02
Facility County:	Los Angeles

Year:	2001
Gepaid:	CAC002349329
Contact:	JIM KROYER
Telephone:	4158508666
Mailing Name:	Not reported
Mailing Address:	46 GALLI DR
Mailing City,St,Zip:	NOVATO, CA 949490000
Gen County:	Not reported
TSD EPA ID:	CAD008302903
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus inorganics
Disposal Method:	Transfer Station
Tons:	0.14
Facility County:	Los Angeles

Year:	2001
Gepaid:	CAC002349329
Contact:	JIM KROYER
Telephone:	4158508666
Mailing Name:	Not reported
Mailing Address:	46 GALLI DR
Mailing City,St,Zip:	NOVATO, CA 949490000
Gen County:	Not reported
TSD EPA ID:	CAD008302903
TSD County:	Not reported
Waste Category:	Alkaline solution without metals pH >= 12.5
Disposal Method:	Transfer Station
Tons:	0.05
Facility County:	Los Angeles

C46 **MERONA ENTERPRISES DBA CARSON NORMANDIE PLAZA LLC** **HAZNET** **S113799145**
NNW **1141 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 8 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

HAZNET:

Year:	2012
Gepaid:	CAL000360511
Contact:	CARLOS LOSADA
Telephone:	5623074735
Mailing Name:	Not reported
Mailing Address:	9550 FIRESTONE BLVD STE 105
Mailing City,St,Zip:	DOWNEY, CA 902415560
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	2.94
Facility County:	Los Angeles

C47 **CARSON-NORMANDIE PLAZA, LLC** **SLIC** **S106916817**
NNW **1141 CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 9 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

SLIC:

Region:	STATE
Facility Status:	**Open - Remediation**
Status Date:	10/07/2010
Global Id:	SL0603746736
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	33.832414
Longitude:	-118.29643
Case Type:	Cleanup Program Site
Case Worker:	BA
Local Agency:	Not reported
RB Case Number:	1173
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Tetrachloroethylene (PCE)
Site History:	The site is a commercial shopping strip mall, originally constructed in approximately 1962. A dry cleaner occupied a unit at 1161 West Carson Street and operated from approximately 1962 to at least 1985. Site investigations were conducted at the site from 2001 to 2007, involving soil vapor survey, soil and groundwater sampling and installation of six groundwater monitoring wells and indicated that there was a release of chemicals used in the dry cleaning operations. Perchloroethylene (PCE), trichloroethene (TCE) and other volatile organic compounds were detected in the soil, soil vapor and groundwater. A soil remedial action plan (RAP) was approved by the Regional Board on July 23, 2009. The RAP proposed impacted soil excavation and removal from the upper 5 feet and a soil vapor extraction (SVE) system for the remaining portion of the vadose zone, which is approximately 45 feet thick. The soil excavtion was completed in January 2009. A total of 367 tons of VOC-impacted soil

CARSON-NORMANDIE PLAZA, LLC (Continued) **S106916817**

was excavated and removed from inside the former dry cleaner's unit. The SVE system was installed and began operation on September 7, 2010. An interim groundwater remedial action plan (IGRP) was approved by the Regional Board on January 12, 2011. The IGRP proposed injection of potassium permanganet solution in the source area for source reduction and evaluation of the effectiveness of the reagent. The injection work was conducted from May to June 2011. A total volume of 42,264 gallons of potassium permanganet soultion was injected at 22 injection points and two injection wells in the first round of injection. Groundwater monitoring has been performed at the site since 2007.

Click here to access the California GeoTracker records for this facility:

C48 **MERONA ENTERPRISES DBA CARSON-NORMANDIE PLAZA** **HAZNET** **S113155306**
NNW **1141 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.002 mi.
13 ft. **Site 10 of 11 in cluster C**

Relative:
Higher

Actual:
44 ft.

HAZNET:

Year:	2011
Gepaid:	CAL000340454
Contact:	CARLOS LOSADA
Telephone:	5627452359
Mailing Name:	Not reported
Mailing Address:	9550 FIRESTONE BLVD STE 105
Mailing City,St,Zip:	DOWNEY, CA 902415560
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	6.426
Facility County:	Los Angeles

Year:	2009
Gepaid:	CAL000340454
Contact:	CARLOS LOSADA
Telephone:	5627452359
Mailing Name:	Not reported
Mailing Address:	9550 FIRESTONE BLVD STE 105
Mailing City,St,Zip:	DOWNEY, CA 902415560
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	1.326
Facility County:	Los Angeles

C49
NW
< 1/8
0.003 mi.
14 ft.

NORGE VILLAGE CLEANERS — **RCRA-SQG** — **1000233450**
1161 W CARSON ST — **CAD981987993**
TORRANCE, CA 90502

Site 11 of 11 in cluster C

Relative:
Higher

Actual:
45 ft.

RCRA-SQG:

Date form received by agency:	12/21/1993
Facility name:	NORGE VILLAGE CLEANERS
Facility address:	1161 W CARSON ST TORRANCE, CA 90502
EPA ID:	CAD981987993
Mailing address:	W CARSON ST TORRANCE, CA 90502
Contact:	RAYMOND SHORE
Contact address:	1161 W CARSON ST TORRANCE, CA 90502
Contact country:	US
Contact telephone:	(310) 328-9675
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	RAYMOND E SHORE
Owner/operator address:	1161 W CARSON TORRANCE, CA 90502
Owner/operator country:	Not reported
Owner/operator telephone:	(310) 328-9675
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

NORGE VILLAGE CLEANERS (Continued) **1000233450**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

E50 **SHELL** **HAZNET** **S113086838**
ENE **911 W CARSON** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.003 mi.
16 ft. **Site 11 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

HAZNET:
Year: 1998
Gepaid: CAL000162358
Contact: EQUILON ENTERPRISES LLC
Telephone: 7132412258
Mailing Name: Not reported
Mailing Address: PO BOX 2099
Mailing City,St,Zip: HOUSTON, TX 772522099
Gen County: Not reported
TSD EPA ID: CAD982484933
TSD County: Not reported
Waste Category: Empty containers less than 30 gallons
Disposal Method: Disposal, Other
Tons: .4250
Facility County: Los Angeles

E51 **TORRANCE HARBOR SHELL** **UST** **U003777977**
ENE **911 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.003 mi.
16 ft. **Site 12 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

UST:
Facility ID: 26329
Latitude: 33.83161
Longitude: -118.29058

E52 **TESORO REFINING & MARKETING/CARSON SHELL #68624** **HAZNET** **S113148562**
ENE **911 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.003 mi.
16 ft. **Site 13 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

HAZNET:
Year: 2012
Gepaid: CAL000322088
Contact: LISA GARCIA
Telephone: 2106264994
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY

TESORO REFINING & MARKETING/CARSON SHELL #68624 (Continued) **S113148562**

Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Los Angeles
TSD EPA ID: NVT330010000
TSD County: 99
Waste Category: Not reported
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.015
Facility County: Los Angeles

Year: 2012
Gepaid: CAL000322088
Contact: LISA GARCIA
Telephone: 2106264994
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY
Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Los Angeles
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.0672
Facility County: Los Angeles

Year: 2011
Gepaid: CAL000322088
Contact: ROB DONOVAN
Telephone: 2538968700
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PARKWAY
Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Not reported
TSD EPA ID: NVT330010000
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.1175
Facility County: Los Angeles

Year: 2011
Gepaid: CAL000322088
Contact: ROB DONOVAN
Telephone: 2538968700
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PARKWAY
Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.0042
Facility County: Los Angeles

TESORO REFINING & MARKETING/CARSON SHELL #68624 (Continued) **S113148562**

Year:	2010
Gepaid:	CAL000322088
Contact:	LISA GARCIA
Telephone:	2106264994
Mailing Name:	Not reported
Mailing Address:	19100 RIDGEWOOD PKWY
Mailing City,St,Zip:	SAN ANTONIO, TX 782590000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.168
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
5 additional CA_HAZNET: record(s) in the EDR Site Report.

E53 **SHELL SERVICE STATION** **RCRA-SQG 1005441232**
ENE **911 W CARSON** **HAZNET CAR000116954**
< 1/8 **TORRANCE, CA 90502**
0.003 mi.
16 ft. **Site 14 of 14 in cluster E**

Relative:
Lower

Actual:
38 ft.

RCRA-SQG:

Date form received by agency:	05/21/2002
Facility name:	SHELL SERVICE STATION
Facility address:	911 W CARSON S A P 136184 TORRANCE, CA 90502
EPA ID:	CAR000116954
Mailing address:	P O BOX 2648 HOUSTON, TX 772522648
Contact:	SONDRA BIENVENU
Contact address:	P O BOX 2648 HOUSTON, TX 772522648
Contact country:	US
Contact telephone:	(713) 241-5036
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	EQUILON ENT LLC DBA S O P US
Owner/operator address:	P O BOX 2648 HOUSTON, TX 77252
Owner/operator country:	Not reported
Owner/operator telephone:	(713) 241-5036
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported

SHELL SERVICE STATION (Continued) **1005441232**

Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

HAZNET:
Year: 2007
Gepaid: CAR000116954
Contact: R HULL/ENV. REPORTING ANALYST
Telephone: 2818742224
Mailing Name: Not reported
Mailing Address: 12700 NORTHBOROUGH DR 300G03
Mailing City,St,Zip: Houston, TX 770670000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.04
Facility County: Los Angeles

Year: 2004
Gepaid: CAR000116954
Contact: N CORTEZ/ENVT'L DATA ANALYST
Telephone: 2818742224
Mailing Name: Not reported
Mailing Address: 12700 NORTHBOROUGH DR MFT 240-G

SHELL SERVICE STATION (Continued) **1005441232**

Mailing City,St,Zip: Houston, TX 770672508
Gen County: Not reported
TSD EPA ID: CAD982484933
TSD County: Not reported
Waste Category: Other empty containers 30 gallons or more
Disposal Method: Disposal, Other
Tons: 1.25
Facility County: Los Angeles

Year: 2002
Gepaid: CAR000116954
Contact: N CORTEZ/ENVT'L DATA ANALYST
Telephone: 2818742224
Mailing Name: Not reported
Mailing Address: 12700 NORTHBOROUGH DR MFT 240-G
Mailing City,St,Zip: Houston, TX 770672508
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Treatment, Tank
Tons: 0.1
Facility County: Los Angeles

Year: 2002
Gepaid: CAR000116954
Contact: N CORTEZ/ENVT'L DATA ANALYST
Telephone: 2818742224
Mailing Name: Not reported
Mailing Address: 12700 NORTHBOROUGH DR MFT 240-G
Mailing City,St,Zip: Houston, TX 770672508
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Tank bottom waste
Disposal Method: Treatment, Tank
Tons: 0.7
Facility County: Los Angeles

F54 **SMILE CARE DENTAL GROUP** **HAZNET** **S113053914**
ENE **923 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.003 mi.
17 ft. **Site 2 of 2 in cluster F**

Relative:
Lower

Actual:
38 ft.

HAZNET:
Year: 2003
Gepaid: CAL000083020
Contact: LANE D HARTER-DIR CLIN SVCS
Telephone: 7148503333
Mailing Name: Not reported
Mailing Address: PO BOX 25096
Mailing City,St,Zip: SANTA ANA, CA 927995096
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station

SMILE CARE DENTAL GROUP (Continued) **S113053914**

Tons: 0.02
Facility County: Los Angeles

Year: 2003
Gepaid: CAL000083020
Contact: LANE D HARTER-DIR CLIN SVCS
Telephone: 7148503333
Mailing Name: Not reported
Mailing Address: PO BOX 25096
Mailing City,St,Zip: SANTA ANA, CA 927995096
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Tons: 0.02
Facility County: Los Angeles

Year: 2001
Gepaid: CAL000083020
Contact: LANE D HARTER-DIR CLIN SVCS
Telephone: 7148503333
Mailing Name: Not reported
Mailing Address: PO BOX 25096
Mailing City,St,Zip: SANTA ANA, CA 927995096
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Liquids with mercury >= 20 Mg./L
Disposal Method: Transfer Station
Tons: 0
Facility County: Los Angeles

Year: 2001
Gepaid: CAL000083020
Contact: LANE D HARTER-DIR CLIN SVCS
Telephone: 7148503333
Mailing Name: Not reported
Mailing Address: PO BOX 25096
Mailing City,St,Zip: SANTA ANA, CA 927995096
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Liquids with mercury >= 20 Mg./L
Disposal Method: Transfer Station
Tons: 0
Facility County: Los Angeles

Year: 2000
Gepaid: CAL000083020
Contact: LANE D HARTER-DIR CLIN SVCS
Telephone: 7148503333
Mailing Name: Not reported
Mailing Address: PO BOX 25096
Mailing City,St,Zip: SANTA ANA, CA 927995096
Gen County: Not reported
TSD EPA ID: CAD028409019

SMILE CARE DENTAL GROUP (Continued) **S113053914**

TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Tons: 0.02
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
15 additional CA_HAZNET: record(s) in the EDR Site Report.

G55 **AT&T INFORMATION SYSTEMS** **HIST UST** **U001564090**
ESE **826 W 220TH ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.047 mi.
250 ft. **Site 1 of 2 in cluster G**

Relative:
Lower

Actual:
42 ft.

HIST UST:
Region: STATE
Facility ID: 00000004923
Facility Type: Other
Other Type: COMMUNICATIONS
Total Tanks: 0000
Contact Name: BILL PARKER
Telephone: 7149731675
Owner Name: PRITKIN-FINKKEL INVESTMENT COM
Owner Address: 10880 WILSHIRE BLVD., SUITE 23
Owner City,St,Zip: LOS ANGELES, CA 90024

Tank Num: 001
Container Num: 01
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

G56 **BEPO AUTO REPAIR** **HAZNET** **S113123211**
ESE **802 W 220TH ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.063 mi.
334 ft. **Site 2 of 2 in cluster G**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 2011
Gepaid: CAL000262120
Contact: ENRIQUE GONZALES
Telephone: 3103202641
Mailing Name: Not reported
Mailing Address: 802 W 220TH ST
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: NVT330010000
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect

BEPO AUTO REPAIR (Continued) **S113123211**

Tons: 0.475
Facility County: Los Angeles

H57 **VISION AUTO SERVICE CENTER** **HAZNET** **S113140819**
ENE **800 W CARSON ST STE 32** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.088 mi.
465 ft. **Site 1 of 4 in cluster H**

Relative:
Lower

Actual:
41 ft.

HAZNET:
Year: 2006
Gepaid: CAL000302620
Contact: ANTHONY CHAVEZ
Telephone: 3102127989
Mailing Name: Not reported
Mailing Address: 800 W CARSON ST STE 32
Mailing City,St,Zip: TORRANCE, CA 90502
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: 0.41
Facility County: Los Angeles

H58 **MISSION STORAGE** **HAZNET** **S112941569**
ENE **735 W CARSON ST** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.088 mi.
465 ft. **Site 2 of 4 in cluster H**

Relative:
Lower

Actual:
41 ft.

HAZNET:
Year: 2004
Gepaid: CAC002583971
Contact: DAVE
Telephone: 7145545291
Mailing Name: Not reported
Mailing Address: 1954 PLACENTIA AVE # 210
Mailing City,St,Zip: COSTA MESA, CA 92627
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: 0
Facility County: Los Angeles

H59 **CAR TECH MG AUTO SPECIALIST** **HAZNET** **S113161513**
ENE **800 W CARSON ST STE 35** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.088 mi.
465 ft. **Site 3 of 4 in cluster H**

Relative:
Lower

Actual:
41 ft.

HAZNET:

Year:	2012
Gepaid:	CAL000362648
Contact:	GHERRY GIMENEZ
Telephone:	5627538099
Mailing Name:	Not reported
Mailing Address:	800 W CARSON ST STE 35
Mailing City,St,Zip:	TORRANCE, CA 905022100
Gen County:	Los Angeles
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.722
Facility County:	Los Angeles

Year:	2011
Gepaid:	CAL000362648
Contact:	GHERRY GIMENEZ
Telephone:	5627538099
Mailing Name:	Not reported
Mailing Address:	800 W CARSON ST STE 35
Mailing City,St,Zip:	TORRANCE, CA 905022100
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.665
Facility County:	Los Angeles

H60 **TORRANCE BUSINESS PLAZA** **HAZNET** **S112976718**
ENE **800 W CARSON ST STE 35** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.088 mi.
465 ft. **Site 4 of 4 in cluster H**

Relative:
Lower

Actual:
41 ft.

HAZNET:

Year:	2009
Gepaid:	CAC002640525
Contact:	SURYA GUPTA
Telephone:	3238992772
Mailing Name:	Not reported
Mailing Address:	PO BOX 93391
Mailing City,St,Zip:	LOS ANGELES, CA 900930391
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0375

TORRANCE BUSINESS PLAZA (Continued) **S112976718**

Facility County:	Los Angeles
Year:	2009
Gepaid:	CAC002640525
Contact:	SURYA GUPTA
Telephone:	3238992772
Mailing Name:	Not reported
Mailing Address:	PO BOX 93391
Mailing City,St,Zip:	LOS ANGELES, CA 900930391
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Tank bottom waste
Disposal Method:	Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)
Tons:	0.6672
Facility County:	Los Angeles

61
SW
< 1/8
0.090 mi.
474 ft.

NAWAID RANA **HAZNET** **S112992837**
22114 KENWOOD AVE **N/A**
TORRANCE, CA 90502

Relative:
Higher

Actual:
46 ft.

HAZNET:

Year:	2011
Gepaid:	CAC002675176
Contact:	NAWAID RANA
Telephone:	3104096444
Mailing Name:	Not reported
Mailing Address:	22114 KENWOOD AVE
Mailing City,St,Zip:	TORRANCE, CA 90502
Gen County:	Not reported
TSD EPA ID:	AZC950823111
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	1.2
Facility County:	Los Angeles
Year:	2011
Gepaid:	CAC002675176
Contact:	NAWAID RANA
Telephone:	3104096444
Mailing Name:	Not reported
Mailing Address:	22114 KENWOOD AVE
Mailing City,St,Zip:	TORRANCE, CA 90502
Gen County:	Not reported
TSD EPA ID:	AZC950823111
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	1.2
Facility County:	Los Angeles

I62 **THE 21600 VERMONT GROUP** **HAZNET** **S112874606**
ENE **21600 VERMONT** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.102 mi.
538 ft. **Site 1 of 5 in cluster I**

Relative:
Lower

Actual:
33 ft.

HAZNET:

Year:	1996
Gepaid:	CAC001212624
Contact:	THE 21600 VERMONT GROUP
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	21600 VERMONT
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	7.3308
Facility County:	Los Angeles

I63 **JOHN BATES** **HIST CORTESE** **S103990725**
ENE **21600 VERMONT** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.102 mi.
538 ft. **Site 2 of 5 in cluster I**

Relative:
Lower

Actual:
33 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	R-23360

I64 **HERTZ EQUIPMENT RENTAL** **RCRA-SQG** **1000423582**
ENE **21600 S VERMONT AVE** **HIST UST** **CAD981664279**
< 1/8 **TORRANCE, CA** **HAZNET**
0.102 mi.
538 ft. **Site 3 of 5 in cluster I**

Relative:
Lower

Actual:
33 ft.

RCRA-SQG:

Date form received by agency:	10/14/1986
Facility name:	HERTZ EQUIPMENT RENTAL
Facility address:	21600 S VERMONT AVE TORRANCE, CA 90502
EPA ID:	CAD981664279
Mailing address:	S VERMONT AVE TORRANCE, CA 90502
Contact:	ENVIRONMENTAL MANAGER
Contact address:	21600 S VERMONT AVE TORRANCE, CA 90502
Contact country:	US
Contact telephone:	(213) 637-7368
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

HERTZ EQUIPMENT RENTAL (Continued) **1000423582**

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	HERTZ CORP
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

HIST UST:

Region:	STATE
Facility ID:	00000068538
Facility Type:	Other
Other Type:	CONST. EQUIP. RENTAL
Total Tanks:	0002
Contact Name:	RICK BROWN
Telephone:	2014286825
Owner Name:	VERMONT ENTERPRISES
Owner Address:	P.O. BOX 1589
Owner City,St,Zip:	TORRANCE, CA 90505

Tank Num: 001

HERTZ EQUIPMENT RENTAL (Continued) **1000423582**

Container Num: 1
Year Installed: 1980
Tank Capacity: 00010000
Tank Used for: WASTE
Type of Fuel: 4
Tank Construction: Unkown inches
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1980
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

HAZNET:
Year: 1993
Gepaid: CAD981664279
Contact: Not reported
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 21600 S VERMONT AVE
Mailing City,St,Zip: TORRENCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAT080011059
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Recycler
Tons: 1.4595
Facility County: Los Angeles

I65 **JOHN BATES** **LUST S110654520**
ENE **21600 VERMONT AVE S** **N/A**
< 1/8 **LOS ANGELES, CA 90502**
0.102 mi.
538 ft. **Site 4 of 5 in cluster I**

Relative:
Lower

Actual:
33 ft.

LUST:
Region: STATE
Global Id: T0603705399
Latitude: 33.8324457
Longitude: -118.2901786
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 04/24/1996
Lead Agency: LOS ANGELES COUNTY
Case Worker: JOA
Local Agency: LOS ANGELES COUNTY
RB Case Number: R-23360
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Aviation
Site History: Not reported

JOHN BATES (Continued) **S110654520**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603705399
Contact Type:	Local Agency Caseworker
Contact Name:	JOHN AWUJO
Organization Name:	LOS ANGELES COUNTY
Address:	900 S FREMONT AVE
City:	ALHAMBRA
Email:	jawujo@dpw.lacounty.gov
Phone Number:	6264583507

Global Id:	T0603705399
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0603705399
Status:	Completed - Case Closed
Status Date:	04/24/1996

Global Id:	T0603705399
Status:	Open - Case Begin Date
Status Date:	04/24/1996

Regulatory Activities:

Global Id:	T0603705399
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

I66 **JOHN BATES** **LUST** **S102064075**
ENE **21600 VERMONT AVE S** **N/A**
< 1/8 **LOS ANGELES, CA 90502**
0.102 mi.
538 ft. **Site 5 of 5 in cluster I**

Relative:
Lower

Actual:
33 ft.

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	R-23360
Status:	Case Closed
Substance:	1
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Soil
Abatement Method Used at the Site:	Not reported
Global ID:	T0603705399
W Global ID:	Not reported

JOHN BATES (Continued) **S102064075**

Staff:	UNK	
Local Agency:	19000	
Cross Street:	Not reported	
Enforcement Type:	Not reported	
Date Leak Discovered:	Not reported	
Date Leak First Reported:		4/24/1996
Date Leak Record Entered:	10/9/1996	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		4/24/1996
Date the Case was Closed:		4/24/1996
How Leak Discovered:	Not reported	
How Leak Stopped:	Not reported	
Cause of Leak:	Not reported	
Leak Source:	Not reported	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		7125.607563918045609149523869 6
Source of Cleanup Funding:		Not reported
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		Not reported
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Groundwater:		Not reported
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	VERMONT GROUP 21600	
RP Address:	21600 S VERMONT AVE, STE 545 TORRANCE 90502	
Program:	LUST	
Lat/Long:	33.8324457 / -1	
Local Agency Staff:	Not reported	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	
Assigned Name:	Not reported	
Summary:	Not reported	

J67 **X PERT REBUILD & MACHINE UNIT F** **RCRA-SQG** **1000219325**
SE **22102 S VERMONT AVE** **CAD981439250**
< 1/8 **TORRANCE, CA**
0.103 mi.
544 ft. **Site 1 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	X PERT REBUILD & MACHINE UNIT F
Facility address:	22102 S VERMONT AVE TORRANCE, CA 90502

X PERT REBUILD & MACHINE UNIT F (Continued) **1000219325**

EPA ID: CAD981439250
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: RAY BOWMAN
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/03/1986
Facility name: X PERT REBUILD & MACHINE UNIT F

X PERT REBUILD & MACHINE UNIT F (Continued) **1000219325**

Classification: Large Quantity Generator

Violation Status: No violations found

J68 **PARAGON ENGINEERING INC** **RCRA-SQG** **1000146203**
SE **22106 S VERMONT AVE** **CAD010706885**
< 1/8 **TORRANCE, CA 90502**
0.107 mi.
564 ft. **Site 2 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

RCRA-SQG:

Date form received by agency:	09/09/1986
Facility name:	PARAGON ENGINEERING INC
Facility address:	22106 S VERMONT AVE TORRANCE, CA 90502
EPA ID:	CAD010706885
Mailing address:	S VERMONT AVE TORRANCE, CA 90502
Contact:	ENVIRONMENTAL MANAGER
Contact address:	22106 S VERMONT AVE TORRANCE, CA 90502
Contact country:	US
Contact telephone:	(213) 320-9251
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	PARAGON ENG
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

PARAGON ENGINEERING INC (Continued) **1000146203**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

J69 **PARAGON ENGINEERING INC** **HAZNET** **S113035772**
SE **22106 S VERMONT AVE** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.107 mi.
564 ft. **Site 3 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	1995
Gepaid:	CAL000035972
Contact:	MAZZARINO VJ
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD099452708
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Recycler
Tons:	.4170
Facility County:	Los Angeles

Year:	1994
Gepaid:	CAL000035972
Contact:	MAZZARINO VJ
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD099452708
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Recycler
Tons:	.6046
Facility County:	Los Angeles

J70
SE
< 1/8
0.107 mi.
564 ft.

22104 S.VERMONT
TORRANCE, CA

Site 4 of 13 in cluster J

ERNS **2010953981**
N/A

Relative:
Lower

Actual:
42 ft.

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

J71
SE
< 1/8
0.107 mi.
564 ft.

DRAKE RCD INC
22106 S VERMONT AVE STE 106
TORRANCE, CA 90502

Site 5 of 13 in cluster J

HAZNET **S113071389**
N/A

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	2009
Gepaid:	CAL000126284
Contact:	CLARK DRAKE
Telephone:	3103285375
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE STE 106
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Not reported
Tons:	0.22935
Facility County:	Los Angeles

Year:	2009
Gepaid:	CAL000126284
Contact:	CLARK DRAKE
Telephone:	3103285375
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE STE 106
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Not reported
Tons:	0.22935
Facility County:	Los Angeles

Year:	2000
Gepaid:	CAL000126284
Contact:	CLARK DRAKE
Telephone:	3103285375
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE STE 106
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080025711
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	9.06
Facility County:	Los Angeles

DRAKE RCD INC (Continued) **S113071389**

Year:	2000
Gepaid:	CAL000126284
Contact:	CLARK DRAKE
Telephone:	3103285375
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE STE 106
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080025711
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	9.06
Facility County:	Los Angeles

Year:	1999
Gepaid:	CAL000126284
Contact:	DRAKE RACE CAR INC
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	22106 S VERMONT AVE STE 106
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080025711
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	8.2566
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
7 additional CA_HAZNET: record(s) in the EDR Site Report.

J72 **BICKERTON INDUSTRIES INC** **SWEEPS UST** **S103945107**
SE **22118 S VERMONT AVE** **N/A**
< 1/8 **UNINCORPORATED, CA**
0.115 mi.
606 ft. **Site 6 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

SWEEPS UST:

Status:	Active
Comp Number:	13197
Number:	9
Board Of Equalization:	Not reported
Referral Date:	06-30-89
Action Date:	Not reported
Created Date:	06-30-89
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	Not reported
Actv Date:	Not reported
Capacity:	Not reported
Tank Use:	Not reported
Stg:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

J73 **BICKERTON IRON WORKS** **HAZNET** **S113076705**
SE **22118 S VERMONT AVE** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.119 mi.
627 ft. **Site 7 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	2010
Gepaid:	CAL000140263
Contact:	MINH TRUONG, CONTROLLER
Telephone:	3103207720
Mailing Name:	Not reported
Mailing Address:	22118 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	AZR000030452
TSD County:	Not reported
Waste Category:	Latex waste
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.2085
Facility County:	Los Angeles

Year:	2002
Gepaid:	CAL000140263
Contact:	ERNIE HAUSER-MGR
Telephone:	3103207720
Mailing Name:	Not reported
Mailing Address:	22118 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Tank bottom waste
Disposal Method:	Recycler
Tons:	0.12
Facility County:	Los Angeles

Year:	1998
Gepaid:	CAL000140263
Contact:	BICKERTON IRON WORKS INC
Telephone:	3103207720
Mailing Name:	Not reported
Mailing Address:	22118 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Transfer Station
Tons:	.3500
Facility County:	Los Angeles

Year:	1998
Gepaid:	CAL000140263
Contact:	BICKERTON IRON WORKS INC
Telephone:	3103207720
Mailing Name:	Not reported
Mailing Address:	22118 S VERMONT AVE

BICKERTON IRON WORKS (Continued) **S113076705**

Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Organic liquids (nonsolvents) with halogens
Disposal Method: Transfer Station
Tons: .0150
Facility County: Los Angeles

Year: 1998
Gepaid: CAL000140263
Contact: BICKERTON IRON WORKS INC
Telephone: 3103207720
Mailing Name: Not reported
Mailing Address: 22118 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Tons: .6880
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

J74 **VERMONT INDUSTRIAL CTR** **HAZNET** **S112893618**
SE **22122 S VERMONT AVE STE B** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.125 mi.
658 ft. **Site 8 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 1999
Gepaid: CAC001470512
Contact: VERMONT INDUSTRIAL CTR
Telephone: 3103209213
Mailing Name: Not reported
Mailing Address: 22122 S VERMONT AVE STE B
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Empty containers less than 30 gallons
Disposal Method: Transfer Station
Tons: .0300
Facility County: Los Angeles

Year: 1999
Gepaid: CAC001470512
Contact: VERMONT INDUSTRIAL CTR
Telephone: 3103209213
Mailing Name: Not reported
Mailing Address: 22122 S VERMONT AVE STE B
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: CAD028409019

VERMONT INDUSTRIAL CTR (Continued) **S112893618**

TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Transfer Station
Tons: .2250
Facility County: Los Angeles

J75 **MECHANICAL SEAL REPAIR** **HAZNET** **S113014169**
SE **22122 S VERMONT** **N/A**
< 1/8 **TORRANCE, CA 90502**
0.125 mi.
658 ft. **Site 9 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 1998
Gepaid: CAD982313892
Contact: Not reported
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 3188 ORANGE AVENUE
Mailing City,St,Zip: SIGNAL HILL, CA 908070000
Gen County: Not reported
TSD EPA ID: CAD093459485
TSD County: Not reported
Waste Category: Organic liquids with metals (Alkaline solution (pH >= 12.5) with metals)
Disposal Method: Transfer Station
Tons: .2418
Facility County: Los Angeles

J76 **UNITED MICROWAVE PRODUCTS INC** **HAZNET** **S113014188**
SE **22129 S VERMONT AVE** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.134 mi.
710 ft. **Site 10 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 2012
Gepaid: CAD982314700
Contact: EDWIN T JACOBS/PRESIDENT
Telephone: 3103201244
Mailing Name: Not reported
Mailing Address: 22129 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905022132
Gen County: Los Angeles
TSD EPA ID: TXD077603371
TSD County: 99
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.1
Facility County: Los Angeles

Year: 2012
Gepaid: CAD982314700
Contact: EDWIN T JACOBS/PRESIDENT
Telephone: 3103201244

UNITED MICROWAVE PRODUCTS INC (Continued) **S113014188**

Mailing Name: Not reported
Mailing Address: 22129 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905022132
Gen County: Los Angeles
TSD EPA ID: TXD077603371
TSD County: 99
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.1
Facility County: Los Angeles

Year: 2012
Gepaid: CAD982314700
Contact: EDWIN T JACOBS/PRESIDENT
Telephone: 3103201244
Mailing Name: Not reported
Mailing Address: 22129 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905022132
Gen County: Los Angeles
TSD EPA ID: CAT000613976
TSD County: Orange
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.756
Facility County: Los Angeles

Year: 2012
Gepaid: CAD982314700
Contact: EDWIN T JACOBS/PRESIDENT
Telephone: 3103201244
Mailing Name: Not reported
Mailing Address: 22129 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905022132
Gen County: Los Angeles
TSD EPA ID: CAT000613976
TSD County: Orange
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.756
Facility County: Los Angeles

Year: 2011
Gepaid: CAD982314700
Contact: EDWIN T JACOBS/PRESIDENT
Telephone: 3103201244
Mailing Name: Not reported
Mailing Address: 22129 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905022132
Gen County: Not reported
TSD EPA ID: CAT000613976
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

UNITED MICROWAVE PRODUCTS INC (Continued) **S113014188**

Tons: 0.168
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
27 additional CA_HAZNET: record(s) in the EDR Site Report.

J77 **ALFRA INDUSTRIES INC** **HAZNET** **S113169488**
SE **22134 S VERMONT AVE,UNIT ABC** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.148 mi.
783 ft. **Site 11 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year: 1999
Gepaid: CAL930835676
Contact: FRANZ ISAK
Telephone: 3103201410
Mailing Name: Not reported
Mailing Address: 8338 RUSH STREET
Mailing City,St,Zip: ROSEMEAD, CA 917703617
Gen County: Not reported
TSD EPA ID: CAD099452708
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 2.0932
Facility County: Los Angeles

Year: 1998
Gepaid: CAL930835676
Contact: FRANZ ISAK
Telephone: 3103201410
Mailing Name: Not reported
Mailing Address: 8338 RUSH STREET
Mailing City,St,Zip: ROSEMEAD, CA 917703617
Gen County: Not reported
TSD EPA ID: CAD099452708
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 1.9014
Facility County: Los Angeles

Year: 1997
Gepaid: CAL930835676
Contact: FRANZ ISAK
Telephone: 3103201410
Mailing Name: Not reported
Mailing Address: 8338 RUSH STREET
Mailing City,St,Zip: ROSEMEAD, CA 917703617
Gen County: Not reported
TSD EPA ID: CAD099452708
TSD County: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Recycler
Tons: 1.0591
Facility County: Los Angeles

ALFRA INDUSTRIES INC (Continued) **S113169488**

Year:	1997
Gepaid:	CAL930835676
Contact:	FRANZ ISAK
Telephone:	3103201410
Mailing Name:	Not reported
Mailing Address:	8338 RUSH STREET
Mailing City,St,Zip:	ROSEMEAD, CA 917703617
Gen County:	Not reported
TSD EPA ID:	CAD099452708
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	.8548
Facility County:	Los Angeles

Year:	1996
Gepaid:	CAL930835676
Contact:	FRANZ ISAK
Telephone:	3103201410
Mailing Name:	Not reported
Mailing Address:	8338 RUSH STREET
Mailing City,St,Zip:	ROSEMEAD, CA 917703617
Gen County:	Not reported
TSD EPA ID:	CAD099452708
TSD County:	Not reported
Waste Category:	Oil/water separation sludge
Disposal Method:	Recycler
Tons:	1.6346
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
4 additional CA_HAZNET: record(s) in the EDR Site Report.

K78 **SK AUTO PARTS INC** **HAZNET** **S113154505**
WNW **1407 CARSON ST** **N/A**
1/8-1/4 **TORRANCE, CA 90501**
0.150 mi.
793 ft. **Site 1 of 3 in cluster K**

Relative:
Higher

Actual:
52 ft.

HAZNET:

Year:	2008
Gepaid:	CAL000337932
Contact:	YOUNG SHIN
Telephone:	3103282204
Mailing Name:	Not reported
Mailing Address:	1407 CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 90501
Gen County:	Not reported
TSD EPA ID:	CAD097030993
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.23
Facility County:	Los Angeles

K79 **K K & T AUTO PARTS** **HAZNET** **S113007130**
WNW **1407 W CARSON STREET** **N/A**
1/8-1/4 **TORRANCE, CA 90504**
0.150 mi.
793 ft. **Site 2 of 3 in cluster K**

Relative:
Higher

Actual:
52 ft.

HAZNET:

Year:	2006
Gepaid:	CAD981463094
Contact:	GERALD TANAKA
Telephone:	3103282204
Mailing Name:	Not reported
Mailing Address:	1407 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905010000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.41
Facility County:	Los Angeles

Year:	2003
Gepaid:	CAD981463094
Contact:	GERALD TANAKA
Telephone:	3103282204
Mailing Name:	Not reported
Mailing Address:	1407 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905010000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	1
Facility County:	Los Angeles

Year:	1999
Gepaid:	CAD981463094
Contact:	K K & T AUTO PARTS
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	1407 W CARSON ST
Mailing City,St,Zip:	TORRANCE, CA 905010000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	.6000
Facility County:	Los Angeles

K80 **K & K AUTO PARTS** **RCRA-SQG** **1000121167**
WNW **1407 W CARSON STREET** **CAD981463094**
1/8-1/4 **TORRANCE, CA 90504**
0.150 mi.
793 ft. **Site 3 of 3 in cluster K**

Relative:
Higher

Actual:
52 ft.

RCRA-SQG:

Date form received by agency:	04/01/1986
Facility name:	K & K AUTO PARTS
Facility address:	1407 W CARSON STREET TORRANCE, CA 90504
EPA ID:	CAD981463094
Contact:	ENVIRONMENTAL MANAGER
Contact address:	1407 W CARSON STREET TORRANCE, CA 90504
Contact country:	US
Contact telephone:	(213) 328-2204
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	K & K & T AUTO PARTS
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

K & K AUTO PARTS (Continued) **1000121167**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

J81 **CARLILE MANUFACTURING INC** **HAZNET** **S113025551**
SE **22138 S VERMONT #D** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.150 mi.
793 ft. **Site 12 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 2006
Gepaid: CAL000011621
Contact: UNDELIVERABLE 96 FEES MB
Telephone: --
Mailing Name: Not reported
Mailing Address: 22138 S VERMONT #D
Mailing City,St,Zip: TORRANCE, CA 905020000
Gen County: Not reported
TSD EPA ID: AZC950823111
TSD County: Not reported
Waste Category: Asbestos containing waste
Disposal Method: Not reported
Tons: 0.42
Facility County: Los Angeles

J82 **U.S. POWER CONVERTING** **HAZNET** **S113075793**
SE **22138 S VERMONT AVE** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.150 mi.
793 ft. **Site 13 of 13 in cluster J**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 1997
Gepaid: CAL000138795
Contact: LEONARD SNOW
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 22138 S VERMONT AVE
Mailing City,St,Zip: TORRANCE, CA 905022131
Gen County: Not reported
TSD EPA ID: CAL000024110
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Recycler
Tons: .3800
Facility County: Los Angeles

L83
SE
1/8-1/4
0.174 mi.
918 ft.

UNIFIED PROPERTY MGMT INC
22203 VERMONT AVE
TORRANCE, CA 90502

HAZNET **S112948893**
N/A

Site 1 of 13 in cluster L

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	2005
Gepaid:	CAC002596133
Contact:	BRETT GERLACH/X1
Telephone:	3107877111
Mailing Name:	Not reported
Mailing Address:	21718 VERMONT AVE STE 203
Mailing City,St,Zip:	TORRANCE, CA 90502
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Unspecified solvent mixture
Disposal Method:	Transfer Station
Tons:	0.08
Facility County:	Los Angeles

L84
SE
1/8-1/4
0.174 mi.
918 ft.

DOYLE BROS, INC.
22203 S VERMONT AVE
TORRANCE, CA 90502

HIST UST **U001564094**
N/A

Site 2 of 13 in cluster L

Relative:
Lower

Actual:
42 ft.

HIST UST:

Region:	STATE
Facility ID:	00000006405
Facility Type:	Other
Other Type:	MECHANICAL CONTRACTO
Total Tanks:	0001
Contact Name:	Not reported
Telephone:	2133286680
Owner Name:	DOYLE BROS, INC.
Owner Address:	22203 SO. VERMONT AVE.
Owner City,St,Zip:	TORRANCE, CA 90502
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	None

L85
SE
1/8-1/4
0.174 mi.
918 ft.

DELTA CONVERSION SHOP — **HAZNET** — **S113081222**
22203 SO VERMONT STE B — **N/A**
TORRANCE, CA 90502

Site 3 of 13 in cluster L

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	2004
Gepaid:	CAL000147684
Contact:	CARLOS FLORES/OWNER
Telephone:	3105330953
Mailing Name:	Not reported
Mailing Address:	22203 SO VERMONT STE B
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD008252405
TSD County:	Not reported
Waste Category:	Unspecified solvent mixture
Disposal Method:	Recycler
Tons:	0.06
Facility County:	Los Angeles

L86
SE
1/8-1/4
0.176 mi.
928 ft.

DOYLE BROTHERS INC. — **LUST** — **S105032925**
22203 VERMONT AVE S — **N/A**
TORRANCE, CA 90502

Site 4 of 13 in cluster L

Relative:
Lower

Actual:
42 ft.

LUST:

Region:	STATE
Global Id:	T0603704260
Latitude:	33.8255989
Longitude:	-118.290935
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/01/1993
Lead Agency:	LOS ANGELES COUNTY
Case Worker:	JOA
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-15114
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704260
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0603704260
Contact Type:	Local Agency Caseworker

DOYLE BROTHERS INC. (Continued) **S105032925**

Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Status History:
Global Id: T0603704260
Status: Completed - Case Closed
Status Date: 04/01/1993

Global Id: T0603704260
Status: Open - Case Begin Date
Status Date: 11/22/1989

Global Id: T0603704260
Status: Open - Site Assessment
Status Date: 11/22/1989

Regulatory Activities:
Global Id: T0603704260
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0603704260
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0603704260
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: I-15114
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603704260
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: 222RD ST.
Enforcement Type: 222
Date Leak Discovered: 11/22/1989
Date Leak First Reported: 2/27/1990

DOYLE BROTHERS INC. (Continued) **S105032925**

Date Leak Record Entered:	4/24/1990	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	11/22/1989	
Date Case Last Changed on Database:		4/1/1993
Date the Case was Closed:		4/1/1993
How Leak Discovered:	Tank Closure	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	BILLINGTON, KEN	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		5906.562651910817052347317 4403
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		11/22/1989
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		1/1/1965
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Groundwater:		Not reported
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	DOYLE BROTHERS INC.	
RP Address:	22203 VERMONT AVE., S., TORRANCE, 90502	
Program:	LUST	
Lat/Long:	33.8255468 / -1	
Local Agency Staff:	Not reported	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	
Assigned Name:	Not reported	
Summary:	Not reported	

L87 **DOYLE BROTHERS INC.** **HIST CORTESE** **S101297315**
SE **22203 VERMONT** **N/A**
1/8-1/4 **LOS ANGELES, CA 90502**
0.176 mi.
928 ft. **Site 5 of 13 in cluster L**

Relative:
Lower

Actual:
42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	I-15114

88
NE
1/8-1/4
0.180 mi.
952 ft.

Relative:
Lower

Actual:
30 ft.

21414 VERMONT AVE, UNINCORP. COUNTY AREA
CARSON, CA

CHMIRS **S109037305**
N/A

CHMIRS:

OES Incident Number:	07-5843	
OES notification:	09/24/2007	
OES Date:	Not reported	
OES Time:	Not reported	
Incident Date:	Not reported	
Date Completed:	**Not reported**	
Property Use:	Not reported	
Agency Id Number:	Not reported	
Agency Incident Number:	Not reported	
Time Notified:	Not reported	
Time Completed:	Not reported	
Surrounding Area:	Not reported	
Estimated Temperature:	Not reported	
Property Management:	Not reported	
Special Studies 1:	Not reported	
Special Studies 2:	Not reported	
Special Studies 3:	Not reported	
Special Studies 4:	Not reported	
Special Studies 5:	Not reported	
Special Studies 6:	Not reported	
More Than Two Substances Involved?:		Not reported
Resp Agncy Personel # Of Decontaminated:		Not reported
Responding Agency Personel # Of Injuries:		Not reported
Responding Agency Personel # Of Fatalities:		Not reported
Others Number Of Decontaminated:		Not reported
Others Number Of Injuries:		Not reported
Others Number Of Fatalities:		Not reported
Vehicle Make/year:	Not reported	
Vehicle License Number:	Not reported	
Vehicle State:	Not reported	
Vehicle Id Number:	Not reported	
CA/DOT/PUC/ICC Number:	Not reported	
Company Name:	Not reported	
Reporting Officer Name/ID:	Not reported	
Report Date:	Not reported	
Comments:	Not reported	
Facility Telephone:	Not reported	
Waterway Involved:	Not reported	
Waterway:	Storm Drain	
Spill Site:	Not reported	
Cleanup By:	Reporting Party	
Containment:	Not reported	
What Happened:	Not reported	
Type:	Not reported	
Measure:	Not reported	
Other:	Not reported	
Date/Time:	Not reported	
Year:	2007	
Agency:	Los Angeles County Public Works	
Incident Date:	9/24/2007 12:00:00 AM	
Admin Agency:	L. A. County Fire Prevention	
Amount:	Not reported	

(Continued) **S109037305**

Contained:	Yes
Site Type:	Residence
E Date:	Not reported
Substance:	Sewage
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	200
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	09/24/07 at 1938 hrs, vandalized, clogged sewer line cause a manhole to overflow into a storm drain.

89
NNE
1/8-1/4
0.183 mi.
967 ft.

PETE MAMEA **HAZNET** **S113783324**
21403 BERENDO AVE **N/A**
TORRANCE, CA 90502

Relative:
Lower

Actual:
39 ft.

HAZNET:

Year:	2012
Gepaid:	CAC002698080
Contact:	PETE MAMEA
Telephone:	3109301204
Mailing Name:	Not reported
Mailing Address:	21403 BERENDO AVE
Mailing City,St,Zip:	TORRANCE, CA 90502
Gen County:	Los Angeles
TSD EPA ID:	CAD009007626
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.4
Facility County:	Los Angeles

90
NNE
1/8-1/4
0.184 mi.
974 ft.

DALE KANESHIRO
941 W. 214TH ST.
TORRANCE, CA 90502

HAZNET **S113792523**
N/A

Relative:
Lower

Actual:
30 ft.

HAZNET:

Year:	2012
Gepaid:	CAC002710976
Contact:	DALE KANESHIRO
Telephone:	3105056591
Mailing Name:	Not reported
Mailing Address:	941 W. 214TH ST.
Mailing City,St,Zip:	TORRANCE, CA 90502
Gen County:	Los Angeles
TSD EPA ID:	CAD009007626
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.4
Facility County:	Los Angeles

91
WNW
1/8-1/4
0.187 mi.
986 ft.

LAUSD/ HALLDALE AVE ELEM
21514 HALLDALE AVE
TORRANCE, CA 90507

HAZNET **S113013515**
N/A

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	2007
Gepaid:	CAD982045791
Contact:	YI HWA KIM DEPUTY DIRECTOR
Telephone:	2137435086
Mailing Name:	Not reported
Mailing Address:	333 S Beaudry Ave 20th Fl
Mailing City,St,Zip:	Los Angeles, CA 900170000
Gen County:	Not reported
TSD EPA ID:	CAD009007626
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	4
Facility County:	Los Angeles

Year:	2007
Gepaid:	CAD982045791
Contact:	YI HWA KIM DEPUTY DIRECTOR
Telephone:	2137435086
Mailing Name:	Not reported
Mailing Address:	333 S Beaudry Ave 20th Fl
Mailing City,St,Zip:	Los Angeles, CA 900170000
Gen County:	Not reported
TSD EPA ID:	NVT330010000
TSD County:	Not reported
Waste Category:	Polychlorinated biphenyls and material containing PCBs
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.15

LAUSD/ HALLDALE AVE ELEM (Continued) **S113013515**

Facility County: Los Angeles

Year: 2003
Gepaid: CAD982045791
Contact: YI HWA KIM DEPUTY DIRECTOR
Telephone: 2137435086
Mailing Name: Not reported
Mailing Address: 333 S Beaudry Ave 20th Fl
Mailing City,St,Zip: Los Angeles, CA 900170000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Tons: 0.1
Facility County: Los Angeles

Year: 2001
Gepaid: CAD982045791
Contact: YI HWA KIM DEPUTY DIRECTOR
Telephone: 2137435086
Mailing Name: Not reported
Mailing Address: 333 S Beaudry Ave 20th Fl
Mailing City,St,Zip: Los Angeles, CA 900170000
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Disposal, Land Fill
Tons: 0.05
Facility County: Los Angeles

Year: 1999
Gepaid: CAD982045791
Contact: LOS ANGELES USD
Telephone: 2137435086
Mailing Name: Not reported
Mailing Address: 1449 S SAN PEDRO ST
Mailing City,St,Zip: LOS ANGELES, CA 900153119
Gen County: Not reported
TSD EPA ID: AZR000005454
TSD County: Not reported
Waste Category: Polychlorinated biphenyls and material containing PCBs
Disposal Method: Recycler
Tons: .2204
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

L92 **JANSEN ANIMAL HOSPITAL** **HAZNET** **S113048092**
SE **22231 S VERMONT AVE** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.195 mi.
1032 ft. **Site 6 of 13 in cluster L**

Relative: **Higher**

Actual: **44 ft.**

HAZNET:

Year:	1998
Gepaid:	CAL000068638
Contact:	JAMES R. JANSEN
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	22231 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905022134
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0625
Facility County:	Los Angeles

L93 **DECOCAL INC** **HAZNET** **S112952877**
SE **22208 S VERMONT AVE** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.196 mi.
1033 ft. **Site 7 of 13 in cluster L**

Relative: **Lower**

Actual: **43 ft.**

HAZNET:

Year:	2006
Gepaid:	CAC002602700
Contact:	CARLOS MAILLAND, PRES
Telephone:	3107826304
Mailing Name:	Not reported
Mailing Address:	22208 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 90502
Gen County:	Not reported
TSD EPA ID:	CAD980884183
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Transfer Station
Tons:	0.22
Facility County:	Los Angeles

L94 **UNITED INSTALLER** **CA FID UST** **S101585432**
SE **22208 S VERMONT AVE** **SWEEPS UST** **N/A**
1/8-1/4 **CARSON, CA**
0.196 mi.
1033 ft. **Site 8 of 13 in cluster L**

Relative: **Lower**

Actual: **43 ft.**

CA FID UST:

Facility ID:	19023494
Regulated By:	UTNKA
Regulated ID:	00046934
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	8180000000
Mail To:	Not reported

UNITED INSTALLER (Continued) **S101585432**

Mailing Address: 22208 S VERMONT AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: CARSON
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

SWEEPS UST:
Status: Active
Comp Number: 12444
Number: 9
Board Of Equalization: Not reported
Referral Date: 06-30-89
Action Date: Not reported
Created Date: 06-30-89
Tank Status: Not reported
Owner Tank Id: Not reported
Swrcb Tank Id: Not reported
Actv Date: Not reported
Capacity: Not reported
Tank Use: Not reported
Stg: Not reported
Content: Not reported
Number Of Tanks: Not reported

L95 **JUAN CARLOS MAILLAND** **HAZNET** **S113461831**
SE **22208 S VERMONT AVE** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.196 mi.
1033 ft. **Site 9 of 13 in cluster L**

Relative:
Lower

Actual:
43 ft.

HAZNET:
Year: 2010
Gepaid: CAC002656128
Contact: JUAN CARLOS MAILLAND
Telephone: 3104667354
Mailing Name: Not reported
Mailing Address: 2348 VIA LA ORILLA
Mailing City,St,Zip: FALLBROOK, CA 92028
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Tank bottom waste
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.2085
Facility County: Los Angeles

L96
SE
1/8-1/4
0.196 mi.
1033 ft.

DECOCAL INC
22208 SOUTH VERMONT AVE
TORRANCE, CA 90502

Site 10 of 13 in cluster L

Relative:
Lower

Actual:
43 ft.

HAZNET **S112849728**
N/A

HAZNET:

Year:	1995
Gepaid:	CAC000882224
Contact:	CARLOS MAILLAND
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	22208 SOUTH VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	1.4595
Facility County:	Los Angeles

L97
SE
1/8-1/4
0.196 mi.
1033 ft.

D.C. DECKER CO. INC.
22208 S VERMONT AVE
TORRANCE, CA 90502

Site 11 of 13 in cluster L

Relative:
Lower

Actual:
43 ft.

HIST UST **U001564092**
N/A

HIST UST:

Region:	STATE
Facility ID:	00000046934
Facility Type:	Other
Other Type:	CONTRACTORS
Total Tanks:	0001
Contact Name:	ROBERT R. SPENCER
Telephone:	2133287604
Owner Name:	D.C. DECKER CO. INC.
Owner Address:	22208 S. VERMONT AVE.
Owner City,St,Zip:	TORRANCE, CA 90502
Tank Num:	001
Container Num:	ONE
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	10 gauge
Leak Detection:	Stock Inventor

L98
SE
1/8-1/4
0.196 mi.
1033 ft.

BYROM RADIATOR SERVICE
22208 S VERMONT AVE
TORRANCE, CA 90502

HAZNET **S113009339**
N/A

Site 12 of 13 in cluster L

Relative:
Lower

Actual:
43 ft.

HAZNET:

Year:	1993
Gepaid:	CAD981655707
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	22208 S VERMONT AVE
Mailing City,St,Zip:	TORRANCE, CA 905020000
Gen County:	Not reported
TSD EPA ID:	CAD000088252
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Transfer Station
Tons:	5.00000000000
Facility County:	Los Angeles

L99
SE
1/8-1/4
0.196 mi.
1033 ft.

BYROM RADIATOR SERVICE
22208 SO VERMONT AVE
TORRANCE, CA

RCRA-SQG **1000334137**
CAD981655707

Site 13 of 13 in cluster L

Relative:
Lower

Actual:
43 ft.

RCRA-SQG:

Date form received by agency:	09/10/1986
Facility name:	BYROM RADIATOR SERVICE
Facility address:	22208 SO VERMONT AVE TORRANCE, CA 90502
EPA ID:	CAD981655707
Mailing address:	SO VERMONT AVE TORRANCE, CA 90502
Contact:	ENVIRONMENTAL MANAGER
Contact address:	22208 SO VERMONT AVE TORRANCE, CA 90502
Contact country:	US
Contact telephone:	(213) 328-1930
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported

BYROM RADIATOR SERVICE (Continued) **1000334137**

Owner/Op end date: Not reported

Owner/operator name: BYROM DONALD R
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

M100 **SERVICE STATION 2529** **HIST UST** **U001565766**
ENE **600 W CARSON ST** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.220 mi.
1161 ft. **Site 1 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

HIST UST:
Region: STATE
Facility ID: 00000029439
Facility Type: Gas Station
Other Type: Not reported
Total Tanks: 0003
Contact Name: DOO HYONG CHO
Telephone: 2133202307
Owner Name: UNION OIL COMPANY OF CALIFORNI
Owner Address: 3701 WILSHIRE BOULEVARD-SUITE
Owner City,St,Zip: LOS ANGELES, CA 90010

Tank Num: 001
Container Num: 2529-1
Year Installed: 1966
Tank Capacity: 00009940
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: Stock Inventor, Pressure Test

SERVICE STATION 2529 (Continued) **U001565766**

Tank Num:	002
Container Num:	2529-2
Year Installed:	1966
Tank Capacity:	00009940
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	Stock Inventor, Pressure Test

Tank Num:	003
Container Num:	2529-4
Year Installed:	1966
Tank Capacity:	00000000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Tank Construction:	Not reported
Leak Detection:	Stock Inventor, Pressure Test

M101 **UNOCAL CORP SS 2529** **SWEEPS UST** **U002280502**
ENE **600 W CARSON ST** **N/A**
1/8-1/4 **CARSON, CA**
0.220 mi.
1161 ft. **Site 2 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

SWEEPS UST:

Status:	Active
Comp Number:	6264
Number:	9
Board Of Equalization:	44-001057
Referral Date:	06-30-89
Action Date:	Not reported
Created Date:	06-30-89
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	19-000-006264-000001
Actv Date:	06-30-89
Capacity:	Not reported
Tank Use:	UNKNOWN
Stg:	W
Content:	Not reported
Number Of Tanks:	3

Status:	Active
Comp Number:	6264
Number:	9
Board Of Equalization:	44-001057
Referral Date:	06-30-89
Action Date:	Not reported
Created Date:	06-30-89
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	19-000-006264-000002
Actv Date:	06-30-89
Capacity:	Not reported
Tank Use:	UNKNOWN
Stg:	W
Content:	Not reported
Number Of Tanks:	Not reported

UNOCAL CORP SS 2529 (Continued) **U002280502**

Status:	Active
Comp Number:	6264
Number:	9
Board Of Equalization:	44-001057
Referral Date:	06-30-89
Action Date:	Not reported
Created Date:	06-30-89
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	19-000-006264-000003
Actv Date:	06-30-89
Capacity:	Not reported
Tank Use:	UNKNOWN
Stg:	W
Content:	Not reported
Number Of Tanks:	Not reported

M102 **UNOCAL SERVICE STATION #2529** **HAZNET** **S113008712**
ENE **600 W CARSON** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.220 mi.
1161 ft. **Site 3 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	1996
Gepaid:	CAD981643752
Contact:	UNION OIL COMPANY OF CALIFORNI
Telephone:	7144286560
Mailing Name:	Not reported
Mailing Address:	PO BOX 25376
Mailing City,St,Zip:	SANTA ANA, CA 927995376
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Treatment, Tank
Tons:	2.0850
Facility County:	Los Angeles

Year:	1994
Gepaid:	CAD981643752
Contact:	UNION OIL COMPANY OF CALIFORNI
Telephone:	7144286560
Mailing Name:	Not reported
Mailing Address:	PO BOX 25376
Mailing City,St,Zip:	SANTA ANA, CA 927995376
Gen County:	Not reported
TSD EPA ID:	CAD982484933
TSD County:	Not reported
Waste Category:	Other empty containers 30 gallons or more
Disposal Method:	Recycler
Tons:	16.0000
Facility County:	Los Angeles

Year:	1994
Gepaid:	CAD981643752
Contact:	UNION OIL COMPANY OF CALIFORNI
Telephone:	7144286560

UNOCAL SERVICE STATION #2529 (Continued) **S113008712**

Mailing Name:	Not reported
Mailing Address:	PO BOX 25376
Mailing City,St,Zip:	SANTA ANA, CA 927995376
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	.7297
Facility County:	Los Angeles

Year:	1994
Gepaid:	CAD981643752
Contact:	UNION OIL COMPANY OF CALIFORNI
Telephone:	7144286560
Mailing Name:	Not reported
Mailing Address:	PO BOX 25376
Mailing City,St,Zip:	SANTA ANA, CA 927995376
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Treatment, Tank
Tons:	1.3552
Facility County:	Los Angeles

Year:	1993
Gepaid:	CAD981643752
Contact:	UNION OIL COMPANY OF CALIFORNI
Telephone:	7144286560
Mailing Name:	Not reported
Mailing Address:	PO BOX 25376
Mailing City,St,Zip:	SANTA ANA, CA 927995376
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Treatment, Tank
Tons:	10.3832
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

M103 **UNOCAL #2529** **HIST CORTESE** **S101295782**
ENE **600 CARSON** **LUST** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.222 mi.
1172 ft. **Site 4 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	I-06264

LUST:

UNOCAL #2529 (Continued) **S101295782**

Region:	STATE
Global Id:	T0603703189
Latitude:	33.831337
Longitude:	-118.286403
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/17/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	I-06264
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603703189
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0603703189
Contact Type:	Local Agency Caseworker
Contact Name:	JOHN AWUJO
Organization Name:	LOS ANGELES COUNTY
Address:	900 S FREMONT AVE
City:	ALHAMBRA
Email:	jawujo@dpw.lacounty.gov
Phone Number:	6264583507

Status History:

Global Id:	T0603703189
Status:	Completed - Case Closed
Status Date:	07/17/1996

Global Id:	T0603703189
Status:	Open - Case Begin Date
Status Date:	01/03/1990

Global Id:	T0603703189
Status:	Open - Remediation
Status Date:	10/14/1994

Global Id:	T0603703189
Status:	Open - Site Assessment
Status Date:	08/02/1990

Global Id:	T0603703189
Status:	Open - Site Assessment

UNOCAL #2529 (Continued) **S101295782**

Status Date: 01/21/1992

Regulatory Activities:

Global Id: T0603703189
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0603703189
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0603703189
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

LUST REG 4:

Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: I-06264
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: Not reported
Global ID: T0603703189
W Global ID: Not reported
Staff: UNK
Local Agency: 19000
Cross Street: FIGUEROA ST
Enforcement Type: Not reported
Date Leak Discovered: 7/31/1990
Date Leak First Reported: 1/3/1990
Date Leak Record Entered: 12/2/1990
Date Confirmation Began: 8/2/1990
Date Leak Stopped: 7/31/1990
Date Case Last Changed on Database: 9/6/1996
Date the Case was Closed: 7/17/1996
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 5916.650780646456117522290551 7
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: 1/21/1992
Remediation Plan Submitted: Not reported

UNOCAL #2529 (Continued) **S101295782**

Remedial Action Underway:	10/14/1994
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	UNOCAL CORPORATION
RP Address:	376 S VALENCIA AVE, BREA CA 92621
Program:	LUST
Lat/Long:	33.8314278 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	ROUTINE TANK REPLACEMENT. NO OBVIOUS SOURCE OF LEAKAGE. CONTAMINATED ARE CONFINED TO TURBINE-END OF OLD TANK HOLE. 09/06/96 WELL ABANDONMENT REPORT

M104 **SO-CAL RACING PRODUCTS INC** **HIST UST** **U001565770**
ENE **21629 FIGUEROA ST** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.241 mi.
1275 ft. **Site 5 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

HIST UST:

Region:	STATE
Facility ID:	00000050452
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0001
Contact Name:	MIKE HOWARD
Telephone:	2133283594
Owner Name:	ANDY PAPAC
Owner Address:	2030 SANTA ANITA
Owner City,St,Zip:	SOUTH EL MONTE, CA 91733
Tank Num:	001
Container Num:	1
Year Installed:	1964
Tank Capacity:	00008000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Tank Construction:	Not reported
Leak Detection:	None

M105 **SO-CAL** **LUST** **S105035483**
ENE **21629 FIGUEROA ST S** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.241 mi.
1275 ft. **Site 6 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

LUST:

Region:	STATE
Global Id:	T0603704563
Latitude:	33.8318781
Longitude:	-118.2861434
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/24/1986
Lead Agency:	LOS ANGELES COUNTY
Case Worker:	GLM
Local Agency:	LOS ANGELES COUNTY
RB Case Number:	R-01507
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603704563
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0603704563
Contact Type:	Local Agency Caseworker
Contact Name:	GILLIAN MINTIER
Organization Name:	LOS ANGELES COUNTY
Address:	900 SOUTH FREMONT AVE
City:	ALHAMBRA
Email:	gmintier@ladpw.org
Phone Number:	Not reported

Status History:

Global Id:	T0603704563
Status:	Completed - Case Closed
Status Date:	02/24/1986

Global Id:	T0603704563
Status:	Open - Case Begin Date
Status Date:	09/30/1985

Global Id:	T0603704563
Status:	Open - Site Assessment
Status Date:	09/30/1985

SO-CAL (Continued) **S105035483**

Regulatory Activities:

Global Id:	T0603704563
Action Type:	ENFORCEMENT
Date:	02/24/1986
Action:	Closure/No Further Action Letter

Global Id:	T0603704563
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	R-01507	
Status:	Leak being confirmed	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Soil	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603704563	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19000	
Cross Street:	216TH	
Enforcement Type:	Not reported	
Date Leak Discovered:	Not reported	
Date Leak First Reported:		9/30/1985
Date Leak Record Entered:	8/12/1987	
Date Confirmation Began:	9/30/1985	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		7/22/1988
Date the Case was Closed:		Not reported
How Leak Discovered:	Not reported	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		5923.97085768057208183936 8943
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		Not reported
Pollution Characterization Began:		Not reported
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		Not reported
Hist Max MTBE Conc in Groundwater:		Not reported
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported

SO-CAL (Continued) **S105035483**

GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	SO-CAL
RP Address:	Not reported
Program:	LUST
Lat/Long:	33.8321228 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	OLD CASE #004036

M106 **SO-CAL** **HIST CORTESE** **S104159928**
ENE **21629 FIGUEROA** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.241 mi.
1275 ft. **Site 7 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	R-01507

M107 **SO-CAL RACING FUEL CO** **CA FID UST** **S101617963**
ENE **21629 S FIGUEROA ST** **SWEEPS UST** **N/A**
1/8-1/4 **CARSON, CA**
0.241 mi.
1275 ft. **Site 8 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

CA FID UST:

Facility ID:	19001284
Regulated By:	UTNKA
Regulated ID:	00050452
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	8180000000
Mail To:	Not reported
Mailing Address:	21629 S FIGUEROA ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	CARSON
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	1507

SO-CAL RACING FUEL CO (Continued) **S101617963**

Number:	9
Board Of Equalization:	Not reported
Referral Date:	06-30-89
Action Date:	Not reported
Created Date:	06-30-89
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	Not reported
Actv Date:	Not reported
Capacity:	Not reported
Tank Use:	Not reported
Stg:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

M108 **TORRANCE ANIMAL HOSPITAL** **HAZNET** **S113046146**
ENE **21617 SO FIGUEROA ST** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.243 mi.
1281 ft. **Site 9 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	1998
Gepaid:	CAL000063199
Contact:	Not reported
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	21617 SO FIGUEROA ST
Mailing City,St,Zip:	CARSON, CA 907450000
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0208
Facility County:	Los Angeles

N109 **CENTURY PARTS INC** **HAZNET** **S113150289**
SSE **913 W 223RD ST** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.245 mi.
1293 ft. **Site 1 of 4 in cluster N**

Relative:
Lower

Actual:
43 ft.

HAZNET:

Year:	2008
Gepaid:	CAL000326009
Contact:	LYNN HALE
Telephone:	3103280281
Mailing Name:	Not reported
Mailing Address:	913 W 223RD ST
Mailing City,St,Zip:	TORRANCE, CA 905022246
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery

CENTURY PARTS INC (Continued) **S113150289**

(H010-H129) Or (H131-H135)
Tons: 0.017
Facility County: Los Angeles

Year: 2008
Gepaid: CAL000326009
Contact: LYNN HALE
Telephone: 3103280281
Mailing Name: Not reported
Mailing Address: 913 W 223RD ST
Mailing City,St,Zip: TORRANCE, CA 905022246
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.297
Facility County: Los Angeles

Year: 2008
Gepaid: CAL000326009
Contact: LYNN HALE
Telephone: 3103280281
Mailing Name: Not reported
Mailing Address: 913 W 223RD ST
Mailing City,St,Zip: TORRANCE, CA 905022246
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Off-specification, aged or surplus organics
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.002
Facility County: Los Angeles

N110 **CHMIRS** **S110979333**
SSE **925 WEST 223RD STREET** **N/A**
1/8-1/4 **TORRANCE, CA**
0.245 mi.
1294 ft. **Site 2 of 4 in cluster N**

Relative:
Lower

Actual:
43 ft.

CHMIRS:
OES Incident Number: '10-2748
OES notification: 05/03/2010
OES Date: Not reported
OES Time: Not reported
Incident Date: Not reported
Date Completed: **Not reported**
Property Use: Not reported
Agency Id Number: Not reported
Agency Incident Number: Not reported
Time Notified: Not reported
Time Completed: Not reported
Surrounding Area: Not reported
Estimated Temperature: Not reported
Property Management: Not reported
Special Studies 1: Not reported
Special Studies 2: Not reported

(Continued) **S110979333**

Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Unknown
Waterway:	storm drain
Spill Site:	Merchant/Business,Residence
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	320
Year:	2010
Agency:	Southern CA Edison
Incident Date:	5/3/2010
Admin Agency:	Torrance Fire Department
Amount:	Not reported
Contained:	Yes
Site Type:	storm drain
E Date:	Not reported
Substance:	mineral oil NON PCB
Quantity Released:	45
BBLS:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported
Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	Not reported
Number of Fatalities:	Not reported

(Continued) **S110979333**

Description: RP States: A vehicle struck a pole and caused a release from the transformers on the pole. Some of the material may have entered a storm drain.

N111 **ERNS** **2010938872**
SSE **925 W. 223RD STREET** **N/A**
1/8-1/4 **TORRANCE, CA**
0.245 mi.
1294 ft. **Site 3 of 4 in cluster N**

Relative:
Lower

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
43 ft.

N112 **ADVANCED CONTRACTORS INC.** **HAZNET** **S112951766**
SSE **935 W 223RD ST** **N/A**
1/8-1/4 **TORRANCE, CA 90502**
0.247 mi.
1305 ft. **Site 4 of 4 in cluster N**

Relative:
Lower

Actual:
42 ft.

HAZNET:

Year:	2006
Gepaid:	CAC002600903
Contact:	ROBERT MALDANO-SUPERVISOR
Telephone:	3103203803
Mailing Name:	Not reported
Mailing Address:	935 W 223RD ST
Mailing City,St,Zip:	TORRANCE, CA 905022246
Gen County:	Not reported
TSD EPA ID:	CAD982444481
TSD County:	Not reported
Waste Category:	Adhesives
Disposal Method:	Recycler
Tons:	0.45
Facility County:	Los Angeles

Year:	2006
Gepaid:	CAC002600903
Contact:	ROBERT MALDANO-SUPERVISOR
Telephone:	3103203803
Mailing Name:	Not reported
Mailing Address:	935 W 223RD ST
Mailing City,St,Zip:	TORRANCE, CA 905022246
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Transfer Station
Tons:	0.22
Facility County:	Los Angeles

113
South
1/8-1/4
0.248 mi.
1312 ft.

LAUSD/ MEYLER ST ELEM
1123 W 223RD ST
TORRANCE, CA 90502

HAZNET **S113013558**
N/A

Relative:
Lower

Actual:
43 ft.

HAZNET:

Year:	2005
Gepaid:	CAD982046237
Contact:	YI HWA KIM DEPUTY DIRECTOR
Telephone:	2137435086
Mailing Name:	Not reported
Mailing Address:	333 S BEAUDRY AVE 20 FL
Mailing City,St,Zip:	LOS ANGELES, CA 90017
Gen County:	Not reported
TSD EPA ID:	AZC950823111
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Not reported
Tons:	30.34
Facility County:	Los Angeles

Year:	2003
Gepaid:	CAD982046237
Contact:	YI HWA KIM DEPUTY DIRECTOR
Telephone:	2137435086
Mailing Name:	Not reported
Mailing Address:	333 S BEAUDRY AVE 20 FL
Mailing City,St,Zip:	LOS ANGELES, CA 90017
Gen County:	Not reported
TSD EPA ID:	CAD008252405
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Transfer Station
Tons:	0
Facility County:	Los Angeles

Year:	2002
Gepaid:	CAD982046237
Contact:	YI HWA KIM DEPUTY DIRECTOR
Telephone:	2137435086
Mailing Name:	Not reported
Mailing Address:	333 S BEAUDRY AVE 20 FL
Mailing City,St,Zip:	LOS ANGELES, CA 90017
Gen County:	Not reported
TSD EPA ID:	CAD009007626
TSD County:	Not reported
Waste Category:	Asbestos containing waste
Disposal Method:	Disposal, Land Fill
Tons:	1.68
Facility County:	Los Angeles

Year:	2001
Gepaid:	CAD982046237
Contact:	YI HWA KIM DEPUTY DIRECTOR
Telephone:	2137435086
Mailing Name:	Not reported
Mailing Address:	333 S BEAUDRY AVE 20 FL
Mailing City,St,Zip:	LOS ANGELES, CA 90017

LAUSD/ MEYLER ST ELEM (Continued) **S113013558**

Gen County: Not reported
TSD EPA ID: AZC950823111
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Tons: 0
Facility County: Los Angeles

Year: 2000
Gepaid: CAD982046237
Contact: YI HWA KIM DEPUTY DIRECTOR
Telephone: 2137435086
Mailing Name: Not reported
Mailing Address: 333 S BEAUDRY AVE 20 FL
Mailing City,St,Zip: LOS ANGELES, CA 90017
Gen County: Not reported
TSD EPA ID: AZR000005454
TSD County: Not reported
Waste Category: Polychlorinated biphenyls and material containing PCBs
Disposal Method: Recycler
Tons: 0.32
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

M114 **ARCO PRODUCTS COMPANY** **HAZNET** **S113024215**
East **21704 S FIGUEROA STREET** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.249 mi.
1317 ft. **Site 10 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

HAZNET:
Year: 1994
Gepaid: CAL000007230
Contact: ATLANTIC RICHFIELD COMPANY
Telephone: 2134860494
Mailing Name: Not reported
Mailing Address: PO BOX 6038
Mailing City,St,Zip: ARTESIA, CA 907026038
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 2.1475
Facility County: Los Angeles

Year: 1994
Gepaid: CAL000007230
Contact: ATLANTIC RICHFIELD COMPANY
Telephone: 2134860494
Mailing Name: Not reported
Mailing Address: PO BOX 6038
Mailing City,St,Zip: ARTESIA, CA 907026038
Gen County: Not reported
TSD EPA ID: IRC957100891
TSD County: Not reported

ARCO PRODUCTS COMPANY (Continued) **S113024215**

Waste Category: Asbestos containing waste
Disposal Method: Disposal, Land Fill
Tons: .1053
Facility County: Los Angeles

Year: 1994
Gepaid: CAL000007230
Contact: ATLANTIC RICHFIELD COMPANY
Telephone: 2134860494
Mailing Name: Not reported
Mailing Address: PO BOX 6038
Mailing City,St,Zip: ARTESIA, CA 907026038
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Treatment, Tank
Tons: .4378
Facility County: Los Angeles

Year: 1994
Gepaid: CAL000007230
Contact: ATLANTIC RICHFIELD COMPANY
Telephone: 2134860494
Mailing Name: Not reported
Mailing Address: PO BOX 6038
Mailing City,St,Zip: ARTESIA, CA 907026038
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Not reported
Tons: .1668
Facility County: Los Angeles

Year: 1993
Gepaid: CAL000007230
Contact: ATLANTIC RICHFIELD COMPANY
Telephone: 2134860494
Mailing Name: Not reported
Mailing Address: PO BOX 6038
Mailing City,St,Zip: ARTESIA, CA 907026038
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: Recycler
Tons: 0.25019999999
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

M115
East
1/8-1/4
0.249 mi.
1317 ft.

CLIFFORD E MALONE
21704 FIGUEROA ST
CARSON, CA 90745

Site 11 of 12 in cluster M

HIST UST **U001565734**
N/A

Relative:
Lower

Actual:
42 ft.

HIST UST:

Region:	STATE
Facility ID:	00000026787
Facility Type:	Gas Station
Other Type:	Not reported
Total Tanks:	0005
Contact Name:	Not reported
Telephone:	0000000000
Owner Name:	ARCO PETROLEUM PRODUCTS CO.
Owner Address:	515 SOUTH FLOWER STREET
Owner City,St,Zip:	LOS ANGELES, CA 90071

Tank Num:	001
Container Num:	0000000001
Year Installed:	1967
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	0000240 inches
Leak Detection:	Stock Inventor, 10

Tank Num:	002
Container Num:	0000000002
Year Installed:	1967
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	0000240 inches
Leak Detection:	Stock Inventor, 10

Tank Num:	003
Container Num:	0000000003
Year Installed:	1971
Tank Capacity:	00004000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	0000167 inches
Leak Detection:	Stock Inventor, 10

Tank Num:	004
Container Num:	0000000004
Year Installed:	1967
Tank Capacity:	00004000
Tank Used for:	PRODUCT
Type of Fuel:	06
Tank Construction:	0000167 inches
Leak Detection:	Stock Inventor, 10

Tank Num:	005
Container Num:	0000000005
Year Installed:	Not reported
Tank Capacity:	00000280
Tank Used for:	PRODUCT

CLIFFORD E MALONE (Continued) **U001565734**

Type of Fuel: WASTE OIL
Tank Construction: 0000093 inches
Leak Detection: Stock Inventor

M116 **ARCO #5108** **HIST CORTESE** **S101295797**
East **21704 FIGUEROA** **LUST** **N/A**
1/8-1/4 **CARSON, CA 90745**
0.249 mi.
1317 ft. **Site 12 of 12 in cluster M**

Relative:
Lower

Actual:
42 ft.

CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: I-01781

LUST:
Region: STATE
Global Id: T0603702800
Latitude: 33.8314859
Longitude: -118.2859351
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 05/19/1998
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: JP
Local Agency: LOS ANGELES COUNTY
RB Case Number: I-01781
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603702800
Contact Type: Regional Board Caseworker
Contact Name: JOSE PEREYRA
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: Not reported
Phone Number: Not reported

Global Id: T0603702800
Contact Type: Local Agency Caseworker
Contact Name: JOHN AWUJO
Organization Name: LOS ANGELES COUNTY
Address: 900 S FREMONT AVE
City: ALHAMBRA
Email: jawujo@dpw.lacounty.gov
Phone Number: 6264583507

Status History:
Global Id: T0603702800

ARCO #5108 (Continued) **S101295797**

Status: Completed - Case Closed
Status Date: 05/19/1998

Global Id: T0603702800
Status: Open - Case Begin Date
Status Date: 03/02/1988

Global Id: T0603702800
Status: Open - Remediation
Status Date: 11/20/1996

Global Id: T0603702800
Status: Open - Site Assessment
Status Date: 04/14/1988

Regulatory Activities:
Global Id: T0603702800
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0603702800
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: I-01781
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: Not reported
Global ID: T0603702800
W Global ID: Not reported
Staff: JP
Local Agency: 19000
Cross Street: CARSON
Enforcement Type: Not reported
Date Leak Discovered: 3/2/1988
Date Leak First Reported: 4/14/1988
Date Leak Record Entered: 4/27/1988
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 7/15/1998
Date the Case was Closed: 5/19/1998
How Leak Discovered: Tank Test
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: PRESTIGE STATIONS, INC

ARCO #5108 (Continued) **S101295797**

Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		5868.1190982680093392335277484
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		Not reported
Preliminary Site Assessment Began:		Not reported
Pollution Characterization Began:		4/14/1988
Remediation Plan Submitted:		Not reported
Remedial Action Underway:		11/20/1996
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		Not reported
Historical Max MTBE Date:		1/1/1965
Hist Max MTBE Conc in Groundwater:		5900
Hist Max MTBE Conc in Soil:		Not reported
Significant Interim Remedial Action Taken:		Not reported
GW Qualifier:	Not reported	
Soil Qualifier:	Not reported	
Organization:	Not reported	
Owner Contact:	Not reported	
Responsible Party:	ATLANTIC RICHFIELD CO.	
RP Address:	17315 STUDEBAKER RD, CERRITOS, CA 90701	
Program:	LUST	
Lat/Long:	33.8314518 / -1	
Local Agency Staff:	Not reported	
Beneficial Use:	Not reported	
Priority:	Not reported	
Cleanup Fund Id:	Not reported	
Suspended:	Not reported	
Assigned Name:	Not reported	
Summary:	07/15/98 - 2ND QTR 1998 GW MON RPT	

Count: 17 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CARSON	1014673209	EAST CARSON STREET	2535-2569 E CARSON STREET	90745	US BROWNFIELDS
CARSON	S100833322	GOLDEN EAGLE REFINERY	2100 SOUTH FIGUEROA STREET	90745	CA BOND EXP. PLAN
CARSON	1014915682	DOMINGUEZ CHANNEL SOUTH OF CARSON	405 FWY AND E CARSON ST	90745	RCRA-SQG
CARSON	S113179154	DOMINGUEZ CHANNEL SOUTH OF CARSON	330 FT N INTER 405 FWY & CARSO	90745	HAZNET
CARSON	S105023098	CHEVRON-ALAMITOS BAY PART	PACIFIC COAST HWY & LOMIT	90745	HIST CORTESE
CARSON	S113170576	SILIKAL RESIN SYSTEMS	2760 EL PRESIDIO ST L M D WARE	90745	HAZNET
CARSON	1003878476	SOIL MGMT METHOD INC	WILMINGTON AND LOMITA	90745	CERC-NFRAP
CARSON CA	S103441755	CARSON	CARSON	90745	WMUDS/SWAT
LOS ANGELES	S111076155	VERMONT AVENUE & KNOX STREET DUMP	19240 VERMONT AVENUE	90502	SWF/LF
TORRANCE	S103441573	PACIFIC SMELTING-TORRANCE	2316 ASALONE		WMUDS/SWAT
TORRANCE	S111075930	GREEN HOG RANCH	2200 EAST BERYL STREET		SWF/LF
TORRANCE	1000472939	VISION GRAPHICS	2420 CARSON ST #215		RCRA-SQG
TORRANCE	S103441575	COLUMBIA STEEL-TORRANCE	CARVERS AVE & VANNESS		WMUDS/SWAT
TORRANCE	S105960461	DEL AMO BOULEVARD	DEL AMO BOULEVARD, BETWEEN VER	90502	CA BOND EXP. PLAN
TORRANCE	S109821526	H.M. GUENSER	GRAMMERCY PLACE, BET 178TH AND		SWF/LF
TORRANCE	S111076098	SOUTH TORRANCE DUMP	ROLLING HILLS ROAD AND WHIFFLE		SWF/LF
TORRANCE	S111076071	ROYAL BOULEVARD LAND RECLAMATION S	20925 SOUTH ROYAL BOULEVARD		SWF/LF

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 72

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 07/11/2013
Date Data Arrived at EDR: 08/08/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/02/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/19/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 50

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 07/29/2013
Date Data Arrived at EDR: 07/30/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 94

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 08/27/2013
Date Data Arrived at EDR: 08/27/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 66
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 07/29/2013
Date Data Arrived at EDR: 08/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 92

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/20/2013
Date Data Arrived at EDR: 08/23/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 70

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2014
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/17/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 09/05/2013
Date Data Arrived at EDR: 09/05/2013
Date Made Active in Reports: 10/10/2013
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/24/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/19/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 28
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

Local Lists of Hazardous waste / Contaminated Sites

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

TOXIC PITS: Toxic Pits Cleanup Act Sites
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27
Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24
Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8
Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/14/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 08/21/2013
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/11/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/11/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/12/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 55

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/30/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

Other Ascertainable Records

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 06/11/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 143

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/13/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/30/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/26/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 07/05/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 52

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/01/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: No Update Planned

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 41

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/15/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Annually

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 07/25/2013
Date Data Arrived at EDR: 07/26/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 25

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 07/22/2013
Date Made Active in Reports: 08/26/2013
Number of Days to Update: 35

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/22/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 07/31/2013
Date Data Arrived at EDR: 08/01/2013
Date Made Active in Reports: 08/27/2013
Number of Days to Update: 26

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 33

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/09/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 11/26/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 01/21/2013
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 56

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/13/2013
Date Made Active in Reports: 10/08/2013
Number of Days to Update: 56

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/18/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 6
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/18/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 33
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/03/2013
Date Data Arrived at EDR: 07/08/2013
Date Made Active in Reports: 08/23/2013
Number of Days to Update: 46
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/28/2013
Next Scheduled EDR Contact: 02/11/2014
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 09/25/2013
Date Data Arrived at EDR: 09/27/2013
Date Made Active in Reports: 10/18/2013
Number of Days to Update: 21

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/16/2013
Date Data Arrived at EDR: 09/17/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 29

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 09/03/2013
Date Data Arrived at EDR: 09/06/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 38

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/03/2013
Next Scheduled EDR Contact: 12/16/2013
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/18/2013
Date Data Arrived at EDR: 09/20/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 27

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/18/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/18/2013
Number of Days to Update: 24

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/02/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 38

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/30/2013
Next Scheduled EDR Contact: 01/13/2014
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/10/2013
Next Scheduled EDR Contact: 12/23/2013
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/07/2013
Next Scheduled EDR Contact: 01/20/2014
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/29/2013
Date Data Arrived at EDR: 09/18/2013
Date Made Active in Reports: 10/16/2013
Number of Days to Update: 28

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/26/2013
Date Made Active in Reports: 08/20/2013
Number of Days to Update: 55

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/23/2013
Next Scheduled EDR Contact: 01/08/2014
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/18/2013
Next Scheduled EDR Contact: 01/27/2014
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/07/2013
Date Made Active in Reports: 09/10/2013
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/21/2013
Next Scheduled EDR Contact: 02/03/2014
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 08/05/2013
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/23/2013
Next Scheduled EDR Contact: 12/09/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 08/09/2013
Date Made Active in Reports: 09/27/2013
Number of Days to Update: 49

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/16/2013
Next Scheduled EDR Contact: 12/30/2013
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

1000 WEST CARSON STREET
1000 WEST CARSON STREET
TORRANCE, CA 90502

TARGET PROPERTY COORDINATES

Latitude (North):	33.83 - 33° 49' 48.00''
Longitude (West):	118.2948 - 118° 17' 41.28''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	380183.8
UTM Y (Meters):	3743866.8
Elevation:	44 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33118-G3 TORRANCE, CA
Most Recent Revision:	1981

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

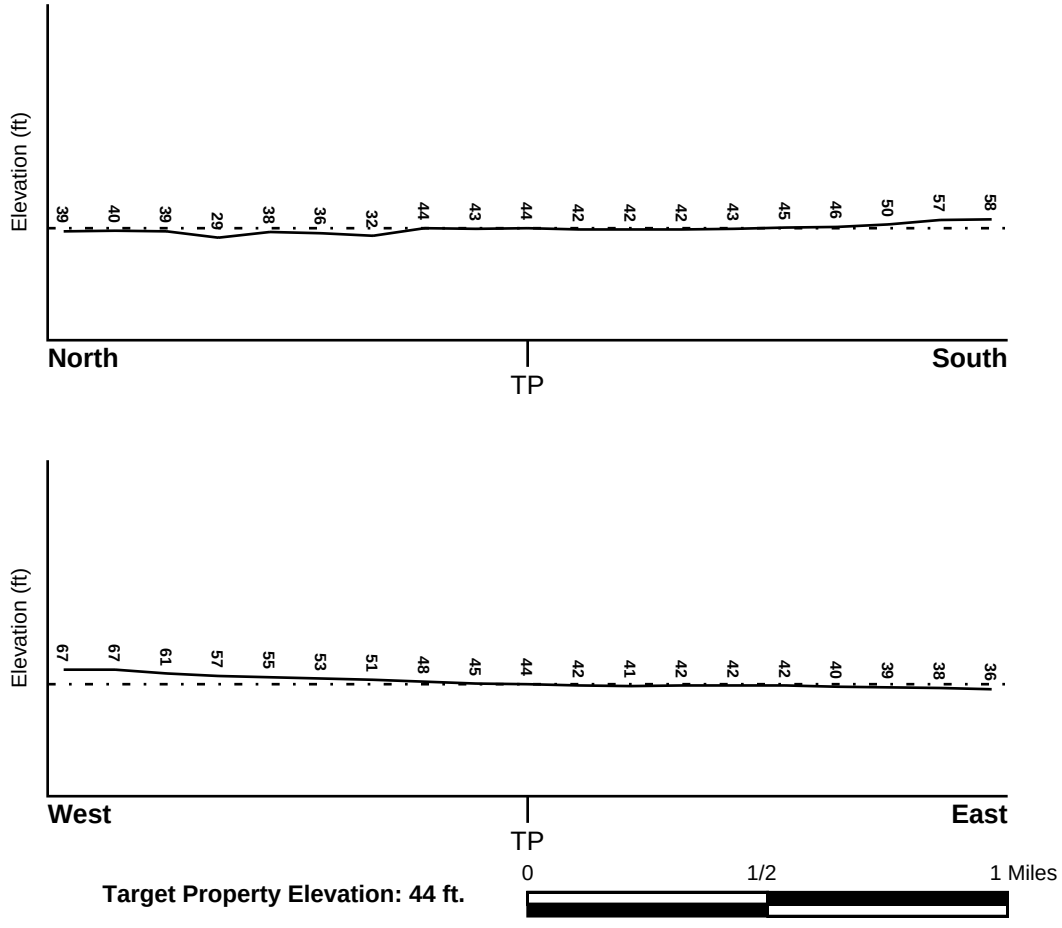
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General East

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
LOS ANGELES, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06037C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
TORRANCE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Location Relative to TP:	1/2 - 1 Mile NE
Site Name:	Golden Eagle Refining Co Inc
Site EPA ID Number:	CAD062080064
Groundwater Flow Direction:	Southeast
Measured Depth to Water:	29 feet.
Hydraulic Connection:	A hydraulic connection exists between the aquifers under the site.
Sole Source Aquifer:	No information about a sole source aquifer is available
Data Quality:	Information based on site-specific subsurface investigations is documented in the CERCLIS investigation report(s)

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/2 - 1 Mile ENE	Not Reported

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site--specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures:
sandy loam
gravelly - sandy loam
silt loam
clay
fine sand
gravelly - sand
sand
fine sandy loam

Surficial Soil Types:
sandy loam
gravelly - sandy loam
silt loam
clay
fine sand
gravelly - sand
sand
fine sandy loam

Shallow Soil Types:
fine sandy loam
gravelly - loam
sandy clay
sandy clay loam
clay
silty clay
sand

Deeper Soil Types:
gravelly - sandy loam
sandy loam
very gravelly - sandy loam
stratified
very fine sandy loam
weathered bedrock
sand
gravelly - fine sandy loam
silty clay loam
clay loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	0.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	0.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 3776452.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- (W) Water Wells
- (P) Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- (GI) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location
- (HD) Closest Hydrogeological Data

N

SITE NAME: 1000 West Carson Street	CLIENT: Ninyo & Moore
ADDRESS: 1000 West Carson Street Torrance CA 90502	CONTACT: Andrew Luong
LAT/LONG: 33.83 / 118.2948	INQUIRY #: 3776452.2s DATE: November 05, 2013 6:10 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
1 **ENE** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	I-06264 Not Reported Not Reported Not Reported 70 07/17/1996	**AQUIFLOW**	**55228**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
90502	21	6

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.711 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.933 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

HAZARDOUS BUILDING MATERIAL SURVEY
HARBOR UCLA MEDICAL CENTER
1000 WEST CARSON STREET
TORRANCE, CALIFORNIA 90502



PREPARED FOR:
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

May 13, 2015
Project No. 209023002

May 13, 2015
Project No. 209023002

Mr. David A. Crook, AICP
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

Subject: Hazardous Building Material Survey
Harbor UCLA Medical Center
1000 West Carson Street
Torrance, California 90502

Dear Mr. Crook:

In accordance with our proposal dated February 13, 2013, Ninyo & Moore has performed a Hazardous Building Material Survey at the above-referenced property. The attached report presents our methodology, findings, conclusions, and recommendations regarding our survey.

We appreciate this opportunity to be of service to you on this important project.

Sincerely,
NINYO & MOORE

Pedro Rodriguez-Mendez
Senior Staff Scientist
Site Surveillance Technician No. 13-5109
CDPH Lead Sampling Technician #23793

Michael S. Cushner
Project Environmental Scientist
Certified Asbestos Consultant No. 11-4711
Lead Inspector/Risk Assessor #16953

Nancy J. Anglin
Principal Engineer

PRM/MSC/NA/SC

Distribution: (1) Addressee (via e-mail)

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1. INTRODUCTION

In accordance with your request and authorization, Ninyo & Moore has performed a hazardous building material survey (HBMS), at the Harbor UCLA Medical Center at West Carson Street in Torrance, California (site; Figure 1). The work was in support of the upcoming renovation and demolition activities associated with the upcoming campus improvements.

Our services included performing an asbestos-containing materials (ACM) survey, a lead-containing surfaces (LCS) survey, and a survey of miscellaneous hazardous building materials including potentially polychlorinated biphenyls (PCBs) containing materials and materials listed under the California Department of Toxic Substances Control (DTSC) Universal Waste Rule (UWR). This report has been prepared in accordance with generally accepted environmental science and engineering practices. This report is based upon conditions at the site at the time of the sampling activities and provides documentation of our findings and recommendations.

2. PURPOSE AND SCOPE OF SERVICES

The objective of the HBMS is to provide information about current conditions of the site buildings regarding the potential presence of ACMs, LCSs, and other hazardous building materials. For the purposes of this assessment, LCS refers to both lead-bearing substances (LBS) and lead-based paint (LBP), as defined by the California Department of Public Health (CDPH) and United States Department of Housing and Urban Development (HUD), and other potential lead-containing materials.

Our scope of services is identified as follows.

- Perform a visual reconnaissance of the interior and exterior areas of the site structures to evaluate the possible presence of ACMs and LCS.
- Collect 1,280 bulk samples of building materials and submittal of these samples to an independent laboratory for analysis of asbestos content. Samples were analyzed via the United States Environmental Protection Agency (EPA) recommended method of Polarized Light Microscopy (PLM) in accordance with EPA Test Method 600/R-93/116 July 93.
- Collect 2,011 X-ray fluorescence (XRF) readings of potential LCS.

- Perform a visual assessment and quantification of miscellaneous hazardous building materials including but not limited to wet electrical transformers (possible PCB containing oils), fluorescent light bulbs (possible mercury), fluorescent light ballasts (possible PCB-containing oils), high intensity light bulbs (possible mercury), thermostat switches (possible liquid mercury and/or batteries), emergency lighting and exit signs (possible lead acid or other metal containing batteries or tritium), heating, ventilation, and air conditioning (HVAC) and refrigeration systems (possible chlorofluorocarbon [CFC] gas), and other possible hazardous materials.

- Prepare this HBMS report which summarizes our field activities, presents our survey data, and summarizes descriptions and estimated quantities of assessed materials. This report includes a summary of our field activities, laboratory testing information, conclusions, and recommendations.

3. SITE PLAN

The site structures planned for demolition or renovation are highlighted in the site plan presented in Figure 2. The buildings include various types of medical office buildings including direct patient care, meeting rooms, offices, a library, and laboratories. Building construction dates range from the 1930s to the 1990s.

4. FIELD LIMITATIONS

Since non-destructive sampling techniques were used, there is a possibility that additional ACMs and LCS may be encountered in inaccessible areas (e.g., interstitial wall and ceiling spaces as well as roof areas) during building renovation or demolition activities.

5. SAMPLE COLLECTION

The surveys generally followed the EPA and HUD guidelines, within the limits of the project scope of work. The asbestos survey was conducted and performed by California Department of Occupational Safety and Health-Certified Asbestos Consultants and Asbestos Site Surveillance Technician's, which consisted of visually locating suspected ACMs, inventorying and quantifying homogenous sampling areas, and collecting suspect building materials from these sampling areas. The LCS survey was performed by a CDPH Lead Sampling Technician under the supervision of a CDPH Lead-Related Construction Inspector/Assessor. The surveys were

performed from February to April, 2015. Inspector certification documentation is presented in Appendix B.

5.1. Asbestos Survey

A preliminary visual assessment and bulk-sampling survey of suspect ACMs within the designated interior and exterior areas of the structures was performed. Representative samples of the suspect ACMs were collected after identification of homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction or application date, and general appearance). Each homogeneous area was observed for material type, location, condition, and friability. Representative samples were collected from each homogeneous area except areas that may have been inaccessible or areas of assumed ACM, within the limits of the project scope of work. Samples were collected using EPA-recommended sampling procedures.

A total of 1,280 samples of suspect ACMs were collected and transferred to EmLab P&K (EmLab) for asbestos analysis. EmLab is an accredited laboratory in the National Voluntary Laboratory Accreditation Program for bulk asbestos fiber analysis. The samples were analyzed using PLM with dispersion staining for the presence and quantification of asbestos fibers, in general accordance with EPA method 600/R-93/116 July 93.

Building materials which were sampled and analyzed for the presence of asbestos are presented in Table 1. Copies of the laboratory analytical reports and chain-of-custody records are presented in Appendix B.

5.2. LCS Survey

Lead testing was conducted using a portable NITON XLp 300A XRF spectrum analyzer in accordance with accepted environmental science and engineering practices for renovation projects. The testing methodology used is presented in Appendix C. A total of 2,011 XRF readings were collected from the representative testing combinations (e.g., unique combination of room equivalent, building component, and substrate) within the structures

within the scope of work. Components that were tested for the presence of lead are presented in the attached Table 2.

5.3. Miscellaneous Hazardous Building Materials Survey

Ninyo & Moore conducted a visual survey and inventory of miscellaneous hazardous building materials. Materials of potential concern including but not limited to wet electrical transformers (possible PCB-containing oils), fluorescent light bulbs (possible mercury), fluorescent light ballasts (possible PCB-containing oils), high intensity light bulbs (possible mercury), thermostat switches (possible liquid mercury and/or batteries), emergency lighting and exit signs (possible lead acid or other metal containing batteries or tritium), HVAC and refrigeration systems (possible CFC gas). In accordance with the scope of work, positive identification of the suspect miscellaneous hazardous materials, via analytical testing, was not performed.

6. SURVEY RESULTS

The following sections present the survey results.

6.1. Asbestos

The lower limit of reliable detection for asbestos using the PLM method is approximately one (1) percent by volume. California regulations define asbestos containing construction materials (ACCMs) as those materials having asbestos content of greater than one tenth of 0.1 percent. Materials in which no asbestos was detected are defined in the laboratory report as “None detected.” Materials containing asbestos, but in amounts less than 1 percent, are defined as containing “trace” amounts and for the purpose of this report are assumed to be ACCM.

Asbestos analytical results are summarized in the attached Table 1.

Please note that quantities of ACMs noted, are approximate. It is the abatement contractor’s responsibility to confirm quantities prior to bidding and removal activities.

6.2. Lead-Containing Surfaces

The CDPH stipulates that paint or other surface coatings containing an amount equal to or in excess of one milligram per square centimeter (1.0 mg/cm^2), or more than one-half of one percent (0.5 percent) by weight, constitute a LBP. The HUD guideline for designating a painted surface as lead-containing is consistent with the CDPH. In the County of Los Angeles, Title 11 Health and Safety Chapter 11.28 "Lead Hazards" stipulate that materials containing lead or its compounds in excess of 0.7 mg/cm^2, constitutes a LBS. For the purpose of this survey a LBS is also considered a LCS. In addition, under California Occupational Safety and Health Administration Construction Safety Orders, Lead Title 8, Section 1532.1 CA, "Lead In Construction Standard," specific worker protection measures are required in construction projects where lead is present. The standard covers construction work where employees may be exposed to lead during such activities as demolition, removal, surface preparation for repainting, renovation, clean-up, and routine maintenance.

The LCS detection limit used for the survey was 0.7 mg/cm^2. XRF analytical results are presented in Table 2. The CDPH Form 8552 is presented in Appendix D.

Please note that quantities of LCS noted are approximate. It is the abatement contractor's responsibility to confirm quantities prior to bidding and removal activities.

6.3. Miscellaneous Hazardous Building Materials

Miscellaneous potential hazardous building materials observed within the scope of work areas included fluorescent light bulbs, light ballasts, air conditioning units, and mercury-containing thermostat switches.

Fluorescent light bulbs are classified as light tubes under the DTSC UWR materials (i.e., containing mercury gases). Light ballasts manufactured until the late 1970s commonly contained PCBs. Possible Freon or CFC gases are suspected in refrigeration units and the air conditioning units.

An inventory of miscellaneous building materials is included in Table 3.

7. RECOMMENDATIONS

Since ACMs, LCSs, and other hazardous materials were identified at the site, the following recommendations are provided:

- The identified ACMs and LCSs should not be disturbed. Prior to renovation or demolition activities which would disturb identified ACMs, and LCSs, a licensed abatement removal contractor should remove the ACMs and LCS, and perform paint stabilization activities as needed. The licensed abatement contractor must maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal, or other regulated activities.

- Applicable laws and regulations should be followed, including those provisions requiring notification to regulatory agencies, building occupants, renovation contractors, and workers of the presence of asbestos and LCSs.

- The identified LCSs should not be disturbed. Any painted LCSs in a non-intact condition should be abated or the component properly removed or encapsulated. Lead containing ceramic tiles should be removed prior to demolition activities. Any lead related removal activities should be performed in accordance with the OSHA Lead in Construction Standard, Title 8 California Code of Regulations (CCR) 1532.1.

- Proper LCS waste stream categorization is required. Prior to any demolition activities, a composite sample of the representative LCS material (ceramic tiles and loose and flaking paint) should be analyzed for total lead for comparison with the Total Threshold Limit Concentration in accordance with EPA reference method SW-846. If the concentration of total lead is greater than or equal to 1,000 milligrams per kilogram (mg/kg), the LCS waste material must be disposed at a landfill which can receive such wastes. If the concentration is less than 50 mg/kg the sample may be disposed as construction debris, if it is to remain in California. If the total lead result is greater than or equal to 50 mg/kg and less than 1,000 mg/kg, the sample must be further analyzed for soluble lead by the Waste Extraction Test for comparison with the Soluble Threshold Limit Concentration as described in Title 22 CCR 66261.24a. Additionally, if the result is greater than or equal to 100 mg/kg the sample must be further analyzed for leachable lead by the Toxicity Characteristic Leaching Procedure for comparison with the Resource Conservation and Recovery Act (RCRA) limits. Based on the results of the soluble and leachable analysis the waste material may require disposal as a RCRA-Hazardous waste or non-RCRA- (California-) Hazardous waste.

- Miscellaneous hazardous building materials discussed in this report (Table 3), should be removed and properly recycled or disposed by the licensed abatement contractor prior to renovation or demolition activities. Contractor should provide proper manifesting for all hazardous materials removed and recycled to prove the disposal of all materials was completed in accordance with local, state, and federal requirements.

- Abatement monitoring consulting services should be performed by a third party environmental consultant, to include oversight of abatement contractor activities to be performed in accordance with the abatement specifications, daily air monitoring, clearances (asbestos and lead), verification of complete removal of hazardous materials, and preparation of a closeout report summarizing the abatement activities.

8. LIMITATIONS

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated. However, if additional suspect ACMs or LCSs are encountered during renovation/demolition activities, these materials should be sampled by a qualified person, and analyzed for content prior to further disturbance. In addition, please note that quantities of ACMs and LCSs are approximate. These numbers should be confirmed prior to removal or repair activities.

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and

analyses have been conducted by an independent laboratory which is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building N20						
1	North exterior wall	1	Stucco	None detected	N	NA
2	South exterior wall	1	Stucco	None detected	N	
3	East exterior wall	1	Stucco	None detected	N	
4	Roof	2	Roof core, core sheeting	None detected	N	NA
5	Roof pitch pocket	3	Gray caulking	None detected	N	NA
6	Roof flashing seams	4	Gray caulking	None detected	N	NA
7	Roof vent	5	Black mastic	None detected	N	NA
8	Roof pitch pocket	6	Black mastic	None detected	N	NA
9	Roof parapet wall	7	Base flashing	None detected	N	NA
10	Main entrance floor	8	Caulking & glue	None detected	N	NA
11	Southwest room floor	9	Carpet, glue & leveling compound	None detected	N	NA
12	Janitor's closet	10	Cove base & glue	None detected	N	NA
13	Ceiling near Janitor's closet	11	ceiling tile	None detected	Y	NA
14	North wall	12	Drywall & joint compound	None detected	N	NA
15	South wall	12	Drywall & joint compound	None detected	N	
16	Janitor's closet northeast wall	12	Drywall & joint compound	None detected	N	
Paint Shop						
17	Roof	13	Roof core, foam insulation	None detected	N	NA
18	Northeast roof	14	core shingles	None detected	N	NA
19	North exterior wall	16	Stucco	None detected	N	NA
20	South exterior wall	16	Stucco	None detected	N	
21	West exterior wall	16	Stucco	None detected	N	
22	South office	17	Cove base & glue	None detected	N	NA
23	South office floor	18	Carpet & glue	None detected	N	NA
24	South office wall	19	Stucco	None detected	N	NA
25	Lunch area	20	Vinyl floor tile & glue	None detected	N	NA
26	East wall	21	Tan drywall & joint compound	None detected	N	NA
27	South wall	22	White drywall & joint compound	None detected	N	NA
Building N17						
28	East exterior wall	23	Stucco	None detected	N	NA
29	North exterior wall	23	Stucco	None detected	N	
30	South exterior wall	23	Stucco	None detected	N	
31	Roof south pipe	24	White caulking	None detected	N	NA
32	Roof, south HVAC duct seams	25	Mastic	None detected	N	NA
33	Roof, southwest pipe	26	Mastic	None detected	N	NA
34	Roof	27	Core shingles	None detected	N	NA
35	Exterior HVAC unit duct seams	28	Caulking	None detected	N	NA
36	North office floor	29	Blue carpet & backing	None detected	N	NA
37	East office	30	Gray cove base & glue	None detected	N	NA
38	West office floor	31	Blue carpet & glue	None detected	N	NA
39	Conference room ceiling	32	1' x 1' Ceiling tile & mastic	None detected	N	NA
40	East office restroom	33	White Vinyl floor tile & tan glue	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
41	Southeast corner of snack bar area	34	Pink vinyl floor tile & glue	None detected	N	NA
42	Snack bar area southeast corner	35	6" brown cove base & glue	None detected	N	NA
43	West office wall	36	Drywall & joint compound	None detected	N	NA
44	Restroom wall	36	Drywall & joint compound	None detected	N	
45	East office wall	36	Drywall & joint compound	None detected	N	
Building N25						
46	**Roof**	**37**	**Caulking & Black Mastic**	**10% chrysotile**	**N**	**5 SF (ACM)**
47	Northwest exterior wall	38	Plaster, Mesh & Insulation	None detected	N	NA
48	Southwest exterior wall	38	Plaster, Mesh & Insulation	None detected	N	
49	Northeast exterior wall	38	Plaster, Mesh & Insulation	None detected	N	
50	Roof, northwest section	39	Roof core, core sheeting	None detected	N	NA
51	Roof	40	Foam insulation roofing	None detected	N	NA
52	Northeast offices	41	Drywall & joint compound	None detected	N	NA
53	West offices, room 101	41	Drywall & joint compound	None detected	N	
54	Southwest filing room	41	Drywall & joint compound	None detected	N	
55	Southwest filing room	42	White Vinyl floor tile & glue	None detected	N	NA
56	West offices, room 101	43	Ceiling tile	None detected	N	NA
57	West offices, room 101	44	Blue carpet, glue & leveling compound	None detected	N	NA
58	West Side of Main area	45	Blue cove base & glue	None detected	N	NA
59	East offices	46	Gray cove base & glue	None detected	N	NA
60	East Hallway	47	Dark blue cove base & glue	None detected	N	NA
61	East offices, room E127	48	Blue carpet & glue	None detected	N	NA
Building N33						
62	Roof	49	Roofing core, foam insulation	None detected	N	NA
63	Roof at Annex	50	Roof core, core sheeting	None detected	N	NA
64	South exterior window	51	Caulking	None detected	N	NA
65	Main restroom	52	Blue cove base & glue	None detected	N	NA
66	Main hallway floor	53	Blue carpet & glue	None detected	N	NA
67	Janitor's closet	54	Brown drywall & joint compound	None detected	N	NA
68	South Conference Room	55	Drywall & joint compound	None detected	N	NA
69	Janitor's closet floor	56	Blue vinyl floor tile & glue	None detected	N	NA
70	Restrooms and Janitor's closet	57	Light blue vinyl floor tile & glue	None detected	N	NA
71	Restroom ceiling	58	2' x 4' ceiling tile with insulation	None detected	N	NA
72	South offices ceiling	59	2' x 4' acoustic ceiling tile	None detected	Y	NA

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building N31						
73	Ceiling duct	60	Insulation & tape	None detected	N	NA
74	Roof pipe	61	Roof core, foam insulation	None detected	N	NA
75	Roof	61	Roof core, foam insulation	None detected	N	
76	**Janitor's closet wall**	**62**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**2,000 SF (ACCM)**
				Joint compound - none detected	**N**	
77	**Kitchen/break room**	**62**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
78	**Men's restroom wall**	**62**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile asbestos	**N**	
79	North hallway	63	2' x 4' ceiling tile	None detected	Y	NA
80	Northwest area	64	Black cove base & glue	None detected	N	NA
81	Western area floor	65	Tan vinyl floor tile & mastic	None detected	N	NA
82	Men's restroom area	66	6" cove base & glue	None detected	N	NA
83	Men's restroom	67	2" brown cove base & mastic	None detected	N	NA
84	Janitor's closet floor	68	Pink vinyl floor tile & glue	None detected	N	NA
85	Kitchen area	69	Light blue vinyl floor tile & mastic	None detected	N	NA
Building N26						
86	Roof	70	Roof core, core sheeting	None detected	N	NA
87	North trailer window	71	Window caulking	None detected	N	NA
88	South trailer roof pipe	72	Mastic	None detected	N	NA
89	Center trailer roof	73	Roof core, core sheeting	None detected	N	NA
90	South trailer roof pipe	74	Gray caulking	None detected	N	NA
91	South trailer floor	75	4" gray cove base & glue	None detected	N	NA
92	North west area	76	6" gray cove base & glue	None detected	N	NA
93	Restroom	77	6" tan cove base & glue	None detected	N	NA
94	South trailer floor	78	Blue vinyl floor tile & glue	None detected	N	NA
95	Women's restroom ceiling	79	2' x 4' insulation ceiling tile	None detected	Y	NA
96	Main area floor	80	Tan vinyl floor sheeting & glue	None detected	N	NA
97	Northeast trailer floor	81	White vinyl floor tile & glue	None detected	N	NA
98	Main trailer wall	82	Drywall & joint compound	None detected	N	NA
99	Northeast trailer wall	82	Drywall and joint compound	None detected	N	
100	Northeast trailer wall	82	Drywall & joint compound	None detected	N	

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
101	South trailer ceiling	83	2' x 4' acoustic ceiling tile	None detected	N	NA
102	Trailers	84	Blue carpet, glue & leveling compound	None detected	N	NA
Building N24						
103	North Wing Break Room	85	20" x 20" vinyl floor tile & glue	None detected	N	NA
104	Southwest offices	86	Gray carpet, backing & glue	None detected	N	NA
105	**Southern offices**	**87**	**White vinyl floor tile & mastic**	**Vinyl floor tile - None detected**	**N**	**2,000 SF (ACM)**
				Mastic - 8% chrysotile	**N**	
106	East Hallway	88	Cove base & glue	None detected	N	NA
107	**Ceiling**	**89**	**Insulation & cloth/wrap**	**10% amosite 5% chrysotile**	**N**	**18 LF (ACM)**
108	North wing hallway ceiling	90	Ceiling tile	None detected	Y	NA
109	Southwest office ceiling	91	Ceiling tile & mastic	None detected	Y	NA
110	Office next to mail room, ceiling	92	Acoustic ceiling tile	None detected	Y	NA
111	Ceiling	93	Buttonboard (Plaster/Drywall)	None detected	N	NA
112	Break room, east wall	93	Buttonboard (Plaster/Drywall)	None detected	N	
113	Mail room	93	Buttonboard (Plaster/Drywall)	None detected	N	
114	Ceiling	94	Stucco	None detected	N	NA
115	**Southwest office ceiling**	**95**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
116	**Southwest offices**	**95**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**4,000 SF ACM**
				Joint compound - <1% chrysotile	**N**	
117	**Southwest office wall/entry**	**95**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
118	Northeast offices	96	Black cove base & glue	None detected	N	NA
119	South shed/old Roof	97	Roof core, core shingles	None detected	N	NA
120	**South roof**	**98**	**Sleeper mastic**	**10% chrysotile**	**N**	**10 SF (ACM)**
121	South roof	99	Pitch pocket & black Mastic	None detected	N	NA
122	South roof	100	Roof core, core sheeting	None detected	N	NA
123	**South roof**	**101**	**Cloth tape & mastic**	**Cloth Tape - None detected**	**N**	**12 SF (ACM)**
				Mastic - 10% chrysotile	**N**	
124	Roof trim	102	Caulking & mastic	None detected	N	NA
125	Northeast roof	103	Roof core, foam insulation	None detected	N	NA
126	Northwest wall	104	core sheeting & drywall	None detected	N	NA
127	Roof pitch pocket	105	Mastic	None detected	N	NA
128	Roof northwest	106	core sheeting	None detected	N	NA

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
129	Northwest corner wall	107	Stucco	None detected	N	NA
130	Northeast corner wall	107	Stucco	None detected	N	
131	Southeast corner wall	107	Stucco	None detected	N	
132	Air conditioning unit, north wing	108	Caulking	None detected	N	NA
133	Exterior southeast HVAC unit	109	Duct tape & caulking	None detected	N	NA
134	South window	110	Brown window caulking	None detected	N	NA
135	South roof duct	111	Tape & mastic	None detected	N	NA
136	South roof window	112	Caulking	None detected	N	NA
137	Roof	113	Mastic	None detected	N	NA
138	**Exterior HVAC unit**	**114**	**Tape & mastic**	**Tape - None detected**	**N**	**50 SF (ACM)**
				Mastic - 10% chrysotile	**N**	
Building N18						
139	**Exterior HVAC unit**	**115**	**Gray caulking**	**Coating - 2% chrysotile**	**N**	**10 SF (ACM)**
				Caulking - None detected	**N**	
140	Exterior HVAC duct seams	116	Duct tape	None detected	N	NA
141	West exterior wall	117	Stucco	None detected	N	NA
142	South exterior wall	117	Stucco	None detected	N	
143	North exterior wall	117	Stucco	None detected	N	
144	Roof southeast	118	Roof core, core shingles	None detected	N	NA
145	restroom floor	119	White vinyl floor tile & glue	None detected	N	NA
146	East classroom floor	120	Blue carpet & glue	None detected	N	NA
147	Front office floor	121	Cove base & glue	None detected	N	NA
148	**Break room ceiling**	**122**	**Acoustic ceiling tile**	**3% amosite**	**Y**	**500 SF (ACM)**
149	Entry side near restroom	123	Drywall & joint compound	None detected	N	NA
150	West area	123	Drywall & joint compound	None detected	N	
151	East offices	123	Drywall & joint compound	None detected	N	
Building N32						
152	North exterior wall	124	Stucco	None detected	N	NA
153	South exterior wall	124	Stucco	None detected		
154	West exterior wall	124	Stucco	None detected		
155	Roof	125	Roof core & core shingles	None detected	N	NA
156	Roof vent	126	Mastic	None detected	N	NA
157	Kitchen	127	Drywall & joint compound	None detected	N	NA
158	Men's restroom	128	Cove base	None detected	N	NA
159	East office floor	129	Gray carpet, glue & backing	None detected	N	NA
160	Main area	130	Black cove base & glue	None detected	N	NA
161	Men's restroom	131	White vinyl floor tile & glue	None detected	N	NA
162	Men's restroom	132	2' x 4' ceiling tile	None detected	N	NA
163	Men's restroom	133	Gray vinyl floor tile & glue	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Cottage 18						
164	Roof vent	134	Tape & mastic	None detected	N	NA
165	Roof vent	135	Tan Caulking	None detected	N	NA
166	Roof	136	Core shingles	None detected	N	NA
167	South exterior wall	137	Stucco	None detected	N	NA
168	North exterior wall	137	Stucco	None detected	N	
169	West exterior wall	137	Stucco	None detected	N	
170	**Kitchen floor area**	**138**	**Gray Carpet, backing, 9" x 9" brown Vinyl floor tile & mastic**	**Vinyl floor tile - 5% chrysotile**	N	**700 SF (ACM)**
				Mastic - None detected	N	
171	Restroom	139	White vinyl floor tile & glue	None detected	N	NA
172	Closet wall	140	Buttonboard (Plaster/Drywall)	None detected	N	NA
173	Living Room	140	Buttonboard (Plaster/Drywall)	None detected	N	
174	wall (Hall closet)	140	Buttonboard (Plaster/Drywall)	None detected	N	
175	Roof (Whirly Bird)	141	Tape & Caulking	None detected	N	NA
Cottage 16						
176	North exterior wall	142	Stucco	None detected	N	NA
177	South exterior wall	142	Stucco	None detected	N	
178	West exterior wall	142	Stucco	None detected	N	
179	Roof vent pipe	143	Tape & caulking	None detected	N	NA
180	Roof	144	core shingles	None detected	N	NA
181	Kitchen area	145	White vinyl floor tile, glue & leveling compound	None detected	N	NA
182	North offices	146	4" gray Cove base & glue	None detected	N	NA
183	**Ceiling**	**147**	**Buttonboard (Plaster/Drywall)**	**Joint compound - <1% chrysotile asbestos ACCM**	**N**	**2,000 SF (ACCM)**
				Drywall - none detected	**N**	
184	**Closet wall**	**147**	**Buttonboard (Plaster/Drywall)**	**Joint compound - <1% chrysotile asbestos ACCM**	**N**	
				Drywall - none detected	**N**	
185	**Room**	**147**	**Buttonboard (Plaster/Drywall)**	**Joint compound - <1% chrysotile asbestos ACCM**	**N**	
				Drywall - none detected	**N**	
NS	**Roof**	**144A**	**Transite pipe**	**ASSUMED**	**N**	**1 each**
186	Copy room	148	Gray carpet, glue & leveling compound	None detected	N	NA
Building N18						
187	**Roof pipe**	**149**	**Caulking**	**Caulking - None detected**	**N**	**10 SF**
				Tar - 3% chrysotile asbestos ACM	**N**	
Building N16						
188	Roof seams	150	Mastic	None detected	N	NA
189	Roof vent pipe	151	Mastic	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
190	Roof	152	core sheeting	None detected	N	NA
191	Restroom	153	Vinyl floor sheeting & glue	None detected	N	NA
192	North hallway	154	Carpet, backing & glue	None detected	N	NA
193	Restroom wall	155	Drywall & tape	None detected	N	NA
194	Northeast room wall	155	Drywall & tape	None detected	N	
195	West room wall	155	Drywall & tape	None detected	N	
Building 21						
196	Roof pipe	156	Gray Caulking	None detected	N	NA
197	**Roof**	**157**	**Roof core**	**Paint - None detected**	**N**	**2,000 SF (ACM)**
				Mastic - 7% chrysotile	**N**	
198	Wall behind wood panel	158	Drywall & joint compound	None detected	N	NA
199	Wall behind wood panel	158	Drywall & joint compound	None detected	N	
200	Wall behind wood panel	158	Drywall & joint compound	None detected	N	
201	Water Heater pipe	159	Caulking	None detected	N	NA
202	Hallway	160	Carpet, glue, backing & vinyl floor tile	None detected	N	NA
203	Area near break room	161	Cove base & glue	None detected	N	NA
204	Janitor's closet ceiling	162	Ceiling panels	None detected	N	NA
205	Restroom wall	163	Cove base	None detected	N	NA
206	Janitor's closet floor	164	Vinyl floor tile & glue	None detected	N	NA
207	Restroom	165	Cove base & glue	None detected	N	NA
Building N28						
208	**East hall floor**	**166**	**Carpet, backing, white vinyl floor tile and Mastic & glue**	**Vinyl floor tile - <1% chrysotile**	**N**	**1,500 SF (ACCM)**
				Glue - none detected	**N**	
209	**West hall floor**	**167**	**Green vinyl floor tile & Mastic**	**Vinyl floor tile - <1% chrysotile**	**N**	**1,000 SF (ACCM)**
				Mastic - None detected	**N**	
210	**West stockroom floor**	**168**	**Off-white vinyl floor tile & Mastic**	**Vinyl floor tile - <1% chrysotile**	**N**	**100 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
211	West stockroom floor	169	Vinyl floor tile & glue	None detected	N	NA
212	East-west hallway ceiling	170	1' x 1' tile and Mastic	None detected	N	NA
213	West stockroom	171	Cove base & glue	None detected	N	NA
214	West stockroom	172	Cove base & glue	None detected	N	NA
215	East restroom	173	Cove base & glue	None detected	N	NA
216	Conference room	174	Cove base & glue	None detected	N	NA
217	East Janitor's closet wall	175	Drywall & joint compound	None detected	N	NA
218	East Janitor's closet wall	175	Drywall & joint compound	None detected	N	
219	West stockroom wall	175	Drywall & joint compound	None detected	N	
220	Roof pipe	176	Gray Caulking	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
221	**Roof duct**	**177**	**Black Mastic**	**Coating - None detected**	**N**	**10 SF (ACM)**
				Mastic - 6% chrysotile	**N**	
222	exterior northeast wall	178	Stucco	None detected	N	NA
223	exterior southwest wall	178	Stucco	None detected	N	
224	exterior southeast wall	178	Stucco	None detected	N	
225	Northwest roof	179	Core shingles	None detected	N	NA
226	Northeast roof	179	Core shingles	None detected	N	
227	West roof	180	Core shingles	None detected	N	NA
Building N22						
228	**East exit wall**	**181**	**Drywall & joint compound**	**Drywall - none detected**	N	**1,500 SF (ACCM)**
				Joint compound - <1% chrysotile	N	
229	**East exit ceiling**	**181**	**Drywall & joint compound**	**Drywall - none detected**	N	
				Joint compound - <1% chrysotile	N	
230	**Restroom wall**	**181**	**Drywall & joint compound**	**Drywall - none detected**	N	
				Joint compound - <1% chrysotile	N	
231	Main entrance	182	Cove base & glue	None detected	N	NA
232	East exit/corridor	183	Cove base & glue	None detected	N	NA
233	Northeast area	184	Vinyl floor tile & glue	None detected	N	NA
234	Roof	185	core shingles	None detected	N	NA
235	exterior South End	186	Caulking	None detected	N	NA
236	exterior HVAC Unit	187	Duct Tape & Caulking	None detected	N	NA
237	**Exterior HVAC unit**	**188**	**Duct tape & caulking**	**Coating - <1% chrysotile**	**N**	**2 SF (ACCM)**
				Tape - none detected	**N**	
238	Roof pipe	189	Mastic	10% chrysotile asbestos ACM	N	10 SF
239	East exterior wall	190	Stucco	None detected	N	NA
240	North exterior wall	190	Stucco	None detected	N	
241	South exterior wall	190	Stucco	None detected	N	
Building N14						
242	Ceiling	191	Buttonboard (Plaster/Drywall)	None detected	N	NA
243	Ceiling	191	Buttonboard (Plaster/Drywall)	None detected	N	
244	Ceiling	191	Buttonboard (Plaster/Drywall)	None detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
245	**Northwest hallway wall**	**192**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**3,000 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
				Skim Coat(Texture) - <1% chrysotile	**N**	
246	**North office wall**	**192**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
				Skim Coat(Texture) - <1% chrysotile	**N**	
247	**Janitor's closet wall**	**192**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
				Skim Coat(Texture) - <1% chrysotile	**N**	
248	Room 10C	193	Cove base & tan glue	None detected	N	NA
249	Woman's restroom	194	Cove base & glue	None detected	N	NA
250	Rooms 10A-10B	195	Cove base & glue	None detected	N	NA
251	East hallway	196	Cove base & glue	None detected	N	NA
252	**Northeast copy room**	**197**	**Gray carpet, 9" x 9" vinyl floor tile & mastic**	**Vinyl floor tile - 5% chrysotile**	**N**	**1,500 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
253	**West hallway floor**	**198**	**Blue carpet, glue, 9" x 9" vinyl floor tile & mastic**	**Vinyl floor tile - 6% chrysotile**	**N**	**2,000 SF (ACM)**
				Mastic - None detected	**N**	
254	Shipping and receiving north room	199	Brown carpet	None detected	N	NA
255	Men's restroom	200	Vinyl sheeting & mastic	None detected	N	NA
256	**Shipping and receiving room**	**201**	**Tan vinyl floor tile, mastic and glue**	**Vinyl floor tile - 2% chrysotile**	**N**	**350 SF (ACM)**
				Mastic - None detected	**N**	
257	**Shipping and receiving room**	**202**	**Vinyl floor tile & mastic**	**Vinyl floor tile - 3% chrysotile**	**N**	**250 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
258	Janitor's closet area	203	Blue vinyl floor tile & glue	None detected	N	NA
259	**Room 26 floor**	**204**	**Carpet, backing, vinyl floor tile & mastic**	**Floor tile - 5% chrysotile**	**N**	**500 SF (ACM)**
				Mastic - 7% chrysotile	**N**	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
260	**Woman's restroom floor**	**205**	**Linoleum**	**Tan Sheet flooring with Fibrous backing - 20% chrysotile**	**Y**	**80 SF (ACM)**
				Beige Sheet flooring with Fibrous backing - 20% chrysotile	**Y**	
261	Ceiling	206	tile and Mastic	None detected	Y	NA
262	Vending machine area ceiling	207	ceiling tile	None detected	Y	NA
263	North hallway	208	ceiling tile	None detected	Y	NA
264	Southeast roof	209	core sheeting	None detected	N	NA
265	Roof	210	core sheeting	None detected	N	NA
266	**Roof vent/motor**	**211**	**Mastic**	**10% chrysotile**	**N**	**25 SF (ACM)**
267	**Roof vent**	**212**	**Mastic**	**10% chrysotile**	**N**	**25 SF (ACM)**
268	**Roof pipe**	**213**	**Mastic**	**10% chrysotile**	**N**	**25 SF (ACM)**
269	**Roof vent**	**214**	**Caulking & tape**	**Caulking - none detected**	**N**	**20 SF (ACM)**
				Tape - 10% chrysotile	**N**	
270	South window	215	Caulking	None detected	N	NA
271	East exterior wall	216	Stucco	None detected	N	NA
272	West exterior wall	216	Stucco			
273	North exterior wall	216	Stucco			
274	Exterior HVAC unit	217	Duct caulking	None detected	N	NA
275	Exterior shed wall	218	Drywall	None detected	N	NA
276	Exterior south/east HVAC unit	219	Gray caulking	None detected	N	NA
277	**Exterior pipe**	**220**	**Tape, mastic & insulation**	**Tape - none detected**	**N**	**8 LF (ACM)**
				Insulation - 10% chrysotile	**N**	
278	Exterior HVAC duct	221	Duct tape	None detected	N	NA
279	**Exterior wall vent**	**222**	**Caulking & mastic**	**Caulking - none detected**	**N**	**20 SF (ACM)**
				Mastic - 8% chrysotile	**N**	
Building C3						
280	**Restroom ceiling**	**223**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**3,000 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
281	**West wall**	**223**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
282	**East wall**	**223**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
283	Ceiling in restroom	224	1' x 1' ceiling tile & mastic	None detected	Y	NA
284	North ceiling	225	Ceiling tile & mastic	None detected	Y	NA
285	Ceiling	226	Acoustic ceiling panels	None detected	Y	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
286	Northwest office floor	227	Carpet & backing	None detected	N	NA
287	C3 to C2 hallway floor	228	Vinyl floor tile & mastic	None detected	N	NA
288	Center hallway within C3 floor	229	Vinyl floor tile & glue	None detected	N	NA
289	Center hallway within C3	230	Cove base & glue	None detected	N	NA
290	Restroom	231	Cove base, glue & mastic	None detected	N	NA
291	Hallway from C3 to C2	232	Cove base & glue	None detected	N	NA
292	Exterior south wall	233	Stucco & barrier paper	None detected	N	NA
293	Exterior west wall pipe	234	Pipe insulation	None detected	Y	NA
294	West roof	235	Roof core, core sheeting	None detected	N	NA
295	North roof	236	Roof core, asphalt shingles	None detected	N	NA
296	Roof pipe	237	Mastic	None detected	N	NA
297	Exterior window	238	window putty	None detected	N	NA
298	Exterior vent duct	239	Caulking/mud	None detected	N	NA
Building C2						
299	Hall center	240	Ceiling tile & mastic	None detected	Y	NA
300	North wall	241	Drywall	None detected	N	NA
301	North wall	241	Drywall	None detected	N	
302	North wall	241	Drywall	None detected	N	
303	West wall	242	Drywall & joint compound	None detected	N	NA
304	East wall	242	Drywall & joint compound	None detected	N	
305	South wall	242	Drywall & joint compound	None detected	N	
306	Roof vent	243	Mastic	None detected	N	NA
307	South exterior wall	244	Stucco	None detected	N	NA
308	**Roof wall joint**	**245**	**Mastic**	**7% chrysotile**	**N**	**1 SF (ACM)**
309	Roof wall joint	246	Caulking	None detected	N	NA
310	C2 Annex roof	247	Roof core, core sheeting	None detected	N	NA
311	C2 Center roof	248	Roof core, core shingles	None detected	N	NA
312	West window	249	window putty	None detected	N	NA
313	Roof duct/vent	250	Tape & glue	None detected	N	NA
314	Roof pipe	251	Mastic	None detected	N	NA
315	Conference room floor	252	Carpet, backing, Vinyl floor tile & mastic	None detected	N	NA
316	Restroom floor	253	Vinyl floor sheeting & glue	None detected	N	NA
317	Hall floor	254	Vinyl floor tile & glue	None detected	N	NA
318	Roof vent duct	255	Caulking	None detected	N	NA
319	South offices	256	Carpet, backing & glue	None detected	N	NA
320	North hallway	257	Cove base & glue	None detected	N	NA
321	C2 trailer main area	258	Cove base & glue	None detected	N	NA
322	C2 trailer restroom	259	Cove base & glue	None detected	N	NA
323	C2 trailer ceiling	260	ceiling tile	None detected	Y	NA
Building N9						
324	Interior (East Duct)	261	Duct tape	None detected	N	NA
325	**Exterior wall vent**	**262**	**Tape, caulking & mastic**	**Tape & caulking - none detected**	**N**	**20 SF (ACM)**
				Mastic - 10% chrysotile	**N**	
326	South roof pipe	263	Mastic	None detected	N	NA
327	North roof	264	Roof core, core sheeting	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
328	Main roof	265	Foam insulation coating	None detected	N	NA
329	Northwest wall	266	Drywall & joint compound	None detected	N	NA
330	North wall	266	Drywall & joint compound	None detected	N	
331	South wall	266	Drywall & joint compound	None detected	N	
332	Janitor's closet floor	267	Vinyl floor tile & glue	None detected	N	NA
333	Restroom floor	268	Vinyl floor tile & glue	None detected	N	NA
334	Janitor's closet	269	Cove base & mastic	None detected	N	NA
335	Northeast area	270	Cove base & glue	None detected	N	NA
336	Northeast office floor	271	Carpet & glue	None detected	N	NA
337	Northeast office ceiling	272	Ceiling tile	None detected	Y	NA
Building N12						
338	West roof pipe	273	Caulking	None detected	N	NA
339	Kitchen wall	274	Drywall & joint compound	None detected	N	NA
340	Closet wall	274	Drywall & joint compound	None detected	N	
341	Storage area wall	274	Drywall & joint compound	None detected	N	
342	Room 2	275	Cove base, glue & mastic	None detected	N	NA
343	Roof	276	Roof core, vinyl sheeting	None detected	N	NA
344	Western restroom	277	Cove base & glue	None detected	N	NA
345	**Storage room**	**278**	**Blue carpet, glue, 1' x 1' white vinyl floor tile & mastic**	**Vinyl floor tile - none detected**	**N**	**1,500 SF (ACM)**
				Mastic - 8% chrysotile	**N**	
346	**Restroom floor (Two layers)**	**279**	**Beige Linoleum**	**Linoleum - 20% chrysotile**	**Y**	**40 SF (ACM)**
				Mastic - none detected	**Y**	
347	Hall	280	Ceiling tile	None detected	Y	NA
Building N7						
348	**Northeast floor**	**281**	**Blue carpet, backing, vinyl floor tile & mastic**	**Floor tile - <1% chrysotile**	**N**	**1,000 SF (ACCM)**
				Mastic - 7% chrysotile	**N**	
349	restroom	282	Cove base & glue	None detected	N	NA
350	Hallway	283	Cove base & glue	None detected	N	NA
351	Eastern Room	284	Cove base & glue	None detected	N	NA
352	restroom floor	285	Vinyl floor tile & glue	None detected	N	NA
353	**Eastern Room**	**286**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**1,500 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
354	**Restroom**	**286**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
355	**Room F**	**286**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
356	**Hallway**	**287**	**2' x 4' ceiling tile**	**2% amosite**	**Y**	**1,000 SF (ACM)**
357	Roof (Center)	288	core shingles	None detected	N	NA
358	**Roof (Southern pipe)**	**289**	**Caulking**	**6% chrysotile**	**N**	**1 SF (ACM)**
359	Exterior East HVAC Unit	290	Caulking	None detected	N	NA
360	**Exterior Duct/ HVAC Unit**	**291**	**Duct Tape**	**2% chrysotile**	**N**	**10 SF**
361	West exterior wall	292	Stucco	None detected	N	NA
362	South exterior wall	292	Stucco	None detected	N	
363	North exterior wall	292	Stucco	None detected	N	
Building N8						
364	West exterior wall	293	Stucco	None detected	N	NA
365	South exterior wall	293	Stucco	None detected	N	
366	North exterior wall	293	Stucco	None detected	N	
367	East office floor	294	Gray carpet, glue, vinyl floor tile	None detected	N	NA
368	East office floor	295	Cove base & glue	None detected	N	NA
369	North wall	296	Drywall & joint compound	None detected	N	NA
370	West wall	296	Drywall & joint compound	None detected	N	
371	South wall	296	Drywall & joint compound	None detected	N	
372	Exterior HVAC unit	297	Duct tape & caulking	None detected	N	NA
373	Main roof	298	Foam insulation	None detected	N	NA
374	Roof small on southwest section	299	Roof core, core sheeting	None detected	N	NA
375	East office	300	Ceiling tile	None detected	N	NA
Building N11						
376	Ceiling	301	Insulation	None detected	Y	NA
377	South office ceiling	302	Ceiling tile	None detected	Y	NA
378	Northwest office	303	Ceiling/wall tile & glue	None detected	Y	NA
379	**Kitchen wall**	**304**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**1,200 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
380	**Hallway wall**	**304**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
381	**Hallway north wall**	**304**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
382	**Conference room**	**305**	**Gray carpet, glue, white vinyl floor tile & mastic**	**Floor tile - 8% chrysotile**	**N**	**1,000 SF (ACM)**
				Mastic - 8% chrysotile	**N**	
383	**Roof vent seams**	**306**	**Vent Tape**	**10% chrysotile**	**N**	**10 SF (ACM)**
384	**Roof pipe**	**307**	**Tape**	**10% chrysotile**	**N**	**5 SF (ACM)**
385	**Roof vent**	**308**	**Mastic**	**10% chrysotile**	**N**	**15 SF (ACM)**
386	Exterior HVAC unit	309	Tape & caulking	None detected	N	NA
387	Exterior east window	310	Window putty	None detected	N	NA
388	North roof	311	Roof core, core shingles	None detected	N	NA

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building B2						
389	Hall ceiling	312	Acoustic ceiling "popcorn ceiling"	None detected	Y	NA
390	North hallway wall	313	Buttonboard (plaster/drywall/joint compound)	None detected	N	NA
391	Room G wall	313	Buttonboard (plaster/drywall/joint compound)	None detected	N	
392	Room G ceiling	313	Buttonboard (plaster/drywall/joint compound)	None detected	N	
393	**Room G wall**	**314**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**500 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
394	**Room G wall**	**314**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
395	**Main east area wall**	**314**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
396	Southwest room	315	Cove base & mastic	None detected	N	NA
397	**Main area floor**	**316**	**12" x 12" red/brown vinyl floor tile & mastic**	**Floor tile - none detected**	**N**	**800 SF (ACM)**
				Mastic - 6% chrysotile	**N**	
398	**North end floor**	**317**	**Dark red/brown 9" x 9" vinyl floor tile & mastic**	**Floor tile - 5% chrysotile**	**N**	**800 SF (ACM)**
				Mastic - None detected	**N**	
399	Main area north ceiling	318	Random hole ceiling tile & mastic	None detected	Y	NA
400	**South end floor**	**319**	**Brown carpet with white 12" x 12" vinyl floor tile & mastic**	**Floor tile - <1% chrysotile**	**N**	**1,000 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
401	**North floor**	**320**	**Beige speckled 9" x 9" vinyl floor tile & mastic**	**Floor tile - 8% chrysotile**	**N**	**800 SF (ACM)**
				Mastic - none detected	**N**	
402	Room G	321	Cove base & mastic	None detected	N	NA
403	Exterior south window	322	Window putty	None detected	N	NA
404	Exterior northwest wall	323	Stucco	None detected	N	NA
405	Exterior southwest wall	323	Stucco	None detected		
406	Exterior wall	323	Stucco	None detected		
407	**Southwest roof pipe**	**324**	**Mastic**	**8% chrysotile**	**N**	**25 SF (ACM)**
408	**Northwest roof vent**	**325**	**Mastic**	**10% chrysotile**	**N**	**30 SF (ACM)**
409	**Roof duct seams**	**326**	**Duct Tape & mastic**	**Duct tape - none detected**	**N**	**25 SF (ACM)**
				Mastic - 10% chrysotile	**N**	
410	**Roof southeast whirly bird seams**	**327**	**Mastic**	**10% chrysotile**	**N**	**10 SF (ACM)**

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
411	Exterior B2-B3 hallway	328	window putty	None detected	N	NA
412	Center roof	329	Roof core, core shingles	None detected	N	NA
413	West roof	330	Roof core, core sheeting	None detected	N	NA
414	Exterior pipe northeast corner	331	Thermal system insulation	None detected	N	NA
Building B2 West						
415	West closet floor	332	Carpet & glue	None detected	N	NA
416	**West closet floor**	**333**	**Vinyl floor tile & glue**	**Floor tile - 2% chrysotile**	**N**	**20 SF (ACM)**
				Mastic - none detected	**N**	
417	West closet	334	Cove base & glue	None detected	N	NA
418	West closet ceiling	335	Ceiling panels	None detected	Y	NA
419	West closet floor	336	Glue	None detected	N	NA
420	Center roof	337	Roof core, core sheeting	None detected	N	NA
Building B3						
421	Center roof	338	Various layers	None detected	N	NA
422	South roof	339	Caulking	None detected	N	NA
423	North kitchen wall	340	Cove base & glue	None detected	N	NA
424	East near computer room	341	Carpet, glue, leveling compound	None detected	N	NA
425	Kitchen floor	342	Vinyl floor tile, glue & leveling compound	None detected	N	NA
426	Restroom ceiling	343	Ceiling tile	None detected	N	NA
427	Restroom	344	Drywall & joint compound	None detected	N	NA
428	Kitchen	344	Drywall & joint compound	None detected	N	
429	North hall	344	Drywall & joint compound	None detected	N	
Building B3 Annex						
430	West wall	345	Drywall & joint compound	None detected	N	NA
431	Southwest wall	345	Drywall & joint compound	None detected	N	
432	North wall	345	Drywall & joint compound	None detected	N	
433	North office	346	Carpet & glue	None detected	N	NA
434	North ceiling	347	Ceiling tile & mastic	None detected	Y	NA
435	North entrance floor	348	Vinyl floor tile & glue	None detected	N	NA
436	West wall at north end	348	Cove base & glue	None detected	N	NA
437	exterior west window	349	window putty	None detected	N	NA
438	Ceiling	350	Popcorn ceiling	None detected	Y	NA
439	North roof duct	351	Caulking	None detected	N	NA
440	North roof duct	352	Caulking	None detected	N	NA
441	Roof duct wall	353	Duct tape	None detected	N	NA
442	North roof	354	Roof core, core shingles	None detected	N	NA
443	Roof vent	355	Tape	None detected	N	NA
444	B3-B4 hallway roof	356	Roof core, core shingles	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building N6						
445	exterior south window	357	Window putty	None detected	N	NA
446	West men's restroom	358	Drywall & joint compound	None detected	N	NA
447	Women's restroom	358	Drywall & joint compound	None detected	N	
448	East main hallway	358	Drywall & joint compound	None detected	N	
449	Women's restroom	359	ceiling tile	None detected	Y	NA
450	Restroom	360	Vinyl floor tile & glue	None detected	N	NA
451	Main area	361	Carpet & glue	None detected	N	NA
452	Break room	362	Cove base & glue	None detected	N	NA
453	exterior HVAC unit	363	Duct tape	None detected	N	NA
454	Roof center	364	Roof core, core shingles	None detected	N	NA
455	West roof vent	365	Caulking	None detected	N	NA
456	South roof	366	Duct tape	None detected	N	NA
457	Roof HVAC duct	367	Mastic	None detected	N	NA
Building C1						
458	**West hallway wall**	**368**	**Buttonboard (plaster/drywall/joint compound)**	**Drywall - none detected**	**N**	**3,000 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
459	**Southwest hallway wall**	**368**	**Buttonboard (plaster/drywall/joint compound)**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
460	**Northwest hallway wall**	**368**	**Buttonboard (plaster/drywall/joint compound)**	**Drywall - none detected**	**N**	
				Joint compound - none detected	**N**	
461	Room 20	369	Cove base & glue	None detected	N	NA
462	Northwest floor	370	Vinyl floor tile, glue & leveling compound	None detected	N	NA
463	North hallway	371	Vinyl floor tile & glue	None detected	N	NA
464	**Room 20 south wall**	**372**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**4,000 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
465	**Hallway wall**	**372**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
466	**North hallway wall**	**372**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
467	Room 20 ceiling	373	Ceiling tile	None detected	Y	NA
468	North ceiling	374	Straight hole (2'x2')	None detected	Y	NA
469	exterior northwest window	375	window putty	None detected	N	NA
470	Southwest exterior	376	Stucco	None detected	N	NA
471	West exterior	376	Stucco	None detected	N	
472	East exterior	376	Stucco	None detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building C1 - Annex						
473	Restroom ceiling	377	ceiling tile & mastic	None detected	Y	NA
474	**Room 6 floor**	**378**	**12" x 12" vinyl floor tile & mastic**	**Floor tile - 8% chrysotile** **Mastic - 6% chrysotile**	**N**	**250 SF (ACM)**
475	East hallway ceiling	379	Barrier paper	ND	N	NA
476	**Southwest roof vent duct**	**380**	**Mastic**	**10% chrysotile**	**N**	**25 SF (ACM)**
477	Roof whirly bird seams	381	Mastic	ND	N	30 SF
478	**Roof vent pipe**	**382**	**Mastic**	**10% chrysotile**	**N**	**25 SF (ACM)**
479	**Roof vent**	**383**	**Mastic**	**10% chrysotile**	**N**	**35 SF (ACM)**
480	South roof	384	Roof core 3, core sheeting	None detected	N	NA
481	Center roof	385	Roof core 1, core sheeting	None detected	N	NA
482	West roof	386	Roof core 2, core sheeting	None detected	N	NA
483	Roof wooden vent	387	Parapet wall core	None detected	N	NA
484	**North roof joint**	**388**	**Mastic & Tape**	**Roofing Material with Felt - 9% chrysotile**	**N**	**25 SF (ACM)**
485	Exterior HVAC seams	389	Tape	None detected	N	NA
486	Exterior HVAC seams	390	Caulking	None detected	N	NA
487	Southwest exterior window	391	window putty	None detected	Y	NA
488	Conference room floor	392	Carpet & glue	None detected	N	NA
Building C1						
489	Room 20 floor	393	Vinyl floor tile & mastic	None detected	N	NA
490	Second hallway	394	Cove base & mastic	None detected	N	NA
491	**Room 14 floor**	**395**	**Green carpet, backing, green vinyl floor tile & mastic**	**Floor tile - 5% chrysotile** **Mastic - 5% chrysotile**	**N** **N**	**120 SF (ACM)**
492	Room 2G/hallway	396	Cove base & glue	None detected	N	NA
493	Hallway near restroom	397	Cove base & glue	None detected	N	NA
494	**Room 14**	**398**	**1" gray cove base & mastic**	**Cove base - none detected** **Mastic - 5% chrysotile**	**N** **N**	**100 LF (ACM)**
Building B1						
495	**North roof HVAC unit**	**399**	**Vibration Damper**	**90% chrysotile asbestos ACM**	**N**	**20 SF**
496	Roof center	400	Roof core 1, core shingles	None detected	N	NA
497	Northwest roof	401	Roof core 2, core sheeting	None detected	N	NA
498	Roof vent pipe	402	Tape & mastic	None detected	N	NA
499	Roof vent duct	403	Mastic	None detected	N	NA
500	Roof vent duct	404	vent Caulking	None detected	N	NA
501	Exterior west window	405	window putty	None detected	N	NA
502	Roof HVAC unit	406	Mastic	None detected	N	NA
503	**South roof vent**	**407**	**Mastic**	**10% chrysotile**	**N**	**40 SF (ACM)**
504	**Roof pipe**	**408**	**Mastic**	**10% chrysotile**	**N**	**35 SF (ACM)**

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
505	North exterior wall	409	Stucco	None detected	N	NA
506	West exterior wall	409	Stucco	None detected	N	
507	Southwest wall	409	Stucco	None detected	N	
508	**North wall**	**410**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**2,500 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
509	**West wall**	**410**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
510	**South wall**	**410**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
511	**Restroom wall**	**411**	**Buttonboard (plaster/drywall/joint compound)**	**Drywall - none detected**	**N**	**800 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
512	**Restroom wall**	**411**	**Buttonboard (plaster/drywall/joint compound)**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
513	**West wall**	**411**	**Buttonboard (plaster/drywall/joint compound)**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
514	**South hallway wall**	**412**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**2,000 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
515	**North hallway wall**	**412**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
516	**South wall**	**412**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
517	North room floor	413	Carper, backing & glue	None detected	N	NA
518	**South room**	**414**	**4" white cove base & glue**	**Glue -none detected**	**N**	**100 LF (ACCM)**
				White compound - <1% chrysotile	**N**	
519	Hallway	415	Cove base & glue	None detected	N	NA
520	Hallway floor	416	Leveling compound	None detected	N	NA
521	**Southwest area**	**417**	**12" x 12" white vinyl floor tile, mastic, flooring & paper**	**Floor tile - <1% chrysotile**	**N**	**1,200 SF (ACCM)**
				Mastic - 8% chrysotile		
				Tar paper - 30% chrysotile		
522	North room, north wall	418	Drywall & joint compound	None detected	N	NA
523	North room, northwest wall	418	Drywall & joint compound	None detected	N	
524	North room, northwest ceiling	418	Drywall & joint compound	None detected	N	

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
525	North room center	419	Cove base & glue	None detected	N	NA
526	**North laboratory**	**420**	**4" black cove base & glue**	**Cream compound - <1% chrysotile**	**N**	**300 LF (ACCM)**
				Cove base - none detected	**N**	
527	Restroom wall	421	Buttonboard (plaster/drywall/joint compound)	None detected	N	NA
528	East restroom wall	421	Buttonboard (plaster/drywall/joint compound)	None detected		
529	Northeast restroom wall	421	Buttonboard (plaster/drywall/joint compound)	None detected		
530	West room floor	422	Gray floor sheeting & layers	None detected	N	NA
531	**Northeast room floor**	**423**	**Beige 12" x 12" vinyl floor tile, level compound, glue & mastic**	**Floor tile - none detected**	**N**	**200 SF (ACM)**
				Mastic - 3% chrysotile	**N**	
532	Restroom floor	424	Vinyl floor sheeting & glue	None detected	N	NA
533	**West room floor**	**425**	**Beige 9" x 9" vinyl floor tile & mastic**	**Floor tile - <1% chrysotile**	**N**	**1,500 SF (ACCM)**
				Mastic - none detected	**N**	
534	West Room	426	Cove base & mastic	None detected	N	NA
535	**Northwest room**	**427**	**White vinyl sheeting, 9" x 9" vinyl floor tile & mastic**	**Floor tile - 5% chrysotile**	**N**	**100 SF (ACM)**
				White vinyl sheeting - none detected	**N**	
536	North offices	428	ceiling tile & mastic	None detected	Y	NA
Building B4						
537	Roof center side-capped pipe	429	Mastic	None detected	N	NA
538	West exterior	430	window putty	None detected	N	NA
539	Roof east HVAC duct	431	Caulking	None detected	N	NA
540	**Roof center vent pipe**	**432**	**Mastic**	**12% chrysotile**	**N**	**20 SF (ACM)**
541	Roof south vent duct	433	Caulking	None detected	N	NA
542	Roof north end	434	Roof core 1, core sheeting	None detected	N	NA
543	Roof parapet wall	435	Parapet wall core & core sheeting	None detected	N	NA
544	Roof southeast HVAC duct	436	Caulking	None detected	N	NA
545	Roof south end	437	Roof core 2, core shingles	None detected	N	NA
546	Interior wall	438	Barrier paper	None detected	N	NA
547	Southwest exterior	439	Stucco	None detected	N	NA
548	Southeast exterior	439	Stucco	None detected	N	
549	South exterior	439	Stucco	None detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
550	South area wall	440	Drywall & joint compound	None detected	N	NA
551	Hall wall	440	Drywall & joint compound	None detected	N	
552	North area wall	440	Drywall & joint compound	None detected	N	
553	Room 17B ceiling	441	Buttonboard (plaster/drywall/joint compound)	None detected	Y	NA
554	North hall	442	Vinyl floor sheeting, glue & vinyl floor tile	None detected	N	NA
555	Main south area	443	Ceiling tile	None detected	Y	NA
556	Main south area	444	Carpet, backing & leveling compound	None detected	N	NA
557	Main area southeast section	445	Cove base & glue	None detected	N	NA
558	**Floor north end**	**446**	**Green vinyl floor sheeting & glue**	**20% chrysotile**	**Y**	**100 SF (ACM)**
559	Southwest ceiling	447	Ceiling tile	None detected	Y	NA
560	First floor southeast area	448	Vinyl floor tile & glue	None detected	N	NA
561	South end	449	Cove base & glue	None detected	N	NA
562	South men's restroom	450	Cove base & glue	None detected	N	NA
Building E4						
563	**Northeast wall**	**451**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**4,000 SF (ACCM)**
				Joint compound - none detected	**N**	
564	**Hallway exit north wall**	**451**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - none detected	**N**	
565	**Room 15 ceiling**	**451**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
566	Main hallway	452	Ceiling tile	None detected	Y	NA
567	**Room 9 floor**	**453**	**Red vinyl floor tile (Various layers)**	**Floor tile - 2% chrysotile**	**N**	**1,000 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
				Sheet flooring with fibrous backing - 20% chrysotile	**Y**	
568	**Floor (Men's restroom)**	**454**	**Brown vinyl floor tile & mastic**	**Floor tile - 8% chrysotile**	**N**	**200 SF (ACM)**
				Mastic - 9% chrysotile	**N**	
569	Room 29 wall	455	Cove base & glue	None detected	N	NA
570	Room 21 floor	456	Vinyl floor tile & glue	None detected	N	NA
571	Room 16 floor	457	Glue & level compound	None detected	N	NA
572	**Room 14 wall**	**458**	**4" light gray cove base & glue**	**Glue - none detected**	**N**	**300 SF (ACCM)**
				White compound - <1% chrysotile	**N**	
573	Room 35	459	Carpet & glue	None detected	N	NA
574	Room 37	460	Carpet & backing	None detected	N	NA

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
575	**East area floor**	**461**	**12" x 12" White vinyl floor tile, red floor tile**	**White floor tile with glue - none detected**	**N**	**1,800 SF (ACM)**
				Red floor tile - 8% chrysotile; mastic - 8% chrysotile	**N**	
576	**Main area ceiling**	**462**	**1' x 1' ceiling tile & mastic**	**Ceiling tile w/mastic - none detected**	**N**	**1,800 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
Building E1- Annex						
577	Laundry room	463	Drywall & joint compound	None detected	N	NA
578	HVAC duct	464	Mud & tape	None detected	N	NA
578A	Laundry room	465	Cove base & glue	None detected	N	NA
579	**Roof pipe**	**466**	**Mastic**	**10% chrysotile**	**N**	**2 SF (ACM)**
580	**Center roof core**	**467**	**Asphalt shingles**	**Roofing Shingle - None detected**	**N**	**1,000 SF (ACM)**
				Mastic - 10% chrysotile	**N**	
Building E5						
581	exterior window (Hallway Between E5/E6)	468	Window putty	None detected	N	NA
582	Exterior northwest wall	469	Stucco	None detected	N	NA
583	Exterior east wall	469	Stucco	None detected		
584	Exterior west wall	469	Stucco	None detected		
585	West roof	470	Asphalt sheeting	None detected	N	NA
586	East roof	471	Asphalt shingles	None detected	N	NA
587	**Roof HVAC duct seams**	**472**	**Tape & mastic**	**Tape - None detected**	**N**	**25 SF (ACM)**
				Mastic - 6% chrysotile	**N**	
588	**HVAC duct base**	**473**	**Mastic**	**10% chrysotile**	**N**	**30 SF (ACM)**
589	**Roof northeast vent pipe**	**474**	**Mastic**	**8% chrysotile**	**N**	**25 SF (ACM)**
590	West office ceiling	475	Ceiling tile	None detected	Y	NA
591	Restroom wall	476	Drywall & joint compound	None detected	N	NA
592	South offices	477	Drywall & joint compound	None detected	N	NA
593	East storage area	477	Drywall & joint compound	None detected	N	
594	File room	478	Cove base & glue	None detected	N	NA
595	Restroom	479	Cove base & glue	None detected	N	NA
596	Main area	480	Cove base & glue	None detected	N	NA
597	Restroom	481	Vinyl floor tile & glue	None detected	N	NA
598	Break room	482	Vinyl floor tile & glue	None detected	N	NA
599	Storage area	483	Vinyl floor tile & glue	None detected	N	NA
600	Private room	484	Vinyl floor sheeting & glue	None detected	N	NA
601	Hall floor	485	Carpet & glue	None detected	N	NA
Building D4.5						
604	Exterior lower wall	486	Sealant	None detected	N	NA
605	Southwest office	487	Cove base & mastic	None detected	N	NA
606	Northwest Storage closet	488	Vinyl floor tile & mastic	None detected	N	NA

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
607	Hallway	489	Acoustic ceiling tile	None detected	Y	NA
608	Southwest office	490	Carpet & mastic	None detected	N	NA
609	Exterior Northeast Electrical Box	491	Translucent sealant	None detected	N	NA
610	Above ceiling (Southwest office)	492	Drywall & joint compound	None detected	N	NA
611	Above ceiling (Northwest office)	492	Drywall & joint compound	None detected	N	
612	North Central/West office	492	Drywall & joint compound	None detected	N	
613	Center roof	493	Roof assembly, vinyl & white powder	None detected	N	NA
614	Roof west parapet wall	494	Penetration mastic	None detected	N	NA
615	Roof inside northeast gutter	495	Sealant	None detected	N	NA
616	Roof center	496	Sealant	None detected	N	NA
Building D6						
617	Roof southeast HVAC unit	497	Sealant	None detected	N	NA
618	Roof center	498	Roof assembly	None detected	N	NA
619	Roof southwest	499	Roof assembly	None detected	N	NA
620	Roof center/west	500	Penetration mastic	None detected	N	NA
621	Roof northeast HVAC unit	501	Painted gauze	None detected	N	NA
622	Roof northeast HVAC unit	502	Translucent sealant	None detected	N	NA
623	Roof southeast HVAC unit	503	Sealant	None detected	N	NA
624	Exterior southeast corner	504	Stucco	None detected	N	NA
625	Exterior southeast corner	504	Stucco	None detected	N	
626	Exterior southeast corner	504	Stucco	None detected	N	
627	Exterior window	505	Window putty	None detected	N	NA
628	**South hallway**	**506**	**Brown pebble vinyl floor sheeting with 2nd layer**	**Brown pebble floor sheeting - none detected**	**N**	**250 SF (ACM)**
				Green floor tile - 2% chrysotile	**N**	
629	South hallway	507	Cove base & mastic	None detected	N	NA
630	**South hallway**	**508**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**800 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
631	**Room 9**	**508**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
632	**Bridging Hallway**	**508**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
633	Firehouse Cupboard (Central Hallway)	509	Plaster & scratch coat	None detected	N	NA
634	Central/West Bathroom wall	509	Plaster & scratch coat	None detected	N	
635	wall (Room 26)	509	Plaster & scratch coat	None detected	N	

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
636	Northeast office	510	Cove base & mastic	None detected	N	NA
637	Bridging Hallway	511	Acoustic ceiling tile & mastic	None detected	Y	NA
638	North office	512	Acoustic ceiling tile & mastic	None detected	Y	NA
639	North Hallway	513	Carpet & mastic	None detected	N	NA
640	South Hallway	514	Carpet & leveling compound	None detected	N	NA
641	South Hallway	515	Carpet, mastic & leveling compound	None detected	N	NA
642	Room 9	516	Vinyl floor tile & mastic	None detected	N	NA
643	**Room 9 (beneath carpet)**	**517**	**Gray leveling compound with red flooring**	**Red flooring - none detected**	**N**	**150 SF (ACCM)**
				Beige floor tile- <1% asbestos	**N**	
644	Observation Room	518	Cove base & mastic	None detected	N	NA
645	Room 21	519	Vinyl floor tile & mastic	None detected	N	NA
Building F 3/3.5						
646	**4" Outer diameter pipe west crawlspace**	**520**	**Thermal system insulation**	**10% amosite 10% chrysotile**	**Y**	**300 LF**
647	**Northwest outside office**	**521**	**Gray carpet, over gray flooring**	**Carpet - none detected**	**N**	**500 SF ACCM**
				Gray flooring - <1% chrysotile	**N**	
648	**Northwest inner office**	**522**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**2,500 SF (ACCM)**
				Joint compound - <1% chrysotile	**N**	
649	**Hallway entrance**	**522**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - none detected	**N**	
650	**Southwest bathroom**	**522**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - none detected	**N**	
651	Beneath carpet northwest inner office	523	Flooring	None detected	N	NA
652	Ceiling northwest outside office	524	Acoustic ceiling tile & mastic	None detected	Y	NA
653	Hallway entrance	525	Vinyl floor tile & mastic	None detected	N	NA
654	Central hallway	526	Vinyl floor tile & mastic	None detected	N	NA
655	Break room	527	Vinyl floor tile & mastic	None detected	N	NA
656	Southern bathroom	528	Vinyl floor tile & mastic	None detected	N	NA
657	Southern bathroom	529	Cove base & mastic	None detected	N	NA
658	Hallway entrance	530	Cove base & mastic	None detected	N	NA
659	Northeast exterior wall	531	Stucco	None detected	N	NA
660	West exterior wall	531	Stucco	None detected	N	
661	Southwest exterior wall	531	Stucco	None detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
662	Beneath stucco layer exterior wall	532	Vapor barrier paper	None detected	Y	NA
663	Window panel exterior wall	533	Window sealant	None detected	N	NA
664	Storage area northeast offices	534	Flooring, carpet & mastic	None detected	N	NA
665	Northeast storage area	535	Acoustic ceiling tile	None detected	Y	NA
666	Door window northeast office	536	Window putty	None detected	N	NA
667	Roof	537	Roof assembly	None detected	N	NA
668	Roof HVAC unit	538	Soft sealant	None detected	N	NA
669	Roof HVAC unit	539	Sealant & tape	None detected	N	NA
670	Roof west side	540	Roof assembly	None detected	N	NA
671	**Roof south**	**541**	**Silver paint**	**3% chrysotile**	**N**	**700 SF (ACM)**
672	**Roof south**	**542**	**Gray patch/sealant**	**10% chrysotile**	**N**	**40 SF (ACM)**
673	Roof	543	Mastic	None detected	N	NA
674	Roof vent	544	Black Penetration Mastic	None detected	N	NA
675	Roof vent	545	White Patch/Sealant	None detected	N	NA
676	Break room/ hallway	546	Drywall & joint compound	None detected	**N**	NA
677	Northeast key room	546	Drywall & joint compound	None detected	**N**	
678	Key room ceiling above dropdown system	547	Acoustic ceiling tile	None detected	Y	NA
679	**Exterior base on flashing**	**548**	**Black hard sealant**	**10% chrysotile**	**N**	**30 SF (ACM)**
680	Exterior lower wall	549	Soft Hard Sealant	None detected	N	NA
681	Roof	550	Roof core	None detected	N	NA
682	**Roof HVAC unit**	**551**	**White sealant (black underneath)**	**Black tar - 6% chrysotile**	**N**	**25 SF (ACM)**
			Building F4/4.5			
683	Roof HVAC unit	552	Black Sealant	None detected	N	NA
684	**Roof HVAC unit**	**553**	**Grey sealant**	**10% chrysotile**	**N**	**300 SF (ACM)**
685	Roof of F4	554	Roof assembly	None detected	N	NA
686	Roof vent	555	Mastic	None detected	N	NA
687	Bathroom of F4	556	Gray Cove base & mastic	None detected	N	NA
688	Bathroom of F4	557	Vinyl floor tile, blue streaks & mastic	None detected	N	NA
689	Bathroom of F4	558	Drywall & joint compound	None detected	**N**	NA
690	Southwest corner of F4	558	Drywall & joint compound	None detected	**N**	
691	South room of F4	559	Carpet & mastic	None detected	N	NA
692	Southwest corner of F4	558	Drywall & joint compound	None detected	N	NA
693	Southwest corner of F4	559	Cove base & mastic	None detected	N	NA
694	Southwest corner of F4	560	Carpet & mastic	None detected	N	NA
695	Room 4 of F4	561	Cove base & mastic	None detected	N	NA
696	Room 10 of F4	562	Red flooring, black mastic & leveling compound	None detected	N	NA
697	Men's restroom of F4	563	Light green vinyl floor tile, white sealant & mastic	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
698	Copy room of F4	564	Leveling compound	None detected	Y	NA
699	Center hallway of F4	565	Vinyl floor tile with Gray streaks & mastic	None detected	N	NA
700	South storage area of F4	566	Older gray carpet & mastic	None detected	N	NA
701	Reception area of F4	567	Acoustic ceiling tile & brown mastic	None detected	Y	NA
702	Roof of F4.5	568	Roof assembly	None detected	N	NA
703	West roof	569	Sealant	None detected	N	NA
704	Central area of F4.5	570	White acoustic ceiling tile	None detected	Y	NA
705	South Room of F4.5	571	Drywall & joint compound	None detected	N	NA
706	Northeast office of F4.5	571	Drywall & joint compound	None detected	N	
707	Central area of F4.5	571	Drywall & joint compound	None detected	N	
708	Northwest office of F4.5	572	Carpet & mastic	None detected	N	NA
709	South room	573	Carpet & mastic	None detected	N	NA
710	Beneath old carpet	574	Capet & mastic	None detected	N	NA
711	Northwest roof	575	Gray sealant	None detected	N	NA
Building F7						
712	**Northeast room**	**576**	**12" x 12" cream vinyl floor tile with brown streaks & black mastic**	**Floor tile - 5% chrysotile**	**N**	**600 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
713	**Central-west office**	**577**	**12" x 12" white w/blue streaked vinyl floor tile with blue swirls & black mastic**	**Floor tile - <1% chrysotile**	**N**	**1,300 SF (ACM)**
				Mastic - 6% chrysotile	**N**	
714	**Central-west office**	**578**	**12" x 12" white vinyl floor tile, blue streaks & black mastic**	**Floor tile - None detected**	**N**	**200 SF (ACM)**
				Mastic - 3% chrysotile	**N**	
715	Central office	579	Carpet, Brown Mastic & Red flooring	None detected	N	NA
716	Northwest office ceiling	580	Acoustic ceiling tile & mastic	None detected	Y	NA
717	Northwest office ceiling	581	Carpet & Mastic	None detected	N	NA
718	Northwest office ceiling	582	Gray Cove base & White Mastic	None detected	N	NA
719	**Northeastern bathroom**	**583**	**Drywall & joint compound**	**None detected**	**N**	**12,000 SF (ACCM)**
720	**Central large storage room**	**583**	**Drywall & joint compound**	**None detected**	**N**	
721	**Central storage room**	**583**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - <1% chrysotile	**N**	
722	Interior wall west	584	Stucco, Vapor Barrier Assembly	None detected	Y	NA
723	West office ceiling	585	Acoustic ceiling tile	None detected	Y	NA
724	West-central office	586	Black Cove base & mastic	None detected	N	NA
725	West-central office	587	Carpet & mastic	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
726	**Storage room**	**588**	**Light green vinyl floor tile & mastic**	**Floor tile - <1% chrysotile**	**N**	**70 SF (ACM)**
				Mastic - 6% chrysotile	**N**	
727	Exterior southwest	589	Stucco	None detected	N	NA
728	Exterior Northwest	589	Stucco	None detected	N	
729	Exterior South-central	589	Stucco	None detected	N	
730	**Crawlspace**	**590**	**Thermal system insulation**	**15% amosite**	**Y**	**40 LF (ACM)**
731	Exterior southwest window	591	Window putty	None detected	N	NA
732	Roof northwest	592	Roof assembly	None detected	N	NA
733	Roof sloped section	593	Roof assembly	None detected	N	NA
734	Roof box wall	594	Translucent sealant	None detected	N	NA
735	Roof south center	595	Mastic	None detected	N	NA
Building F9/F9T						
736	Exterior northwest	596	Stucco	None detected	Y	NA
737	Exterior northwest	596	Stucco	None detected	Y	
738	Exterior southwest	596	Stucco	None detected	Y	
739	Exterior window	597	Window putty	None detected	N	NA
740	Roof beneath damaged metal	598	Felt insulation	None detected	Y	NA
741	**Roof south**	**599**	**Sealant**	**10% chrysotile**	**N**	**200 SF (ACM)**
742	**Roof vent**	**600**	**Mastic**	**10% chrysotile**	**N**	**155 SF (ACM)**
743	Roof northeast	601	Roof assembly	None detected	N	NA
744	roof northwest	602	Core, tile, roof assembly	None detected	N	NA
745	**Roof HVAC unit**	**603**	**Sealant**	**Silver Coating - <1% chrysotile**	**N**	**10 SF (ACM)**
				Gray/Black Sealant - 10% chrysotile	**N**	
746	Roof northwest HVAC unit	604	Wall assembly	None detected	N	NA
747	**Roof northwest flashing**	**605**	**Sealant**	**7% chrysotile asbestos - ACM**	**N**	**10 SF**
748	**Roof northwest flashing**	606	Black old dry sealant	None detected	N	NA
749	Roof west	607	Roof assembly	None detected	N	NA
750	**Main room at F9T**	**608**	**12" x 12" white vinyl floor tile with brown streaks & black mastic**	**Floor tile - 2% chrysotile**	**N**	**1,100 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
751	Main room at F9T	609	2' x 4' ceiling tile	None detected	Y	NA
752	Roof at F9T	610	Roof assembly	None detected	N	NA
753	Vent at F9T	611	Mastic	None detected	N	NA
754	HVAC Unit at F9T	612	Gray sandy sealant	None detected	N	NA
755	HVAC Unit at F9T	613	Black sealant	None detected	N	NA
Building E6						
756	East hall	614	Plaster	None detected	N	NA
757	**Room 145 hall**	**615**	**Flooring & leveling compound**	**Floor tile - <1% chrysotile**	**N**	**30 SF (ACM)**
				Mastic - 2% chrysotile	**N**	
758	Southeastern restrooms	616	Vinyl floor sheeting	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
759	**Main hall floor**	**617**	**Various layers of vinyl floor sheeting**	**Brown sheeting - none detected**	**N**	**1,800 SF (ACM)**
				Mastic - 5% chrysotile Gray floor tile - 5% chrysotile	**N**	
760	Main hall ceiling pipe	618	Caulking	None detected	N	NA
761	Hall near room 153	619	Acoustic ceiling tile & glue	None detected	N	NA
762	West office	620	Drywall & joint compound	None detected	N	NA
763	Southeast office floor	621	Carpet, backing & leveling compound	None detected	N	NA
764	Room 182	622	Gray/blue carpet & backing	None detected	N	NA
765	Main area ceiling	623	Acoustic ceiling tile	None detected	Y	NA
766	Main hallway	624	Cove base & glue	None detected	N	NA
767	South exterior window	625	window putty	None detected	Y	NA
768	West exterior wall	626	Stucco	None detected	N	NA
769	East exterior wall	626	Stucco	None detected		
770	North exterior wall	626	Stucco	None detected		
771	**Roof center**	**627**	**Black Mastic**	**6% chrysotile**	**N**	**20 SF (ACM)**
772	**Roof northeast parapet wall**	**628**	**Mastic & Tape**	**6% chrysotile**	**N**	**20 SF (ACM)**
773	**Old roof**	**629**	**Core asphalt shingles**	**Shingles - none detected Mastic - 8% chrysotile**	**N**	**1,800 SF (ACM)**
774	Northwest vent pipe	630	Sealant	None detected	N	NA
775	**Fascia seams**	**631**	**Mastic & second layer**	**Mastic (bottom layer - 10% chrysotile**	**N**	**25 SF (ACM)**
776	Roof vent duct	632	Tape	None detected	N	NA
777	New roof west	633	Asphalt shingles	None detected	N	NA
778	Roof outer, northeast parapet wall	634	Stucco	None detected	N	NA
779	Interior	635	Cove base & glue	None detected	N	NA
780	Room 177	636	Cove base & brown mastic	None detected	N	NA
781	Hallway roof	637	Asphalt sheeting	None detected	N	NA
782	**Roof motor**	**638**	**Mastic**	**8% chrysotile**	**N**	**50 SF (ACM)**
783	Roof new parapet wall	639	core sheeting	None detected	N	NA
784	Roof capped pipe	640	Tape & mastic	None detected	N	NA
785	Northwest floor	641	Carpet, backing & glue	None detected	N	NA
Building E3						
786	Exterior northwest wall	642	Stucco	None detected	N	NA
787	Exterior southwest wall	642	Stucco	None detected	N	
788	Exterior north wall	642	Stucco	None detected	N	
789	South trailer	643	Drywall & joint compound	None detected	N	NA
790	Main hall	643	Drywall & joint compound	None detected		
791	North office	643	Drywall & joint compound	None detected		

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
792	Men's restroom	644	Buttonboard (plaster/drywall/joint compound)	None detected	N	NA
793	Woman's restroom	644	Buttonboard (plaster/drywall/joint compound)	None detected		
794	South/southeast walls	644	Buttonboard (plaster/drywall/joint compound)	None detected		
795	Main area ceiling	645	Acoustic ceiling tile	None detected	N	NA
796	Main area	646	Cove base & mastic	None detected	N	NA
797	**East offices**	**647**	**12" x 12" green vinyl floor tile**	**Floor tile - <1% chrysotile**	**N**	**100 SF (ACCM)**
				Glue - none detected	**N**	
798	East offices	648	Cove base & glue	None detected	N	NA
799	South floor	649	Beige vinyl floor tile & glue	None detected	N	NA
800	South floor	650	Carpet & glue	None detected	N	NA
801	**Room 16**	**651**	**12" x 12" orange/red vinyl floor tile**	**Floor tile - <1% chrysotile**	**N**	**1,000 SF (ACM)**
				Mastic - 5% chrysotile	**N**	
802	Room 16	652	Acoustic ceiling tile & mastic	None detected	N	NA
803	Hall	653	White vinyl floor tile, level compound & glue	None detected	N	NA
804	West floor	654	Blue vinyl floor tile, level compound & glue	None detected	N	NA
805	Room 7	655	Vinyl floor tile & glue	None detected	N	NA
806	**Roof-south pipe**	**656**	**Mastic**	**9% chrysotile**	**N**	**30 SF (ACM)**
807	Northeast vent pipe	657	Mastic	None detected	N	NA
808	**Roof south penetration**	**658**	**Mastic**	**8% chrysotile**	**N**	**50 SF (ACM)**
809	Roof west	659	Asphalt shingles	None detected	N	NA
810	Roof east	660	Asphalt shingles	None detected	N	NA
811	Roof HVAC seam	661	Caulking	None detected	N	NA
812	Roof fascia seams	662	Caulking	None detected	N	NA
813	Exterior west HVAC unit	663	Tape & caulking	None detected	N	NA
814	Roof west parapet wall	664	Asphalt sheeting	None detected	N	NA
815	Roof HVAC unit	665	Mastic	None detected	N	NA
816	Roof parapet wall)	666	Stucco	None detected	N	NA
Building E2						
817	Restroom	667	Acoustic ceiling tile	None detected	Y	NA
818	Northern room 5	668	Cove base & glue	None detected	N	NA
819	**North end**	**669**	**Beige 12" x 12" vinyl floor tile & glue**	**Floor tile - 2% chrysotile**	**N**	**350 SF (ACM)**
				Glue - none detected	**N**	
820	Kitchen floor	670	Vinyl floor tile & glue	None detected	N	NA
821	Main entrance	671	Carpet & leveling compound	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
822	Hall	672	Drywall & joint compound	None detected	N	NA
823	Restroom	672	Drywall & joint compound	None detected	N	
824	South area	672	Drywall & joint compound	None detected	N	
825	Restroom	673	Drywall & joint compound	None detected	N	NA
826	South room	673	Drywall & joint compound	None detected		
827	South room	673	Drywall & joint compound	None detected		
828	South area	674	Cove base & glue	None detected	N	NA
829	Northern main area	675	Carpet & backing	None detected	N	NA
830	Roof center	676	Asphalt shingles	None detected	N	NA
831	Roof wood vent	677	Caulking	None detected	N	NA
832	Roof wood vent	678	Tape	None detected	N	NA
833	Roof vent	679	Caulking	None detected	N	NA
834	Roof pipe	680	Caulking	None detected	N	NA
835	North area	681	Cove base & glue	None detected	N	NA
836	Roof (HVAC duct seams)	682	Mastic	None detected	N	NA
837	West wall	683	Drywall	None detected	N	NA
838	West exterior window	684	Window putty	None detected	N	NA
839	South end exterior	685	Stucco	None detected	N	NA
Building H1						
840	North chimney	686	Mortar	None detected	N	NA
841	Exterior wall	686	Drywall	None detected	N	NA
842	North exterior wall	687	Stucco	None detected	N	NA
843	South exterior wall	687	Stucco	None detected	N	
844	West exterior wall	687	Stucco	None detected	N	
845	Roof center	688	Core shingles	None detected	N	NA
846	**Roof northwest whirly bird**	**689**	**Mastic**	**10% chrysotile**	**N**	**2 SF (ACM)**
847	Roof pipe	690	Mastic	None detected	N	NA
848	West Room	691	Gray cove base & glue	None detected	N	NA
849	West Room	692	Gray cove base & glue	None detected	N	NA
850	Restroom	693	Vinyl floor tile & glue	None detected	N	NA
851	West room	694	Vinyl floor tile & glue	None detected	N	NA
852	West room	695	Acoustic ceiling tile & brown mastic	None detected	N	NA
853	**East room**	**696**	**Drywall & joint compound**	**Joint compound - <1% chrysotile**	**N**	**1,100 SF ACCM**
				Drywall - none detected	**N**	
854	**East room**	**696**	**Drywall & joint compound**	**Joint compound - <1% chrysotile**	**N**	
				Drywall - none detected	**N**	
855	**West room**	**696**	**Drywall & joint compound**	**Joint compound - <1% chrysotile**	**N**	
				Drywall - none detected	**N**	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building F8						
856	Women's restroom	697	Drywall & joint compound	None detected	N	NA
857	North hall	697	Drywall & joint compound	None detected	N	
858	Men's restroom	697	Drywall & joint compound	None detected	N	
859	**Wall**	**698**	**Drywall & joint compound**	**Joint compound - <1% chrysotile**	**N**	**1,500 SF (ACCM)**
				Drywall - none detected	**N**	
860	**North wall**	**698**	**Drywall & joint compound**	**Joint compound - <1% chrysotile**	**N**	
				Drywall - none detected	**N**	
861	**Northwest wall**	**698**	**Drywall & joint compound**	**Joint compound - <1% chrysotile**	**N**	
				Drywall - none detected	**N**	
862	South ceiling	699	Acoustic ceiling tile	None detected	Y	NA
863	Room 4 floor	700	Red carpet & glue	None detected	N	NA
864	South end	701	Green carpet, glue & leveling compound	None detected	N	NA
865	North area	702	Gray cove base & glue	None detected	N	NA
866	Northern restroom	703	Vinyl floor tile & glue	None detected	N	NA
867	ceiling HVAC unit	704	Duct wrap	None detected	N	NA
868	Room 1	705	Various flooring layers	None detected	N	NA
869	Southwest exterior	706	window putty	None detected	N	NA
870	Northwest exterior	707	window putty	None detected	N	NA
871	Roof center	708	Roof core, foam insulation	None detected	N	NA
872	Roof pipe	709	Caulking	None detected	N	NA
873	Roof south	710	Roof core, core sheeting	None detected	N	NA
874	Roof south vent	711	Mastic	None detected	N	NA
875	**Roof joint**	**712**	**Mastic**	**10% chrysotile**	**N**	**10 SF (ACM)**
Building D3						
876	Closet east wall	713	Joint compound	None detected	Y	NA
877	**Room 1 ceiling**	**714**	**Drywall & joint compound**	**Drywall - none detected**	**N**	**2,000 SF (ACM)**
				Joint compound - 2% chrysotile		
878	**Room 2 wall**	**714**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - Positive stop		
879	**Hall wall**	**714**	**Drywall & joint compound**	**Drywall - none detected**	**N**	
				Joint compound - Positive stop		
880	Exterior south	715	Window putty	None detected	Y	NA
881	Ceiling	716	Ceiling tile	None detected	Y	NA
882	Exterior southwest wall	717	Stucco	None detected	N	NA
883	Exterior west wall	717	Stucco	None detected	N	NA
884	Exterior south wall	717	Stucco	None detected	N	NA
885	South end	718	Cove base & mastic	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
886	**Room 3B floor**	**719**	**Carpet and flooring material - various layers**	**White floor tile - None detected** **Mastic- 3% chrysotile**	**N**	**2,000 SF (ACM)**
887	Northern men's restroom	720	Cove base & mastic	None detected	N	NA
888	Janitor's closet floor	721	Various layers	Floor tile - None detected Mastic- none detected	N	NA
889	**Southern lab**	**722**	**White specked vinyl floor tile & mastic**	**White floor tile - None detected** **Mastic- 5% chrysotile**	**N**	**300 SF (ACM)**
890	**Employee's restroom**	**721**	**Linoleum**	**40% chrysotile**	**Y**	**150 SF (ACM)**
891	East closet	728	Floor sheeting & mastic	None detected	N	NA
Building D2.5						
892	Est closet	729	Vinyl floor tile	Floor tile - None detected Mastic- none detected	N	NA
Building D3						
893	Roof north	730	Caulking	None detected	N	NA
894	Roof center pipe	731	Mastic	None detected	N	NA
895	Western exterior, HVAC duct	732	Caulking & tape	None detected	N	NA
896	Roof HVAC duct	733	Tape	None detected	N	NA
897	Roof center	734	Asphalt sheeting	None detected	N	NA
898	Roof	735	Asphalt shingles	None detected	N	NA
Building D2-D3 (Hallway)						
899	Northeast wall	736	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
900	Southeast wall	736	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
901	West wall	736	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
902	Exterior window	737	Window putty	None detected	N	NA
903	Floor	738	Vinyl floor tile & mastic	Floor tile - None detected Mastic- none detected	N	NA
Building D3.5						
904	Roof northern pipe	739	Mastic	None detected	N	NA
905	Roof center	740	Asphalt sheeting	None detected	N	NA
906	South exterior wall	741	Stucco	None detected	N	NA
907	North exterior wall	741	Stucco	None detected	N	
908	West exterior wall	741	Stucco	None detected	N	
909	Janitor's room	742	Vinyl floor tile & glue	Floor tile - None detected Glue- none detected	N	NA
910	Janitor's room	743	Cove base & glue	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
911	South hall	744	Carpet & glue	None detected	N	NA
912	Hallway wall	745	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
913	Restroom wall	745	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
914	Janitor's closet wall	745	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
915	Restroom ceiling	746	Celling tile	None detected	Y	NA
Building D2.5						
916	Room 4	747	Cove base & glue	None detected	N	NA
Building D2A						
917	Hall	748	Cove base & glue	None detected	N	NA
Building D2.5						
918	Conference room	749	Celling tile	None detected	Y	NA
Building D2A						
919	Restroom floor	750	Various layers	Floor tile - None detected Mastic- none detected	N	NA
Building D2.5						
920	Hallway floor	751	Vinyl floor sheeting & glue	None detected	N	NA
Building D2A						
921	Hallway floor	752	Carpet & glue	None detected	N	NA
Building D2.5						
922	Room 4	753	Carpet & glue	None detected	N	NA
923	Room 4 wall	754	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
924	Room 4 wall	754	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
925	Room 3 wall	754	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
926	Roof	755	Foam insulation	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building D2A						
927	Roof	756	Asphalt shingles	None detected	N	NA
928	Closet wall	757	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
929	Closet ceiling	757	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
930	Hallway wall	757	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
Building E4						
931	Roof	758	Asphalt shingles	None detected	N	NA
932	Roof	759	Asphalt shingles	None detected	N	NA
933	**Roof vent**	**760**	**Mastic**	**10% chrysotile**	**N**	**20 SF (ACM)**
934	**Roof pipe**	**761**	**Mastic**	**10% chrysotile**	**N**	**20 SF (ACM)**
Building E4 Annex						
935	Roof	762	Mastic	None detected	N	NA
936	**Roof**	**763**	**Tape & mastic**	**Brown/black mastic - 10% chrysotile** **Gray/black mastic - 10% chrysotile**	**N**	**30 SF (ACM)**
937	**Roof (E4/E4 annex joint)**	**764**	**Mastic**	**8% chrysotile**	**N**	**40 SF (ACM)**
Building D5 Annex						
938	Hallway wall	765	Drywall	None detected	N	NA
939	West wall	765	Drywall	None detected	N	
940	Northern copy room	765	Drywall	None detected	N	
941	Ceiling	766	Ceiling tile	None detected	Y	NA
942	Hallway floor	767	Carpet & glue	None detected	N	NA
943	Copy room	768	Gray cove base & glue	None detected	N	NA
Building D1						
944	South wall	769	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
945	Ceiling	769	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
946	Northern wall	769	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
947	**Lab room C floor**	**770**	**9" x 9" green Vinyl floor tile & mastic**	**Floor tile - 8% chrysotile** **Mastic -10% chrysotile**	**N**	**200 SF (ACM)**
948	**Lab room 9 floor**	**771**	**Green Vinyl floor tile & glue**	**Floor tile - None detected** **Mastic -3% chrysotile**	**N**	**200 SF (ACM)**

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
949	**Room 7 floor**	**772**	**Black Vinyl floor tile & mastic**	**Floor tile - 8% chrysotile** **Mastic -5% chrysotile**	**N**	**300 SF (ACM)**
950	**Restroom**	**773**	**White 12" x 12" vinyl floor tile & mastic**	**Floor tile - none detected** **Mastic -10% chrysotile**	**N**	**400 SF**
951	**Hallway roof**	**774**	**Various layers of flooring**	**All flooring - None detected** **Mastic (bottom layer)- 5% chrysotile**	**N**	**150 SF (ACM)**
952	**Roof vent**	**775**	**Mastic**	**8% chrysotile**	**N**	**30 SF (ACM)**
953	Exterior	776	window putty	None detected	Y	NA
954	Roof (duct/vent)	777	Caulking	None detected	N	NA
955	**Roof pipe**	**778**	**Mastic**	**15% chrysotile**	**N**	**20 SF (ACM)**
956	Roof	779	Roof core	None detected	N	NA
957	**Roof southern vent**	**780**	**Mastic**	**15% chrysotile**	**N**	**10 SF (ACM)**
			Building F6			
958	Northwest hallway	781	Black cove base & glue	None detected	N	NA
959	Room 6/6B	782	White caulking	None detected	N	NA
960	Room 2	783	Red flooring & mastic	None detected	N	NA
961	North end	784	Carpet & backing	None detected	N	NA
962	Western hallway wall	785	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
963	Room 5 east wall	785	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
964	Room 2 south wall	785	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
965	Roof northern section	786	Asphalt shingles	None detected	N	NA
966	**Roof HVAC duct**	**787**	**Various layers of tape**	**Black mastic - <1% chrysotile**	**N**	**30 SF (ACCM)**
967	Roof wood block	788	Mastic	None detected	N	NA
968	Roof pipe	789	Mastic	None detected	N	NA
969	Exterior window	790	Putty	None detected	Y	NA
970	Exterior south wall	791	Stucco	None detected	N	NA
971	Exterior northwest wall	791	Stucco	None detected	N	
972	Exterior north wall	791	Stucco	None detected	N	
			Building F5			
973	**Northeastern water heater (from 1960)**	**792**	**Thermal system insulation**	**15% chrysotile** **10% amosite**	**N**	**30 SF (ACM)**
974	**Crawlspace pipe run**	**792**	**Thermal system insulation**	**Positive stop**	**N**	**2 SF (ACM)**
975	exterior window	794	Putty	None detected	Y/N	NA
976	**Roof pipe**	**795**	**Mastic**	**5% chrysotile**	**N**	**5 SF (ACM)**
977	Roof	796	Asphalt shingles	None detected	N	NA
978	**Roof wooden joint**	**797**	**Mastic**	**5% chrysotile**	**N**	**5 SF (ACM)**
979	North ceiling	798	Fissured ceiling tile & brown mastic	None detected	Y	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
980	Southeast Hall	799	Leveling compound	None detected	Y	NA
981	Women's restroom	800	Black cove base & glue	None detected	N	NA
982	**Sink (north restroom)**	**801**	**Sealant**	**<1% chrysotile asbestos**	**N**	**1 SF (ACCM)**
983	**West hallway wall**	**802**	**Drywall & joint compound**	**Drywall - none detected** **Joint compound - <1% chrysotile**	**N**	**1,800 SF (ACCM)**
984	**Main lobby wall**	**802**	**Drywall & joint compound**	**Drywall - none detected** **Joint compound - <1% chrysotile**	**N**	
985	**Northwest restroom**	**802**	**Drywall & joint compound**	**Drywall - none detected** **Joint compound - <1% chrysotile**	**N**	
Building F5/F6						
986	Restroom (F5/F6 hallway)	803	Red flooring & mastic	None detected	N	NA
Building F5						
987	**West floor**	**804**	**Various layers of carpet and flooring**	**Red floor tile - 3% chrysotile** **Mastic -5% chrysotile**	**N**	**1,000 SF (ACM)**
988	Ceiling	805	Insulation	None detected	N	NA
989	Southeast room floor	806	Various layers	Floor tile - None detected Mastic- none detected	N	NA
990	South wall	807	Stucco	None detected	N	NA
991	West wall	807	Stucco	None detected	N	
992	East wall	807	Stucco	None detected	N	
Cottage 14						
993	Roof vent	808	Tape & layer	None detected	N	NA
994	Roof	809	Asphalt shingles	None detected	N	NA
995	Roof whirly bird seams	810	Caulking	None detected	N	NA
996	**Restroom**	**811**	**White vinyl floor tile & glue**	**Floor tile and carpet- None detected** **Mastic- none detected**	**N**	**50 SF**
997	**Flooring (boiler rooms)**	**812**	**Various layers**	**Red floor tile - 5% chrysotile** **Mastic- none detected**	**N**	**1,200 SF ACM**
998	Closet ceiling	813	Buttonboard (drywall & plaster)	None detected	N	NA
999	Wall	813	Buttonboard (drywall & plaster)	None detected	N	
1000	Hallway wall	813	Buttonboard (drywall & plaster)	None detected	N	
1001	Exterior north wall	814	Stucco	None detected	N	NA
1002	Exterior east wall	814	Stucco	None detected	N	
1003	Exterior west wall	814	Stucco	None detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building F1						
1004	North wall	815	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1005	Plaster on wood wall	816	Plaster	None detected	N	NA
Building F2						
1006	**Breakroom floor**	**817**	**12" x 12" white vinyl floor tile & glue**	**Floor tile - <1% chrysotile** **Mastic- none detected**	**N**	**150 SF (ACCM)**
1007	Breakroom wall	818	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1008	Exterior window	819	Putty	None detected	Y/N	NA
1009	North room	820	Brown cove base & mastic	None detected	N	NA
Building F10						
1010	Main entrance floor	821	Gray carpet & glue (under wood)	None detected	N	NA
1011	Print room floor	822	Gray carpet & glue	None detected	N	NA
1012	North restroom (hallway)	823	Gray cove base & glue	None detected	N	NA
1013	East closet	824	White vinyl floor tile & mastic	Floor tile - none detected Mastic- none detected	N	NA
1014	East closet	825	Ceiling tile	None detected	Y	NA
1015	Woman's restroom	826	Vinyl floor sheeting & glue	None detected	N	NA
1016	Hallway ceiling	827	Fissure ceiling tile	None detected	Y	NA
1017	East room wall	828	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1018	West room wall	828	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1019	East hallway wall	828	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1020	Roof center section	829	Foam insulation roofing	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building F10						
1021	**South office**	**830**	**Drywall & joint compound**	**Drywall - none detected** **Joint compound - <1% chrysotile**	**N**	**1,800 SF (ACCM)**
1022	**North end wall**	**830**	**Drywall & joint compound**	**Drywall - none detected** **Joint compound - <1% chrysotile**	**N**	
1023	**West hallway wall**	**830**	**Drywall & joint compound**	**Drywall - none detected** **Joint compound - <1% chrysotile**	**N**	
1024	North wall	831	Texture coating	None detected	N	NA
1025	Southwest ceiling	832	Wood panels	None detected	N	NA
1026	Room 9 ceiling	833	Drywall	None detected	N	NA
1027	Room 11	834	Ceiling tile	None detected	N	NA
1028	Main area northwest	835	Ceiling tile & mastic	None detected	N	NA
1029	HVAC unit/duct (north section of hallway)	836	Tape	None detected	N	NA
1030	**Room 4 floor**	**837**	**Various flooring layers**	**Red floor tile - 5% chrysotile** **Mastic- 10% chrysotile**	**N**	**300 SF (ACM)**
1031	Hallways west	838	Cove base & glue	None detected	N	NA
1032	**Room 6 floor**	**839**	**Various layers**	**Red floor tile - 3% chrysotile**	**N**	**250 SF (ACM)**
1033	Women's restroom	840	Blue vinyl floor tile & glue	Floor tile - none detected Mastic- none detected	N	NA
1034	Room 9	841	Various layers	None detected	N	NA
1035	Men's restroom (north hallway)	842	Various layers	Floor tile - none detected Mastic- none detected	N	NA
1036	Room 8 (hallway)	843	Various layers	None detected	N	NA
Building 3 South						
1037	Exit floor	844	White vinyl floor sheeting & leveling compound	None detected	N	NA
1038	North wall	845	Gray cove base & glue	None detected	N	NA
1039	Restroom	846	Vinyl floor tile & glue	Floor tile - none detected Glue- none detected	N	NA
1040	Restroom	847	Ceiling tile	None detected	N	NA
1041	South end floor	848	Carpet & glue	None detected	N	NA
1042	Room B1	849	Cove base	None detected	N	NA
1043	Room B1	850	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1044	Room B1	850	Drywall & joint compound	Drywall - none detected Joint compound - none detected		
1045	East exterior wall	851	Stucco	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Imaging Center						
1046	North exterior wall	852	Stucco	None detected	N	NA
1047	South exterior wall	852	Stucco	None detected	N	
1048	Northeast exterior wall	852	Stucco	None detected	N	
1049	wall	853	Stucco	None detected	N	NA
1050	Roof wall/base	854	Mastic	None detected	N	NA
1051	**Roof vent**	**855**	**Mastic**	**3% chrysotile**	**N**	**30 SF (ACM)**
1052	Roof HVAC duct	856	Sealant	None detected	N	NA
1053	Roof north pipe	857	Mastic	None detected	N	NA
1054	Roof HVAC duct/base	858	Mastic	None detected	N	NA
1055	Roof fascia seams	859	Caulking	None detected	N	NA
1056	Roof center	860	Asphalt sheeting	None detected	N	NA
1057	Roof vent motor	861	Mastic	None detected	N	NA
1058	Janitor's closet floor	862	White speckled vinyl floor tile, glue & vinyl floor sheeting	Floor tile - none detected Mastic- none detected	N	NA
1059	Janitor's closet wall	863	Old drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1060	Janitor's closet wall	863	Old drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1061	North storage room	863	Old drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1062	West wall	864	New drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1063	SAV room north wall	864	New drywall & joint compound	Drywall - none detected	N	
1064	East wall	864	New drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1065	SAV room north floor	865	White/beige vinyl floor tile & black mastic	Floor tile - none detected Mastic- none detected	N	NA
1066	Film prep room floor	866	Vinyl floor tile & glue	Floor tile - none detected Glue- none detected	N	NA
1067	SAV room	867	Purple carpet & glue	None detected	N	NA
1068	SAV room	867	Burgundy cove base & glue	None detected	N	NA
1069	Conference room	868	Carpet & glue	None detected	N	NA
1070	Hallway	869	Brown cove base & glue	None detected	N	NA
1071	SAV room ceiling	870	Ceiling tile	None detected	Y	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Professional Building						
1072	Hallway	871	Joint compound	None detected	N	NA
1073	North room wall	872	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1074	South room wall	872	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1075	West room wall	872	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1076	East restroom	873	Gray cove base & glue	None detected	N	NA
1077	Southwest room	874	Pink cove base & glue	None detected	N	NA
1078	Room 903	875	Acoustic ceiling tile	None detected	Y	NA
1079	South room	876	Vinyl floor tile & glue (various layers)	Floor tile - none detected Glue- none detected	N	NA
1080	Waiting room	877	Pink carpet & glue	None detected	N	NA
1081	Hallway floor	878	Leveling compound	None detected	N	NA
1082	600/700 Lobby	879	Green carpet & backing (various layers)	None detected	N	NA
1083	East room	880	Vinyl floor tile, mastic & leveling compound	Floor tile - none detected Mastic - none detected	N	NA
1084	600/700 west rooms	881	Ceiling tile & texture coating	None detected	N	NA
1085	Garage/electrical room	882	Green vinyl floor tile & glue	Floor tile - none detected Glue - none detected	N	NA
1086	Hallway	883	Ceiling tile	None detected	Y	NA
1087	Garage room	884	Cove base & glue	None detected	N	NA
1088	Roof (under wooden block)	885	Mastic	None detected	N	NA
1089	**Roof pipe**	**886**	**Mastic**	**2% chrysotile**	**N**	**100 SF (ACM)**
1090	Roof (HVAC duct seams)	887	Sealant	None detected	N	NA
1091	**Roof (pitchpocket)**	**888**	**Mastic**	**5% chrysotile**	**N**	**150 SF (ACM)**
1092	Exterior north wall	889	Stucco	None detected	N	NA
1093	Exterior south wall	889	Stucco	None detected	N	
1094	Exterior west wall	889	Stucco	None detected	N	
1095	Roof north	890	Asphalt sheeting	None detected	N	NA
1096	Roof (fascia seams)	891	Caulking	None detected	N	NA
1097	Roof (HVAC duct seams)	892	Caulking	None detected	N	NA
1098	Roof (parapet wall)	893	Asphalt sheeting	None detected	N	NA
Building 1 East						
1099	Roof center	894	Foam insulation roofing	None detected	N	NA
1100	Kitchen	895	Gray cove base & glue	None detected	N	NA
1101	Kitchen	896	Vinyl floor tile & glue	Floor tile - none detected Glue - none detected	N	NA
1102	West exterior wall	897	Stucco	None detected	N	NA
1103	North exterior wall	897	Stucco	None detected	N	
1104	South exterior wall	897	Stucco	None detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
1105	Lobby/conference room	898	Blue carpet & glue	None detected	N	NA
1106	East office wall	899	Drywall	Drywall - none detected Joint compound - none detected	N	NA
1107	Conference room wall	899	Drywall	Drywall - none detected Joint compound - none detected	N	
1108	Conference room wall	899	Drywall	Drywall - none detected Joint compound - none detected	N	
1109	Conference room ceiling	900	Acoustic ceiling tile	None detected	Y	NA
1110	Restroom floor	901	Carpet & various layers	None detected	N	NA
Building 2 East						
1111	Roof center	902	Asphalt sheeting	None detected	N	NA
1112	Roof HVAC duct	903	Sealant	None detected	N	NA
1113	Roof HVAC base	904	Mastic	None detected	N	NA
1114	Roof pipe	905	Mastic	None detected	N	NA
1115	Roof (pitchpocket)	906	Mastic	None detected	N	NA
1116	Unfinished floor	907	Glue residue	None detected	N	NA
1117	Exterior wall	908	Stucco	None detected	N	NA
1118	Exterior wall	908	Stucco	None detected	N	
1119	Exterior wall	908	Stucco	None detected	N	
1120	offices	909	Ceiling tile	None detected	N	NA
1121	**Telecom/electrical room**	**910**	**Brown/beige 12" x 12" vinyl floor tile & mastic**	**Floor tile - 3% chrysotile** **Mastic - 3% chrysotile**	**N**	**300 SF (ACM)**
1122	offices	911	Carpet & glue	None detected	N	NA
1123	Telecom room	912	Beige cove base & glue/mastic	None detected	N	NA
1124	Modern room	913	Yellow cove base & brown mastic	None detected	N	NA
1125	Offices	914	Cove base & glue	None detected	N	NA
1126	Telecom room	915	Old carpet	None detected	N	NA
1127	Phone room	916	Gray cove base & glue	None detected	N	NA
1128	Modem room	917	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1129	Offices	917	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1130	South telecom room	917	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Library						
1131	Second floor wall	918	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1132	First floor copy room wall	918	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1133	First floor north wall	918	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1134	Second floor	919	Brown cove base & glue	None detected	N	NA
1135	**Room 127 floor**	**920**	**Beige speckled 12" x 12" vinyl floor tile & mastic**	**Floor tile - none detected** **Mastic - 2% chrysotile**	**N**	**150 SF (ACM)**
1136	Second floor	921	Carpet, glue	None detected	N	NA
1137	Copy room	922	Vinyl floor tile	Floor tile - none detected Glue - none detected	N	NA
1138	Hallways	923	Acoustic ceiling tile	None detected	N	NA
1139	Exterior concrete wall seams	924	Two types of caulking	None detected	N	NA
1140	**Roof hatch in room 217**	**925**	**Barrier paper**	**5% chrysotile**	**N**	**2 SF (ACM)**
Building M1						
1141	Restroom area	926	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1142	Southwest office area	926	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1143	North wall	926	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1144	Kitchen	927	Acoustic ceiling tile	None detected	N	NA
1145	Restroom	928	Gray cove base & glue	None detected	N	NA
1146	Men's restroom	929	White speckled vinyl floor tile & glue	Floor tile - none detected Mastic - none detected	N	NA
1147	Restroom floor	930	Gray speckled vinyl floor tile & glue	Floor tile - none detected Mastic - none detected	N	NA
1148	Kitchen floor	931	Blue vinyl floor tile & glue	Floor tile - none detected Mastic - none detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building T1						
1149	North exterior wall	932	Stucco	None detected	N	NA
1150	Exterior wall	932	Stucco	None detected	N	
1151	Exterior wall	932	Stucco	None detected	N	
1152	Roof center	933	Asphalt sheeting	None detected	N	NA
1153	West exterior	934	Window putty	None detected	N	NA
Central Plant						
1154	**Main entrance**	**935**	**9" x 9" gray Vinyl floor tile & mastic**	**Floor tile - 2% chrysotile** **Mastic - 5% chrysotile**	**N**	**250 SF (ACM)**
1155	Conference room	936	Gray Cove base & glue	None detected	N	NA
1156	Main entrance	937	Light Gray Cove base & glue	None detected	N	NA
1157	Control room	938	Two layers of vinyl floor tile	Floor tile - none detected Mastic - none detected	N	NA
1158	Mechanical room	939	Plaster	None detected	N	NA
1159	Mechanical room	939	Plaster	None detected	N	
1160	Staircase wall	939	Plaster	None detected	N	
1161	Garage door	940	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1162	Roof center	941	core sheeting	None detected	N	NA
1163	Roof pipe	942	Mastic	None detected	N	NA
1164	Roof vent	943	Asphalt shingles & mastic	None detected	N	NA
1165	Roof capped pipe	944	Mastic	None detected	N	NA
1166	Roof pitchpocket	945	Mastic	None detected	N	NA
1167	**Roof smoke stack**	**946**	**Mastic**	**5% chrysotile asbestos - ACM**	**N**	**30 SF**
Building D5.5						
1168	Hallway wall	947	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1169	Center wall	947	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1170	East wall	947	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1171	West wall	948	Blue carpet & various layers	None detected	N	NA
1172	West wall	949	Gray cove base & glue	None detected	N	NA
1173	North hall	950	Acoustic ceiling tile	None detected	N	NA
1174	Roof west	951	Foam Insulation roofing	None detected	N	NA
1175	Hall	952	Beige vinyl floor tile & glue	Floor tile - none detected Glue - none detected	N	NA
1176	North hall	953	White vinyl floor sheeting	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building D5						
1177	HVAC duct/seams	954	Caulking & tape	None detected	N	NA
1178	Roof	955	Asphalt shingles	None detected	N	NA
1179	Roof west	956	Asphalt sheeting	None detected	N	NA
1180	North hall	957	Ceiling tile & brown mastic	None detected	N	NA
1181	Roof pipe	958	Tape	None detected	N	NA
1182	Men's restroom	959	Brown cove base & glue	None detected	N	NA
1183	Men's restroom	960	Vinyl floor sheeting & glue	None detected	N	NA
1184	West exterior window	961	Putty	None detected	N	NA
1185	West wall	962	Gray carpet, glue & leveling compound	None detected	N	NA
1186	Men's restroom ceiling	963	Drywall	None detected	N	NA
1187	West exit	963	Drywall	None detected	N	
1188	Restroom	963	Drywall	None detected	N	
1189	West woman's restroom	963	Drywall	Drywall - none detected Joint compound - none detected	N	
1190	South hall	964	Gray cove base & glue	None detected	N	NA
Building D9						
1191	Central hall	965	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1192	East hall	965	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1193	North hall	965	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1194	East offices	966	Brown carpet & glue	None detected	N	NA
1195	Southwest offices	967	Blue carpet & glue	None detected	N	NA
1196	North hall	968	Acoustic ceiling tile	None detected	N	NA
1197	South hall	969	Gray cove base & glue	None detected	N	NA
1198	HVAC duct	970	Red caulking	None detected	N	NA
1199	Southwest exterior wall	971	Stucco	None detected	N	NA
1200	East exterior wall	971	Stucco	None detected		
1201	West exterior wall	971	Stucco	None detected		
1202	**Roof (fascia seams)**	**972**	**Caulking**	**None detected**	**N**	**10 SF**
1203	Roof (parapet wall)	973	Asphalt sheeting	None detected	N	NA
1204	Roof southwest	974	Asphalt sheeting	None detected	N	NA
1205	Roof pipe	975	Mastic	None detected	N	NA
Building F0						
1206	Roof vent	976	Mastic	None detected	N	NA
1207	Roof	955	Asphalt sheeting	None detected	N	NA
Building F2						
1208	Northeast exterior wall	978	Stucco	None detected	N	NA

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Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building F1						
1209	Northeast exterior wall	978	Stucco	None detected	N	NA
1210	West exterior wall	978	Stucco	None detected	N	
1211	Roof center	979	Asphalt sheeting	None detected	N	NA
1212	**Roof vent**	**980**	**Mastic**	**5% chrysotile**	**N**	**10 SF (ACM)**
1213	Exterior northwest wall	981	Caulking	None detected	N	NA
1214	**Crawl space**	**982**	**Thermal system insulation**	**15% chrysotile asbestos ACM** **5% amosite**	**Y**	**200 LF (ACM)**
1215	Wall	983	Drywall	None detected	N	NA
Building F1/F2						
1216	Roof center	984	Asphalt shingles	None detected	N	NA
1217	Roof whirly bird	985	Mastic	None detected	N	NA
1218	**Roof east pipe**	**986**	**Mastic**	**<1% chrysotile**	**N**	**10 SF (ACCM)**
1219	Roof HVAC duct	987	Sealant	None detected	N	NA
1220	Roof HVAC duct	988	Caulking	None detected	N	NA
1221	Exterior HVAC unit	989	Duct tape	None detected	N	NA
Warehouse 1						
1222	South hall office	990	Gray carpet & glue	None detected	N	NA
1223	Basement wall	991	Plaster	None detected	N	NA
1224	Second floor wall	991	Plaster	None detected	N	NA
1225	Conference room	992	White speckled vinyl floor tile & glue	Floor tile - none detected Mastic - none detected	N	NA
1226	Conference room	993	Gray cove base & glue	None detected	N	NA
1227	**Basement**	**994**	**Thermal system insulation**	**10% chrysotile asbestos ACM** **5% amosite**	**N**	**2,000 LF (ACM)**
1228	**Basement**	**994**	**Thermal system insulation**	**Positive stop**	**N**	
1229	**Basement**	**994**	**Thermal system insulation**	**Positive stop**	**N**	
1230	Basement breakroom	995	Beige vinyl floor tile & glue	Floor tile - none detected Glue - none detected	N	NA
1231	Hallway	996	Acoustic ceiling tile	None detected	N	NA
1232	First floor wall	997	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1233	Offices west wall	997	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1234	East wall hallway	997	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1235	Roof	998	Asphalt sheeting	None detected	N	NA
1236	Roof pipe	999	Roofing material	None detected	N	NA
1237	Roof duct seams	1000	Caulking	None detected	N	NA
1238	Exterior wall roof stretch	1001	Stucco	None detected	N	NA
1239	Exterior wall roof stretch	1001	Stucco	None detected	N	
1240	Exterior wall roof stretch	1001	Stucco	None detected	N	
1241	Roof HVAC duct	1002	Sealant	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
1242	Roof structure	1003	Caulking	None detected	N	NA
1243	Roof electrical conduit	1004	Caulking	None detected	N	NA
1244	Roof vent	1005	Tape	None detected	N	NA
1245	Roof duct seams	1006	Duct tape	None detected	N	NA
Building 1 South						
1246	Room 16	1007	Acoustic ceiling tile	None detected	N	NA
1247	Room 16	1008	Gray cove base & glue	None detected	N	NA
1248	South wall	1009	Plaster	None detected	N	NA
1249	West wall	1009	Plaster	None detected	N	
1250	North wall	1009	Plaster	None detected	N	
1251	North area	1010	Brown cove base, paper & mastic	None detected	N	NA
1252	Hallway wall	1011	Texture coat	None detected	N	NA
1253	Hallway floor	1012	White vinyl floor tile	None detected	N	NA
1254	North wall	1013	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1255	South wall	1013	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1256	West wall	1013	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1257	Room 18	1014	Fissured acoustic ceiling tile & mastic	None detected	N	NA
1258	Roof vent pipe	1015	Mastic	None detected	N	NA
1259	**Exterior southeast wall**	**1016**	**Stucco**	**<1% chrysotile**	**N**	**1,800 SF (ACCM)**
1260	**East exterior wall**	**1016**	**Stucco**	**<1% chrysotile**	**N**	
1261	**Northeast exterior wall**	**1016**	**Stucco**	**<1% chrysotile**	**N**	
1262	**Roof north conduit**	**1017**	**Black/gray sealant**	**<1% chrysotile**	**N**	**35 SF (ACCM)**
1263	Roof HVAC duct	1018	Cloth tape	None detected	N	NA
1264	CRV psychiatric room	1019	Blue cove base & glue	None detected	N	NA
1265	Roof	1020	Roof core	None detected	N	NA
Warehouse 2						
1266	Restroom wall	1021	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1267	Northeast wall	1021	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1268	Northeast wall	1021	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1269	Office	1022	Gray cove base & glue	None detected	N	NA
1270	Restroom	1023	Vinyl floor tile & various layers	Floor tile - none detected Mastic - none detected	N	NA
Building 3 South						
1271	Roof	1024	Roof core	None detected	N	NA

TABLE 1 - ASBESTOS SURVEY RESULTS

Sample ID	Sample Location	HA	Sampled Material	Result (Asbestos Content)	Friable (Y/N)	Approximate Quantity (SF/LF)
Building 2 South						
1272	Roof	1025	Roof core	None detected	N	NA
1273	North floor	1026	White speckled vinyl floor tile & glue	Floor tile - none detected Glue- none detected	N	NA
1274	Room 6	1027	Cove base & glue	None detected	N	NA
1275	North wall	1028	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	NA
1276	East wall	1028	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1277	Northwest wall	1028	Drywall & joint compound	Drywall - none detected Joint compound - none detected	N	
1278	East exterior wall	1029	Stucco	None detected	N	NA
1279	North exterior wall	1029	Stucco	None detected	N	
1280	Southeast exterior wall	1029	Stucco	None detected	N	

Notes:
ACCM - asbestos containing construction material
ACM - asbestos containing material
HA - homogeneous area
HVAC - heating, ventilation, and air-conditioning
ID - identification
LF - linear feet
N - no
NA - not applicable
NS - not sampled
SF - square feet
Y - yes
' - foot
" - inch
% - percent
Positive stop - sample not analyzed as other samples within the same HA No. are asbestos containing

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
1 East											
1 East	1	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
1 East	2	Interior	A	Door Frame	Metal	Intact	Grey	0.7	Negative		0.03
1 East	3	Interior	C	Door Frame	Metal	Intact	White	0.7	Negative		0
1 East	4	Interior	C	Door	Metal	Intact	White	0.7	Negative		0
1 East	**5**	**Interior - Restroom**	**C**	**Wall Tile**	**Ceramic**	**Intact**	**White**	**0.7**	**Positive**	**600 sf**	**0.7**
1 East	6	Exterior	A	Door	Metal	Intact	Black	0.7	Negative		0
1 East	7	Exterior	A	Door Frame	Metal	Intact	Black	0.7	Negative		0
1 East	8	Exterior	A	Window Frame	Metal	Intact	Black	0.7	Negative		0
1 East	9	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
1 East	10	Exterior	A	Hand Rail	Metal	Intact	Black	0.7	Negative		0
1 East	11	Exterior	D	Flashing	Metal	Intact	White	0.7	Negative		0
1 South											
1 South	1	Exterior	B	Wall	Metal	Intact	Blue	0.7	Negative		0
1 South	2	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
1 South	3	Exterior	B	Door	Metal	Intact	White	0.7	Negative		0
1 South	4	Exterior	B	Vent	Metal	Intact	White	0.7	Negative		0.02
1 South	5	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
1 South	6	Exterior	C	Downspout	Metal	Intact	White	0.7	Negative		0
1 South	7	Exterior	B	Door	Metal	Intact	Blue	0.7	Negative		0.02
1 South	8	Exterior	B	Door Frame	Metal	Intact	Blue	0.7	Negative		0.05
1 South	9	Exterior	B	Fire Pipe	Metal	Intact	Red	0.7	Negative		0.03
1 South	10	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0.01
1 South	11	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
1 South	12	Interior	A	Door	Wood	Intact	White	0.7	Negative		0
1 South	13	Interior	A	Door Frame	Metal	Intact	White	0.7	Negative		0.03
1 South	**14**	**Interior - Restroom**	**A**	**Wall Tile**	**Ceramic**	**Intact**	**Brown**	**0.7**	**Positive**	**400 sf**	**5**
1 South	**15**	**Interior - Restroom**	**D**	**Wall Tile**	**Ceramic**	**Intact**	**Pink**	**0.7**	**Positive**	**400 sf**	**5**
1 South	17	Interior	B	Door Frame	Wood	Intact	Blue	0.7	Negative		0
1 South	18	Interior	A	Wall	Drywall	Intact	Grey	0.7	Negative		0.01
1 South	19	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0
1 South	20	Interior	A	Wall	Drywall	Intact	Brown	0.7	Negative		0
1 South	21	Interior	C	Wall	Drywall	Intact	Grey	0.7	Negative		0
1 South	22	Interior	B	Wall	Drywall	Intact	Tan	0.7	Negative		0
1 South	23	Interior	B	Wall Tile	Ceramic	Intact	White	0.7	Negative		0
1 South	24	Interior	B	Wall Tile	Ceramic	Intact	Beige	0.7	Negative		0
1 South	25	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0

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Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
2 East											
2 East	1	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
2 East	2	Exterior	B	Door Frame	Metal	Intact	White	0.7	Negative		0.01
2 East	3	Exterior	B	Door	Metal	Intact	White	0.7	Negative		0
2 East	4	Exterior	B	Wall	Drywall	Intact	Tan	0.7	Negative		0
2 East	**5**	**Interior - Restroom**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**Orange**	**0.7**	**Positive**	**240 sf**	**4.53**
2 East	6	Interior	B	Wall	Drywall	Intact	Red	0.7	Negative		0.01
2 East	7	Interior	D	Window Frame	Metal	Intact	White	0.7	Negative		0.01
2 East	8	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0.06
2 East	9	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
2 East	10	Exterior	B	Door Frame	Metal	Intact	Grey	0.7	Negative		0.1
2 East	11	Exterior	B	Door	Metal	Intact	Grey	0.7	Negative		0
2 East	**12**	**Exterior**	**Roof**	**Pipe**	**Metal**	**Intact**	**Grey**	**0.7**	**Positive**	**2 each**	**5**
2 East	13	Exterior	Roof	Wall	Stucco	Intact	Grey	0.7	Negative		0
2 South											
2 South	1	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
2 South	2	Exterior	C	Window Frame	Metal	Intact	Black	0.7	Negative		0
2 South	3	Exterior	D	Downspout	Metal	Intact	White	0.7	Negative		0
2 South	4	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
2 South	5	Exterior	C	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
2 South	6	Exterior	C	Door Grate	Metal	Fair	Black	0.7	Negative		0
2 South	7	Exterior	D	Fascia	Wood	Intact	Blue	0.7	Negative		0
2 South	8	Exterior	D	Flashing	Metal	Intact	White	0.7	Negative		0
2 South	9	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
2 South	10	Interior	B	Door Frame	Metal	Intact	Grey	0.7	Negative		0.01
2 South	11	Interior	A	Door Frame	Metal	Intact	White	0.7	Negative		0
2 South	12	Interior	A	Door	Metal	Intact	White	0.7	Negative		0
2 South	13	Interior	D	Wall	Drywall	Intact	Pink	0.7	Negative		0
2 South	14	Interior	D	Wall	Drywall	Intact	Blue	0.7	Negative		0
2 South	15	Interior	D	Wall	Drywall	Intact	Grey	0.7	Negative		0
2 South	**16**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**White**	**0.7**	**Positive**	**1,104 sf**	**0.7**
2 South	17	Interior	D	Window Frame	Metal	Intact	Black	0.7	Negative		0
3 South											
3 South	1	Exterior	D	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
3 South	2	Exterior	D	Steps	Wood	Poor	Blue	0.7	Negative		0
3 South	3	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0
3 South	4	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0.25
3 South	5	Exterior	D	Door	Metal	Fair	Blue	0.7	Negative		0
3 South	6	Exterior	D	Flashing	Metal	Fair	White	0.7	Negative		0
3 South	7	Interior	D	Wall	Wood	Intact	White	0.7	Negative		0
3 South	8	Interior	D	Door	Metal	Intact	White	0.7	Negative		0
3 South	9	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
3 South	10	Interior	B	Door Frame	Drywall	Intact	Grey	0.7	Negative		0
3 South	11	Interior	A	Door Frame	Metal	Intact	Black	0.7	Negative		0
3 South	12	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0
3 South	13	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
3 South	14	Exterior	B	Downspout	Metal	Intact	White	0.7	Negative		0
3 South	15	Exterior	B	Fire Pipe	Metal	Intact	Red	0.7	Negative		0
3 South	16	Exterior	D	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
3 South	17	Exterior	B	Fascia	Wood	Poor	Blue	0.7	Negative		0
3 South	18	Exterior	B	Flashing	Metal	Intact	White	0.7	Negative		0
3 South	**19**	**Exterior**	**Roof**	**Pipe**	**Metal**	**Intact**	**White**	**0.7**	**Positive**	**9 each**	**5**
Building 14											
14	1	Exterior	Side A	Wall	Stucco	Fair	White	0.7	Negative		0.01
14	2	Exterior	Side A	Screen Door	Wood	Fair	Blue	0.7	Negative		0
14	**3**	**Exterior**	**Side A**	**Door**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**2**
14	**4**	**Exterior**	**Side A**	**Door Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**2.05**
14	5	Exterior	Side A	Beam	Wood	Fair	Blue	0.7	Negative		0
14	**6**	**Exterior**	**Side A**	**Window Sill**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**13 each**	**1.58**
14	**7**	**Exterior**	**Side A**	**Window Frame**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**13 each**	**1.76**
14	8	Exterior	Side A	Window Casing	Metal	Fair	White	0.7	Negative		0
14	9	Exterior Door Canopy	0	Ceiling	Wood	Fair	White	0.7	Negative		0
14	**10**	**Exterior Door Canopy**	**0**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**21 sf**	**1.08**
14	**11**	**Exterior Eave**	**Side A**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**41 each**	**2.3**
14	12	Exterior	Side A	Flashing	Metal	Fair	White	0.7	Negative		0
14	**13**	**Exterior**	**Side C**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**16 sf**	**2.15**
14	14	Exterior	Side A	Flashing	Metal	Fair	White	0.7	Negative		0
14	15	Exterior	Side A	Fascia	Wood	Fair	White	0.7	Negative		0.01
14	16	Exterior	roof	Vent	Metal	Fair	White	0.7	Negative		0
14	17	Exterior	Side D	Fascia	Wood	Fair	Blue	0.7	Negative		0.36
14	18	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		
14	19	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		
14	20	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		
Building 16											
16	**1**	**Exterior**	**Side A**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**16 sf**	**2.24**
16	2	Exterior	Side A	Screen Door	Wood	Fair	Blue	0.7	Negative		0.54
16	**3**	**Exterior**	**Side A**	**Door Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**1.75**
16	**4**	**Exterior**	**Side A**	**Door**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**2.15**
16	**5**	**Exterior**	**Side A**	**Window Sill**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**13 each**	**1.8**
16	**6**	**Exterior**	**Side A**	**Window Frame**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**13 each**	**1.82**
16	7	Exterior	Side A	Wall	Stucco	Fair	White	0.7	Negative		0.03
16	8	Exterior Door Canopy	Side A	Ceiling	Wood	Fair	White	0.7	Negative		0
16	**9**	**Exterior Door Canopy**	**Side A**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**25 sf**	**1.94**
16	10	Exterior	Side A	Flashing	Metal	Fair	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
16	**11**	**Exterior Eave**	**Side A**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**40 each**	**0.96**
16	12	Exterior	Side C	Beam	Wood	Fair	Blue	0.7	Negative		0
16	**13**	**Exterior**	**Side C**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**6 each**	**1.44**
16	**14**	**Exterior**	**Side A**	**Eave**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**52 sf**	**1.39**
16	15	Exterior	Side A	Flashing	Metal	Fair	White	0.7	Negative		0
16	**16**	**Exterior**	**Side A**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**40 each**	**1.6**
16	17	Exterior	roof	Vent	Metal	Fair	White	0.7	Negative		0
16	**18**	**Exterior**	**Side B**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**32 ft**	**2.25**
16	19	Exterior	Side A	Fascia	Wood	Fair	White	0.7	Negative		0
16	20	Interior	Side A	Door	Wood	Fair	White	0.7	Negative		0.15
16	21	Interior	Side A	Door Frame	Wood	Fair	White	0.7	Negative		0.05
16	**22**	**Interior**	**Side A**	**Door Jamb**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**1.97**
16	23	Interior	Side A	Wall	Drywall	Fair	White	0.7	Negative		0
16	24	Interior	0	Ceiling	Drywall	Fair	White	0.7	Negative		0
16	25	Interior	Side D	Vent	Metal	Fair	White	0.7	Negative		0
16	26	Interior	Side C	Door Frame	Wood	Fair	White	0.7	Negative		0.24
16	27	Interior Kitchen	Side C	Cabinet	Wood	Fair	White	0.7	Negative		0.17
16	28	Interior	Side C	Window Sill	Wood	Fair	White	0.7	Negative		0.29
16	29	Interior	Side C	Window Sill	Wood	Fair	White	0.7	Negative		0.11
16	30	Interior	Side C	Window Frame	Wood	Fair	White	0.7	Negative		0.26
16	31	Interior	Side C	Window Casing	Metal	Fair	White	0.7	Negative		0
16	32	Interior Restroom	Side A	Wall	Tile	Fair	White	0.7	Negative		0.14
Building 18											
18	1	Interior	Side A	Door	Wood	Fair	White	0.7	Negative		0.39
18	2	Interior	Side A	Door Frame	Wood	Fair	White	0.7	Negative		0.23
18	**3**	**Interior**	**Side A**	**Door Jamb**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**2**
18	4	Interior	Side A	Wall	Drywall	Fair	White	0.7	Negative		0
18	5	Interior	Side A	Window Sill	Wood	Fair	White	0.7	Negative		0.2
18	6	Interior	Side A	Window Frame	Wood	Fair	White	0.7	Negative		0.46
18	7	Interior	Side A	Window Casing	Metal	Fair	White	0.7	Negative		0
18	8	Interior	0	Ceiling	Drywall	Fair	White	0.7	Negative		0
18	**9**	**Interior Kitchen**	**Side A**	**Laminate**	**Wood**	**Fair**	**Beige**	**0.7**	**Positive**	**33 sf**	**0.7**
18	10	Interior	Side A	Baseboard	Wood	Fair	White	0.7	Negative		0.54
18	11	Interior Kitchen	Side C	Counter Top	Plastic	Fair	Tan	0.7	Negative		0
18	12	Interior Kitchen	Side C	Cabinet	Wood	Fair	White	0.7	Negative		0.33
18	13	Interior Kitchen	Side C	Window Sill	Wood	Fair	White	0.7	Negative		0.12
18	**14**	**Interior Restroom**	**Side A**	**Wall**	**Tile**	**Fair**	**White**	**0.7**	**Positive**	**9 sf**	**0.7**
18	**15**	**Exterior**	**Side A**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**4 each**	**2.36**
18	16	Exterior	Side A	Screen Door	Wood	Fair	Blue	0.7	Negative		0.24
18	**17**	**Exterior**	**Side A**	**Door Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**1.75**
18	**18**	**Exterior**	**Side A**	**Door**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**2 each**	**2.75**
18	19	Exterior	Side A	Mailbox	Wood	Fair	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
18	20	Exterior	Side A	Wall	Stucco	Fair	White	0.7	Negative		0.01
18	21	Exterior	0	Door Canopy	Stucco	Fair	White	0.7	Negative		0.02
18	**22**	**Exterior Door Canopy**	**0**	**Ceiling**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**42 sf**	**1.6**
18	23	Exterior Door Canopy	0	Beam	Wood	Fair	White	0.7	Negative		0.33
18	**24**	**Exterior Door Canopy**	**0**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**6 each**	**1.13**
18	**25**	**Exterior Door Canopy**	**Side C**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**6 each**	**1.98**
18	26	Exterior	Side C	Window Sill	Wood	Fair	Blue	0.7	Negative		0.15
18	27	Exterior	Side C	Window Sill	Wood	Fair	Blue	0.7	Negative		0.34
18	**28**	**Exterior**	**Side C**	**Window Frame**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**8 each**	**1.2**
18	**29**	**Exterior**	**Side A**	**Window Frame**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**8 each**	**1.92**
18	**30**	**Exterior**	**Side A**	**Window Sill**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**8 each**	**1.53**
18	**31**	**Exterior**	**Side A**	**Eave**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**52 sf**	**1.34**
18	32	Exterior	Side A	Flashing	Metal	Fair	White	0.7	Negative		0
18	**33**	**Exterior**	**Side A**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**6 each**	**2.17**
18	34	Exterior	roof	Vent	Metal	Fair	White	0.7	Negative		0
18	35	Exterior	Side D	Fascia	Wood	Fair	Blue	0.7	Negative		0.15
18	36	Exterior 1 Inch	Side D	Pipe	Metal	Fair	Blue	0.7	Negative		0
Building B1											
B1	**1**	**Interior**	**B**	**Wall**	**Drywall**	**Fair**	**White**	**0.7**	**Positive**	**160 sf**	**0.7**
B1	2	Interior	B	Wall	Drywall	Fair	White	0.7	Negative		0.13
B1	**3**	**Interior**	**B**	**Wall**	**Drywall**	**Fair**	**Tan**	**0.7**	**Positive**	**160 sf**	**0.7**
B1	4	Interior	B	Wall	Wood	Fair	Tan	0.7	Negative		0.02
B1	5	Interior	A	Wall	Drywall	Poor	White	0.7	Negative		0.07
B1	6	Interior	A	Wall	Drywall	Poor	Tan	0.7	Negative		0.16
B1	7	Interior	D	Window Frame	Wood	Poor	Tan	0.7	Negative		0.11
B1	**8**	**Interior**	**D**	**Window Casing**	**Wood**	**Poor**	**Tan**	**0.7**	**Positive**	**25 each**	**1.56**
B1	9	Interior	D	Door Frame	Wood	Poor	Tan	0.7	Negative		0
B1	10	Interior	D	Door	Wood	Poor	Tan	0.7	Negative		0.03
B1	**11**	**Interior**	**A**	**Wall**	**Wood**	**Poor**	**Tan**	**0.7**	**Positive**	**100 sf**	**3.77**
B1	**12**	**Interior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**100 sf**	**2.28**
B1	13	Interior	A	Door Frame	Metal	Poor	Tan	0.7	Negative		0
B1	**14**	**Interior**	**A**	**Fire Alarm**	**Metal**	**Fair**	**Red**	**0.7**	**Positive**	**2 each**	**0.7**
B1	15	Interior	A	Furnace	Metal	Poor	Silver	0.7	Negative		0.01
B1	16	Interior	0	Ceiling	Wood	Poor	Tan	0.7	Negative		0.08
B1	**17**	**Exterior**	**Roof**	**Vent**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**5 each**	**0.98**
B1	**18**	**Exterior**	**Roof**	**Pipe**	**Metal**	**Poor**	**Grey**	**0.7**	**Positive**	**4 each**	**5**
B1	**19**	**Exterior**	**Roof**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**192 sf**	**2.84**
B1	20	Exterior	C	Fascia	Wood	Poor	Blue	0.7	Negative		0.02
B1	21	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
B1	22	Interior	C	Door Frame	Wood	Intact	White	0.7	Negative		0
B1	23	Interior	B	Wall	Drywall	Intact	Beige	0.7	Negative		0.03
B1	24	Interior	0	Duct	Metal	Intact	White	0.7	Negative		0.02

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
B1	25	Exterior	B	Beam	Wood	Poor	White	0.7	Negative		0.07
B1	26	Exterior	B	Duct	Metal	Poor	White	0.7	Negative		0.53
B1	27	Interior	B	Wall	Drywall	Fair	Blue	0.7	Negative		0
B1	28	Interior	0	Floor	Plaster	Fair	Pink	0.7	Negative		0
B1	**29**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**750 sf**	**3.37**
B1	**30**	**Exterior**	**A**	**Door Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**2 each**	**2.16**
B1	31	Exterior	A	Door Frame	Metal	Poor	Blue	0.7	Negative		0.01
B1	32	Exterior	A	Door	Metal	Poor	Blue	0.7	Negative		0.04
B1	**33**	**Exterior**	**A**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 8**	**1.06**
B1	**34**	**Exterior**	**A**	**Door Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 30**	**1.2**
B1	35	Exterior	A	Door	Wood	Poor	Blue	0.7	Negative		0
B1	36	Exterior	A	Porch	Wood	Poor	Blue	0.7	Negative		0
B1	**37**	**Exterior**	**A**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**314 ft**	**3.17**
B1	38	Exterior	A	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
B1	39	Exterior	C	Wall	Stucco	Fair	White	0.7	Negative		0.04
B1	40	Exterior	C	Door Frame	Wood	Fair	Blue	0.7	Negative		0
B1	41	Exterior	C	Door	Wood	Fair	Blue	0.7	Negative		0
B1	**42**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 29**	**2**
B1	43	Exterior	B	Trim	Wood	Poor	Blue	0.7	Negative		0.01
B1	44	Exterior	B	Window Frame	Wood	Poor	Blue	0.7	Negative		0.13
B1	**45**	**Exterior**	**B**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 8**	**2.5**
Building B1 Room 9											
B1 Room 9	1	Exterior	C	Wall	Stucco	Fair	White	0.7	Negative		0
B1 Room 9	2	Exterior	C	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
B1 Room 9	3	Exterior	C	Steps	Wood	Fair	Blue	0.7	Negative		0
B1 Room 9	4	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0.01
B1 Room 9	5	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0.28
B1 Room 9	6	Exterior	B	Window Frame	Wood	Poor	Blue	0.7	Negative		0.45
B1 Room 9	7	Exterior	B	Window Casing	Wood	Poor	Blue	0.7	Negative		0.34
B1 Room 9	8	Exterior	C	Fire Pipe	Metal	Fair	Red	0.7	Negative		0.32
B1 Room 9	9	Exterior	C	Grate	Wood	Fair	Blue	0.7	Negative		0.59
Building B2											
B2	1	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.64
B2	2	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.26
B2	3	Exterior	C	Window Frame	Wood	Poor	Blue	0.7	Negative		0.08
B2	4	Exterior	C	Window Casing	Wood	Poor	Blue	0.7	Negative		0.09
B2	**5**	**Exterior**	**C**	**Pipe**	**Metal**	**Poor**	**Orange**	**0.7**	**Positive**	**1 each**	**5**
B2	6	Exterior	C	Hand Rail	Metal	Fair	Blue	0.7	Negative		0.05
B2	7	Interior	0	Ceiling	Wood	Poor	Tan	0.7	Negative		0.07
B2	8	Interior	A	Wall	Drywall	Poor	Tan	0.7	Negative		0.14
B2	**9**	**Interior**	**A**	**Wall**	**Drywall**	**Poor**	**White**	**0.7**	**Positive**		**0.7**
B2	**10**	**Interior**	**A**	**Wall**	**Drywall**	**Poor**	**White**	**0.7**	**Positive**		**0.7**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
B2	11	Interior	A	Door Frame	Wood	Poor	White	0.7	Negative		0
B2	12	Interior	A	Door	Wood	Poor	White	0.7	Negative		0
B2	13	Interior	0	Beam	Wood	Poor	Tan	0.7	Negative		0.43
B2	14	Interior	A	Window Frame	Wood	Poor	Tan	0.7	Negative		0.21
B2	**15**	**Interior**	**A**	**Window Casing**	**Wood**	**Poor**	**Tan**	**0.7**	**Positive**	**12 each**	**1.32**
B2	**16**	**Interior**	**A**	**Furnace**	**Metal**	**Poor**	**Silver**	**0.7**	**Positive**	**1 each**	**5**
B2	17	Interior	A	Door Frame	Wood	Fair	Tan	0.7	Negative		0.13
B2	18	Interior	A	Door	Wood	Fair	Tan	0.7	Negative		0
B2	19	Exterior	C	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
B2	20	Exterior	C	Porch	Wood	Poor	Blue	0.7	Negative		0.64
B2	21	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.01
B2	22	Exterior	C	Door	Wood	Poor	Blue	0.7	Negative		0
B2	23	Exterior	C	Door Frame	Wood	Poor	Blue	0.7	Negative		0
B2	24	Exterior	C	Window Frame	Wood	Poor	Blue	0.7	Negative		0.32
B2	25	Exterior	C	Window Casing	Wood	Poor	Blue	0.7	Negative		0.45
B2	26	Exterior	B	Window Casing	Wood	Poor	Blue	0.7	Negative		0.02
B2	27	Exterior	B	Fascia	Wood	Poor	Blue	0.7	Negative		0
B2	**28**	**Exterior**	**B**	**Fire Pipe**	**Metal**	**Poor**	**Red**	**0.7**	**Positive**	**1 each**	**2.38**
B2	29	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0.12
B2	30	Interior	A	Door Frame	Metal	Fair	White	0.7	Negative		0.18
B2	31	Interior	A	Door	Wood	Fair	White	0.7	Negative		0.19
B2	32	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0.05
B2	33	Interior	C	Wall	Metal	Fair	Blue	0.7	Negative		0.2
B2	**34**	**Interior Restroom**	**C**	**Wall**	**Drywall**	**Fair**	**White**	**0.7**	**Positive**	**540 sf**	**0.7**
B2	**35**	**Interior Restroom**	**D**	**Wall**	**Drywall**	**Fair**	**White**	**0.7**	**Positive**	**540 sf**	**0.7**
B2	**36**	**Interior Restroom**	**D**	**Ceiling**	**Drywall**	**Poor**	**White**	**0.7**	**Positive**	**54 sf**	**0.7**
B2	**37**	**Interior Restroom**	**C**	**Baseboard**	**Tile**	**Fair**	**Grey**	**0.7**	**Positive**	**54 sf**	**5**
B2	38	Interior Restroom	A	Locker	Metal	Fair	Blue	0.7	Negative		0.17
B2	39	Interior Restroom	D	Window Frame	Wood	Fair	White	0.7	Negative		0.22
B2	40	Interior Restroom	D	Window Casing	Metal	Fair	White	0.7	Negative		0.18
B2	41	Interior Restroom	B	Wall	Drywall	Fair	White	0.7	Negative		0.07
B2	**42**	**Interior**	**B**	**Wall**	**Drywall**	**Fair**	**White**	**0.7**	**Positive**	**16,260 sf**	**0.7**
B2	**43**	**Interior**	**D**	**Wall**	**Drywall**	**Fair**	**White**	**0.7**	**Positive**	**16,260 sf**	**0.7**
Building B2 West											
B2 West	1	Exterior	C	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
B2 West	2	Exterior	C	Porch Beams	Metal	Fair	Blue	0.7	Negative		0
B2 West	3	Exterior	C	Porch	Wood	Fair	Blue	0.7	Negative		0
B2 West	4	Exterior	C	Wall	Metal	Intact	White	0.7	Negative		0.02
B2 West	5	Exterior	C	Door Frame	Metal	Intact	Blue	0.7	Negative		0.04
B2 West	6	Exterior	C	Door	Metal	Intact	Blue	0.7	Negative		0.05
B2 West	7	Interior	B	Wall	Wood	Intact	White	0.7	Negative		0
B2 West	8	Interior	B	Door Frame	Metal	Intact	White	0.7	Negative		0.02

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
B2 West	9	Interior	B	Door	Metal	Intact	White	0.7	Negative		0.02
B2 West	10	Interior	D	Wall	Wood	Intact	Blue	0.7	Negative		0
B2 West	11	Interior	D	Wall	Wood	Intact	Pink	0.7	Negative		0
B2 West	12	Interior	D	Wall	Wood	Intact	Yellow	0.7	Negative		0
B2 West	13	Interior	D	Door Frame	Wood	Intact	Blue	0.7	Negative		0
B2 West	14	Interior	D	Door Frame	Wood	Intact	Pink	0.7	Negative		0
B2 West	15	Interior	0	Vent	Metal	Intact	White	0.7	Negative		0
B2 West	16	Exterior	roof	Tile	Tile	Intact	White	0.7	Negative		0
Building B3											
B3	**1**	**Interior**	**A**	**Wall**	**Drywall**	**Fair**	**White**	**0.7**	**Positive**	**360 sf**	**0.77**
B3	2	Interior	A	Wall	Drywall	Fair	Tan	0.7	Negative		0.59
B3	3	Interior	A	Door Frame	Wood	Fair	Tan	0.7	Negative		0
B3	4	Interior	A	Door	Wood	Fair	Tan	0.7	Negative		0
B3	5	Interior	A	Fire Alarm	Metal	Fair	Red	0.7	Negative		0.01
B3	6	Interior	C	Wall	Wood	Fair	White	0.7	Negative		0
B3	**7**	**Interior**	**C**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**100 sf**	**1.02**
B3	**8**	**Interior**	**C**	**Wall**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**100 sf**	**1.14**
B3	9	Interior	A	Window Frame	Wood	Fair	Tan	0.7	Negative		0.19
B3	**10**	**Interior**	**A**	**Window Casing**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**4 each**	**2.47**
B3	11	Exterior	D	Hand Rail	Metal	Fair	Grey	0.7	Negative		0
B3	12	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
B3	13	Exterior	C	Trim	Wood	Fair	Blue	0.7	Negative		0
B3	14	Exterior	B	Window Frame	Wood	Fair	Blue	0.7	Negative		0
B3	15	Exterior	C	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
B3	16	Exterior	B	Hand Rail	Metal	Fair	Black	0.7	Negative		0
B3	17	Interior	B	Door Frame	Metal	Intact	Black	0.7	Negative		0
B3	18	Interior	A	Door Frame	Metal	Intact	Grey	0.7	Negative		0
B3	19	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
B3	20	Interior Restroom	C	Wall Tile	Ceramic	Intact	Beige	0.7	Negative		0
B3	21	Interior Restroom	C	Wall Tile	Ceramic	Intact	Blue	0.7	Negative		0
B3	22	Interior	D	Door Frame	Metal	Intact	White	0.7	Negative		0
Building B3 Annex											
B3 Annex	**1**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**3,700 sf**	**1.13**
B3 Annex	2	Exterior	C	Door	Wood	Poor	Blue	0.7	Negative		0
B3 Annex	3	Exterior	C	Door Frame	Wood	Poor	Blue	0.7	Negative		0
B3 Annex	4	Exterior	C	Porch	Wood	Poor	Grey	0.7	Negative		0
B3 Annex	5	Exterior	C	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
B3 Annex	**6**	**Exterior**	**B**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**9 each**	**1.59**
B3 Annex	**7**	**Exterior**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**170 feet**	**1.42**
B3 Annex	**8**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**Beige**	**0.7**	**Positive**	**625 sf**	**1.33**
B3 Annex	9	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
B3 Annex	10	Interior	C	Door Frame	Wood	Intact	Blue	0.7	Negative		0

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Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
B3 Annex	11	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		0
B3 Annex	12	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
B3 Annex	13	Exterior	roof	Vent	Metal	Fair	White	0.7	Negative		0
Building B4											
B4	1	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.37
B4	**2**	**Exterior**	**D**	**Window Frame**	**Wood**	**Poor**	**Green**	**0.7**	**Positive**	**8 each**	**1.2**
B4	3	Exterior	D	Duct	Metal	Poor	White	0.7	Negative		0
B4	**4**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**Green**	**0.7**	**Positive**		**2.44**
B4	**5**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**Green**	**0.7**	**Positive**	**95 ft**	**2.24**
B4	6	Exterior	D	Window Frame	Wood	Poor	Green	0.7	Negative		0
B4	7	Exterior	D	Window Frame	Wood	Poor	Green	0.7	Negative		0
B4	8	Exterior	D	Wall	Wood	Fair	White	0.7	Negative		0
B4	9	Exterior	D	Porch	Wood	Poor	Grey	0.7	Negative		0
B4	10	Exterior	D	Hand Rail	Metal	Poor	Blue	0.7	Negative		0
B4	11	Exterior	D	Door Frame	Metal	Fair	Blue	0.7	Negative		0
B4	12	Exterior	D	Door	Metal	Fair	Blue	0.7	Negative		0
B4	13	Exterior	D	Door Canopy	Metal	Fair	Blue	0.7	Negative		0
B4	**14**	**Interior**	**A**	**Wall**	**Drywall**	**Poor**	**Beige**	**0.7**	**Positive**		**0.7**
B4	15	Interior	A	Wall	Drywall	Poor	Tan	0.7	Negative		0.41
B4	**16**	**Interior**	**A**	**Window Casing**	**Wood**	**Fair**	**Beige**	**0.7**	**Positive**	**2 each**	**1.32**
B4	**17**	**Interior**	**A**	**Wall**	**Wood**	**Fair**	**Beige**	**0.7**	**Positive**	**160 sf**	**1.88**
B4	**18**	**Interior**	**A**	**Wall**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**160 sf**	**1.76**
B4	19	Interior	A	Door Frame	Wood	Fair	Tan	0.7	Negative		0.38
B4	20	Interior	A	Door	Wood	Fair	Tan	0.7	Negative		0.14
B4	21	Interior	A	Door	Wood	Fair	Tan	0.7	Negative		0
B4	22	Interior	A	Door	Metal	Fair	Brown	0.7	Negative		0
B4	23	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0
B4	24	Interior	0	Ceiling	Drywall	Fair	White	0.7	Negative		0
B4	25	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0.09
B4	26	Exterior	B	Downspout	Metal	Fair	White	0.7	Negative		0
B4	27	Exterior	A	Wall	Wood	Fair	White	0.7	Negative		0
B4	28	Exterior	A	Window Frame	Wood	Fair	White	0.7	Negative		0.01
B4	**29**	**Exterior**	**A**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**		**4.12**
B4	30	Exterior	A	Door	Wood	Fair	Blue	0.7	Negative		0
B4	31	Exterior	A	Door Frame	Wood	Fair	Blue	0.7	Negative		0
B4	**32**	**Exterior**	**A**	**Door Canopy**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**25 sf**	**1.81**
B4	33	Exterior	A	Beam	Wood	Fair	White	0.7	Negative		0.03
B4	**34**	**Exterior**	**A**	**Fascia**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**40 ft**	**1.57**
B4	**35**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**25 ft**	**2.2**
Building B4 Annex											
B4 Annex	1	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
B4 Annex	2	Exterior	C	Window Frame	Wood	Fair	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
B4 Annex	3	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0
B4 Annex	4	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
B4 Annex	5	Exterior	C	Fire Pipe	Metal	Fair	White	0.7	Negative		0
B4 Annex	6	Exterior	A	Trim	Wood	Fair	Blue	0.7	Negative		0
B4 Annex	7	Exterior	A	Beam	Wood	Fair	Blue	0.7	Negative		0
B4 Annex	8	Exterior	A	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
Building B4 South											
B4 South	1	Exterior	D	Fascia	Wood	Poor	Blue	0.7	Negative		0.12
B4 South	2	Exterior	D	Wall	Wood	Fair	White	0.7	Negative		0.06
B4 South	3	Exterior	D	Window Frame	Wood	Fair	Blue	0.7	Negative		0.1
B4 South	4	Exterior	D	Window Casing	Wood	Fair	Blue	0.7	Negative		0.25
B4 South	5	Exterior	D	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
B4 South	6	Exterior	D	Door Frame	Metal	Fair	Blue	0.7	Negative		0
B4 South	7	Exterior	D	Door	Metal	Fair	Blue	0.7	Negative		0
B4 South	8	Exterior	D	Wall	Stucco	Fair	White	0.7	Negative		0
B4 South	9	Exterior	D	Gutter	Metal	Fair	Blue	0.7	Negative		0
B4 South	10	Exterior	D	Door Canopy	Wood	Fair	White	0.7	Negative		0
B4 South	11	Exterior	D	Eave	Wood	Fair	White	0.7	Negative		0
B4 South	**12**	**Exterior**	**D**	**Downspout**	**Metal**	**Fair**	**Blue**	**0.7**	**Positive**	**3 each**	**0.7**
B4 South	13	Exterior	D	Beam	Wood	Fair	Blue	0.7	Negative		0
B4 South	**14**	**Exterior**	**D**	**Downspout**	**Metal**	**Fair**	**White**	**0.7**	**Positive**	**3 each**	**0.7**
B4 South	15	Exterior	B	Wall	Wood	Poor	White	0.7	Negative		0.24
B4 South	**16**	**Exterior**	**B**	**Window Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**3 each**	**0.7**
B4 South	17	Exterior Shed	B	Wall	Brick	Fair	White	0.7	Negative		0
B4 South	18	Exterior Shed	B	Door	Wood	Fair	White	0.7	Negative		0
B4 South	19	Exterior Shed	B	Fascia	Wood	Fair	White	0.7	Negative		0.05
B4 South	20	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0.01
B4 South	21	Interior	D	Window Frame	Wood	Fair	White	0.7	Negative		0.5
B4 South	22	Interior	C	Door Frame	Metal	Fair	Brown	0.7	Negative		0.05
B4 South	23	Interior	C	Cabinet	Wood	Fair	Grey	0.7	Negative		0
B4 South	24	Interior Restroom	A	Wall Tile	Ceramic	Fair	Grey	0.7	Negative		0.17
B4 South	**25**	**Interior Restroom**	**A**	**Wall Tile**	**Ceramic**	**Fair**	**Beige**	**0.7**	**Positive**	**36 sf**	**4.6**
B4 South	26	Interior Restroom	A	Wall	Drywall	Fair	Beige	0.7	Negative		0
Building C1											
C1	1	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0
C1	2	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0
C1	**3**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**600 sf**	**0.7**
C1	4	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0.01
C1	**5**	**Exterior**	**D**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**20 each**	**0.7**
C1	6	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0.05
C1	**7**	**Exterior**	**D**	**Pipe**	**Metal**	**Poor**	**Yellow**	**0.7**	**Positive**	**1 each**	**4.82**
C1	8	Exterior	D	Door Frame	Wood	Poor	Blue	0.7	Negative		0.14

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
C1	9	Exterior	D	Door Jamb	Wood	Poor	White	0.7	Negative		0.02
C1	10	Exterior	D	Hand Rail	Wood	Poor	Blue	0.7	Negative		0.01
C1	11	Exterior	D	Porch	Wood	Poor	Blue	0.7	Negative		0.01
C1	12	Exterior	D	Wall	Stucco	Fair	White	0.7	Negative		0
C1	13	Exterior	D	Window Sill	Wood	Fair	Blue	0.7	Negative		0.02
C1	14	Exterior	D	Window Casing	Wood	Fair	Blue	0.7	Negative		0.09
C1	15	Exterior	D	Door	Wood	Fair	Blue	0.7	Negative		0
C1	16	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0.01
C1	17	Exterior	D	Fascia	Wood	Poor	Blue	0.7	Negative		0.06
C1	18	Exterior	D	Eave	Wood	Fair	White	0.7	Negative		0.1
C1	19	Exterior	D	Eave	Wood	Fair	White	0.7	Negative		0.13
C1	20	Exterior	D	Eave	Wood	Fair	White	0.7	Negative		0.11
C1	**21**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**405 ft**	**1.77**
C1	**22**	**Exterior**	**roof**	**Vent Shed**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**192 sf**	**0.87**
C1	**23**	**Exterior**	**roof**	**Vent**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**1 each**	**5**
C1	24	Exterior	roof	Window Frame	Wood	Fair	Blue	0.7	Negative		0.45
C1	**25**	**Exterior**	**roof**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**100 sf**	**1.1**
C1	26	Exterior	D	Fascia	Wood	Poor	Blue	0.7	Negative		0.03
C1	27	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
C1	**28**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**6,075 sf**	**4.2**
C1	29	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0
C1	**30**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**6,075 sf**	**2.26**
C1	31	Exterior	B	Door Frame	Wood	Fair	Blue	0.7	Negative		0
C1	32	Exterior	B	Door	Metal	Fair	Blue	0.7	Negative		0
C1	33	Interior	B	Wall	Drywall	Fair	White	0.7	Negative		0
C1	34	Interior	B	Wall	Drywall	Fair	Tan	0.7	Negative		0.1
C1	35	Interior	0	Ceiling	Wood	Fair	Tan	0.7	Negative		0.19
C1	36	Interior	0	Ceiling	Wood	Fair	Tan	0.7	Negative		0.03
C1	37	Interior	C	Door Frame	Metal	Fair	White	0.7	Negative		0
C1	38	Interior	B	Door Frame	Metal	Fair	Tan	0.7	Negative		0
C1	39	Interior	B	Wall	Metal	Fair	Tan	0.7	Negative		0
C1	40	Interior	B	Wall	Drywall	Fair	Beige	0.7	Negative		0
C1	41	Interior	B	Baseboard	Wood	Fair	White	0.7	Negative		0
C1	42	Interior	B	Window Frame	Wood	Fair	Tan	0.7	Negative		0.04
C1	**43**	**Interior**	**B**	**Window Casing**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**20 each**	**1.52**
C1	44	Interior	A	Door Frame	Wood	Fair	Blue	0.7	Negative		0
C1	45	Interior	A	Wall	Drywall	Fair	Blue	0.7	Negative		0
C1	**46**	**Interior**	**A**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**100 sf**	**2.49**
C1	47	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0.18
C1	48	Interior	A	Wall	Drywall	Fair	Tan	0.7	Negative		0.28
C1	**49**	**Interior**	**A**	**Wall**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**100 sf**	**1.99**
C1	**50**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**6,075 sf**	**3.09**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
C1	51	Exterior	A	Trim	Wood	Poor	Blue	0.7	Negative		0.4
C1	52	Exterior	A	Door	Metal	Poor	Blue	0.7	Negative		0.02
C1	**53**	**Exterior**	**A**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**405 ft**	**1.1**
C1	54	Exterior	A	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
C1	55	Exterior	A	Porch	Wood	Poor	Blue	0.7	Negative		0
C1 shed	**56**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**100 sf**	**1.38**
C1 shed	**57**	**Exterior**	**A**	**Wall**	**Drywall**	**Poor**	**White**	**0.7**	**Positive**	**120 sf**	**1.03**
C1 shed	**58**	**Exterior**	**D**	**Door**	**Metal**	**Poor**	**Blue**	**0.7**	**Positive**	**2 each**	**2.44**
Building C2											
C2	**1**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**3,030 sf**	**0.84**
C2	2	Exterior	D	Porch	Wood	Poor	Blue	0.7	Negative		0.07
C2	**3**	**Exterior**	**D**	**Hand Rail**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**20 feet**	**0.88**
C2	**4**	**Exterior**	**D**	**Window Frame**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**24 each**	**2.45**
C2	**5**	**Exterior**	**D**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**		**0.7**
C2	6	Exterior	D	Fascia	Wood	Poor	Blue	0.7	Negative		0.23
C2	7	Exterior	D	Door	Wood	Poor	Blue	0.7	Negative		0
C2	8	Exterior	D	Door Frame	Wood	Poor	Blue	0.7	Negative		0
C2	9	Exterior	D	Security Bars	Metal	Fair	White	0.7	Negative		0
C2	10	Exterior	D	Porch	Wood	Poor	Blue	0.7	Negative		0
C2	**11**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**202 ft**	**1.03**
C2	**12**	**Exterior**	**C**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**		**0.7**
C2	13	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
C2	14	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
C2	15	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0
C2	16	Exterior	C	Beam	Metal	Fair	Blue	0.7	Negative		0
C2	17	Exterior	B	Door	Wood	Poor	Blue	0.7	Negative		0
C2	18	Exterior	B	Door Frame	Wood	Poor	Blue	0.7	Negative		0
C2	19	Exterior	B	Window Frame	Wood	Poor	Blue	0.7	Negative		0.05
C2	**20**	**Exterior**	**B**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**12 each**	**1.89**
C2	21	Exterior	B	Door	Wood	Poor	Blue	0.7	Negative		0
C2	22	Exterior	C	Door Canopy	Metal	Fair	Blue	0.7	Negative		0
C2	**23**	**Exterior**	**B**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**202 ft**	**1.14**
C2	24	Exterior	C	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
C2	25	Interior	C	Wall	Drywall	Intact	Beige	0.7	Negative		0
C2	26	Interior	C	Door Frame	Metal	Intact	Beige	0.7	Negative		0
C2	27	Interior	C	Door	Metal	Intact	Beige	0.7	Negative		0
C2	28	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
C2	29	Interior	B	Wall	Drywall	Intact	Beige	0.7	Negative		0
C2	30	Interior	B	Wall	Wood	Intact	Beige	0.7	Negative		0.19
C2	31	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
C2	32	Interior	D	Window Frame	Wood	Intact	White	0.7	Negative		0
C2 Trailer	33	Exterior	C	Wall	Wood	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
C2 Trailer	34	Exterior	C	Trim	Wood	Fair	Blue	0.7	Negative		0
C2 Trailer	35	Exterior	B	Window Frame	Metal	Intact	White	0.7	Negative		0
C2 Trailer	36	Exterior	B	Door Frame	Metal	Intact	Blue	0.7	Negative		0.01
C2 Trailer	37	Exterior	B	Door	Metal	Intact	Blue	0.7	Negative		0.03
C2 Trailer	38	Exterior	B	Hand Rail	Wood	Intact	Blue	0.7	Negative		0
C2 Trailer	39	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0
C2 Trailer	40	Interior	D	Door Frame	Metal	Intact	Brown	0.7	Negative		0.01
C2 Trailer	41	Interior	D	Door	Metal	Intact	Brown	0.7	Negative		0.02
C2 Trailer	42	Interior	B	Wall	Drywall	Intact	Beige	0.7	Negative		0
C2 Trailer	43	Interior	D	Window Casing	Metal	Intact	Black	0.7	Negative		0
C2 Trailer	44	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
Building C3											
C3	**1**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**3,000 sf**	**2.06**
C3	2	Exterior	D	Window Frame	Wood	Fair	Blue	0.7	Negative		0.04
C3	**3**	**Exterior**	**D**	**Window Casing**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**30 each**	**2.06**
C3	**4**	**Exterior**	**D**	**Window Sill**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**30 each**	**1.75**
C3	5	Exterior	C	Door	Wood	Fair	Blue	0.7	Negative		0
C3	6	Exterior	C	Door Frame	Wood	Fair	Blue	0.7	Negative		0
C3	7	Exterior	C	Door Jamb	Wood	Fair	White	0.7	Negative		0
C3	8	Exterior	D	Hand Rail	Wood	Fair	Grey	0.7	Negative		0
C3	9	Exterior	D	Porch	Wood	Fair	Grey	0.7	Negative		0
C3	10	Exterior	D	Pipe	Metal	Fair	White	0.7	Negative		0.09
C3	11	Exterior	D	Door	Wood	Fair	Blue	0.7	Negative		0
C3	12	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0
C3	13	Exterior	D	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
C3	14	Exterior	D	Beam	Wood	Poor	Blue	0.7	Negative		0.02
C3	15	Exterior	D	Door Canopy	Wood	Poor	White	0.7	Negative		0.01
C3	**16**	**Exterior**	**D**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**200 ft**	**1.73**
C3	17	Exterior	D	Flashing	Metal	Fair	Blue	0.7	Negative		0
C3	18	Exterior	D	Flashing	Metal	Fair	White	0.7	Negative		0
C3	19	Exterior	D	Vent	Metal	Poor	White	0.7	Negative		0
C3	20	Exterior	D	Pipe	Metal	Poor	White	0.7	Negative		0
C3	21	Exterior	C	Wall	Stucco	Poor	White	0.7	Negative		0
C3	22	Exterior	C	Hand Rail	Metal	Poor	Blue	0.7	Negative		0.05
C3	23	Exterior	C	Window Frame	Wood	Poor	Blue	0.7	Negative		0.07
C3	24	Exterior	C	Window Frame	Wood	Poor	Blue	0.7	Negative		0.01
C3	**25**	**Exterior**	**B**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**30 each**	**0.85**
C3	**26**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**3,000 sf**	**1.05**
C3	27	Exterior	B	Pipe	Metal	Poor	White	0.7	Negative		0.09
C3	28	Exterior	C	Door	Wood	Poor	Blue	0.7	Negative		0.02
C3	29	Interior	C	Door	Metal	Fair	White	0.7	Negative		0
C3	30	Interior	C	Door Frame	Metal	Fair	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
C3	31	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0
C3	32	Interior	C	Window Frame	Drywall	Fair	White	0.7	Negative		0.19
C3	33	Interior	C	Window Sill	Wood	Fair	White	0.7	Negative		0.28
C3	34	Interior	B	Door	Wood	Fair	Blue	0.7	Negative		0.03
C3	35	Interior	C	Wall	Wood	Intact	White	0.7	Negative		0
C3	**36**	**Interior**	**C**	**Wall**	**Drywall**	**Intact**	**Black**	**0.7**	**Positive**	**680 sf**	**0.7**
C3	37	Interior	C	Counter Top	Wood	Intact	Black	0.7	Negative		0
C3	38	Interior	C	Wall	Drywall	Intact	Beige	0.7	Negative		0.08
C3	39	Interior	C	Cabinet	Metal	Intact	Blue	0.7	Negative		0
C3	**40**	**Exterior**	**C**	**Fire Pipe**	**Metal**	**Intact**	**Red**	**0.7**	**Positive**	**1 each**	**1.58**
Central Plant											
Central Plant	1	Exterior	A	Wall	Metal	Intact	White	0.7	Negative		0
Central Plant	2	Exterior	A	Wall	Metal	Intact	White	0.7	Negative		0
Central Plant	3	Interior	A	Wall	Concrete	Intact	White	0.7	Negative		0.02
Central Plant	**4**	**Interior**	**A**	**Wall**	**Concrete**	**Intact**	**Brown**	**0.7**	**Positive**	**340 sf**	**0.7**
Central Plant	**5**	**Interior**	**B**	**Door Frame**	**Metal**	**Intact**	**Brown**	**0.7**	**Positive**	**3 each**	**5**
Central Plant	6	Interior	D	Wall	Wood	Intact	Brown	0.7	Negative		0.09
Central Plant	7	Interior	D	Wall	Wood	Intact	White	0.7	Negative		0.02
Central Plant	8	Interior	D	Wall	Metal	Intact	Brown	0.7	Negative		0.04
Central Plant	9	Interior	D	Wall	Stucco	Intact	Brown	0.7	Negative		0
Central Plant	10	Interior	D	Door Frame	Metal	Intact	Black	0.7	Negative		0.02
Central Plant	**11**	**Interior**	**0**	**Floor**	**Concrete**	**Intact**	**Brown**	**0.7**	**Positive**	**5,000 sf**	**0.7**
Central Plant	12	Interior	0	Floor	Concrete	Intact	Grey	0.7	Negative		0
Central Plant	13	Interior	C	Door	Metal	Intact	Brown	0.7	Negative		0
Central Plant	14	Interior	C	Wall	Concrete	Intact	Brown	0.7	Negative		0
Central Plant	15	Interior	0	Beam	Metal	Intact	Brown	0.7	Negative		0
Central Plant	16	Interior	0	Beam	Metal	Intact	White	0.7	Negative		0
Central Plant	17	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0
Central Plant	**18**	**Interior**	**D**	**Door Frame**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**same as 5**	**1.68**
Central Plant	19	Interior	C	Door	Wood	Intact	Blue	0.7	Negative		0.03
Central Plant	**20**	**Interior**	**C**	**Door Frame**	**Concrete**	**Intact**	**Blue**	**0.7**	**Positive**	**same as 5**	**5**
Central Plant	21	Interior	0	Pipe	Metal	Intact	Blue	0.7	Negative		0
Central Plant	22	Exterior	C	Wall	Metal	Intact	Blue	0.7	Negative		0
Central Plant	23	Exterior	C	Beam	Metal	Intact	Blue	0.7	Negative		0
D Hallway											
D Hallway	1	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0
D Hallway	2	Interior	A	Wall	Drywall	Fair	Tan	0.7	Negative		0
D Hallway	3	Interior	A	Door Frame	Drywall	Fair	Tan	0.7	Negative		0
D Hallway	**4**	**Interior**	**C**	**Wall**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**200 sf**	**1.72**
D Hallway	**5**	**Interior**	**C**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**100 sf**	**2.47**
D Hallway	6	Interior	C	Door Frame	Wood	Fair	Tan	0.7	Negative		0.02
D Hallway	7	Interior	C	Door	Wood	Fair	Tan	0.7	Negative		0.02

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
D Hallway	**8**	**Interior**	**C**	**Fire Alarm**	**Metal**	**Fair**	**Red**	**0.7**	**Positive**	**1 each**	**0.7**
D Hallway	9	Interior	A	Furnace	Metal	Fair	Silver	0.7	Negative		0.02
D Hallway	10	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0.12
D Hallway	**11**	**Interior**	**A**	**Wall**	**Drywall**	**Fair**	**Tan**	**0.7**	**Positive**	**same as 4**	**0.7**
D Hallway	**12**	**Interior**	**A**	**Window Casing**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**11 each**	**1.98**
D Hallway	13	Interior	A	Beam	Wood	Fair	White	0.7	Negative		0.11
D Hallway	14	Interior	A	Beam	Wood	Fair	Tan	0.7	Negative		0.38
D Hallway	**15**	**Interior**	**C**	**Wall**	**Drywall**	**Poor**	**Tan**	**0.7**	**Positive**	**250 sf**	**0.7**
D Hallway	**16**	**Interior**	**C**	**Wall**	**Drywall**	**Poor**	**White**	**0.7**	**Negative**		**0.15**
D Hallway	**17**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**5,540 sf**	**1.82**
D Hallway	17	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
Building D1											
D1	1	Exterior	D	Wall	Stucco	Fair	White	0.7	Negative		0
D1	2	Exterior	D	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
D1	**3**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**780**	**1.36**
D1	**4**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 3**	**1.83**
D1	5	Exterior	C	Pipe	Metal	Poor	White	0.7	Negative		0.38
D1	**6**	**Exterior**	**C**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**4 each**	**1.55**
D1	7	Exterior	C	Door	Wood	Intact	Blue	0.7	Negative		0
D1	8	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0
D1	9	Exterior	C	Downspout	Metal	Poor	Blue	0.7	Negative		0
D1	10	Exterior	C	Gutter	Metal	Poor	Blue	0.7	Negative		0
D1	**11**	**Exterior**	**C**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**209 feet**	**0.7**
D1	23	Exterior	C	Hand Rail	Metal	Fair	Black	0.7	Negative		0
D1	24	Exterior	Roof	Trim	Wood	Poor	Blue	0.7	Negative		0
D1	25	Exterior	Roof	Wall	Wood	Poor	White	0.7	Negative		0
D1	26	Exterior	Roof	Duct	Metal	Poor	White	0.7	Negative		0.12
D1	**27**	**Exterior**	**Roof**	**Duct**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**1 each**	**0.8**
D1	**28**	**Exterior**	**Roof**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**80 sf**	**3.55**
D1	29	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0.03
D1	30	Interior	A	Door Frame	Wood	Intact	White	0.7	Negative		0
D1	31	Interior	A	Door	Wood	Intact	White	0.7	Negative		0
D1	32	Interior	A	Floor	Concrete	Intact	Grey	0.7	Negative		0
D1	33	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0.43
D1	**34**	**Interior**	**D**	**Window Frame**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**same as 6**	**0.7**
D1	35	Interior	C	Wall	Brick	Intact	White	0.7	Negative		0.02
Building D2 Annex											
D2 Annex	1	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
D2 Annex	2	Interior	C	Door Frame	Metal	Intact	White	0.7	Negative		0
D2 Annex	3	Interior	A	Wall	Drywall	Intact	Purple	0.7	Negative		0
D2 Annex	4	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0
D2 Annex	5	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
D2 Annex	6	Exterior	B	Door Frame	Metal	Intact	Blue	0.7	Negative		0
D2 Annex	7	Exterior	B	Door	Metal	Intact	Blue	0.7	Negative		0
D2 Annex	8	Exterior	B	Fire Pipe	Metal	Intact	Red	0.7	Negative		0
D2 Annex	9	Exterior	D	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
Building D2.5											
D2.5	1	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
D2.5	2	Exterior	C	Trim	Wood	Fair	Blue	0.7	Negative		0
D2.5	3	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0
D2.5	4	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
D2.5	5	Exterior	C	Window Frame	Wood	Fair	Blue	0.7	Negative		0
D2.5	6	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0
D2.5	7	Interior	B	Door Frame	Metal	Fair	Grey	0.7	Negative		0.18
D2.5	8	Interior	A	Wall	Drywall	Fair	Yellow	0.7	Negative		0
D2.5	9	Exterior	D	Fascia	Wood	Fair	Blue	0.7	Negative		0
Building D3											
D3	1	Interior	A	Door Frame	Wood	Intact	Pink	0.7	Negative		0.11
D3	2	Interior	A	Door	Wood	Intact	White	0.7	Negative		0.14
D3	3	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0.34
D3	**4**	**Interior**	**C**	**Window Frame**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**23 each**	**0.7**
D3	5	Interior	C	Window Casing	Wood	Intact	White	0.7	Negative		0.13
D3	6	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0.11
D3	7	Interior	C	Wall	Drywall	Poor	Beige	0.7	Negative		0.15
D3	8	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
D3	9	Interior	C	Wall	Drywall	Intact	Pink	0.7	Negative		0.14
D3	10	Interior	C	Wall	Drywall	Poor	White	0.7	Negative		0.01
D3	**11**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**600 sf**	**1.94**
D3	**12**	**Exterior**	**D**	**Porch Canopy**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**1,120 sf**	**2.53**
D3	**13**	**Exterior**	**D**	**Door Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**1 each**	**2**
D3	**14**	**Exterior**	**D**	**Door**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 13**	**2.21**
D3	15	Exterior	D	Fascia	Wood	Poor	Blue	0.7	Negative		0.04
D3	**16**	**Exterior**	**D**	**Porch Beams**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**12 each**	**1.36**
D3	17	Exterior	D	Porch Beams	Wood	Intact	Grey	0.7	Negative		0
D3	18	Exterior	D	Porch	Wood	Poor	Blue	0.7	Negative		0.1
D3	19	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
D3	20	Exterior	C	Fascia	Wood	Poor	Blue	0.7	Negative		0.24
D3	21	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.51
D3	22	Exterior	roof	Duct	Metal	Fair	White	0.7	Negative		0.01
D3	23	Exterior	roof	Pipe	Metal	Fair	White	0.7	Negative		0.13
D3	24	Exterior	D	Fascia	Wood	Fair	Blue	0.7	Negative		0.34
Building D3.5											
D3.5	1	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
D3.5	2	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0.02

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
D3.5	**3**	**Interior**	**B**	**Baseboard**	**Ceramic**	**Intact**	**Blue**	**0.7**	**Positive**	**250 sf**	**0.7**
D3.5	4	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
D3.5	5	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
D3.5	6	Exterior	D	Wall	Stucco	Fair	White	0.7	Negative		0
D3.5	7	Exterior	C	Hand Rail	Metal	Fair	Black	0.7	Negative		0.02
D3.5	8	Exterior	C	Door Frame	Metal	Fair	Black	0.7	Negative		0
D3.5	9	Exterior	C	Eave	Wood	Fair	White	0.7	Negative		0
D3.5	10	Exterior	C	Downspout	Metal	Fair	White	0.7	Negative		0.01
D3.5	11	Exterior	C	Gutter	Metal	Fair	White	0.7	Negative		0
D3.5	12	Exterior	C	Fascia	Wood	Fair	Blue	0.7	Negative		0
D3.5	16	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
D3.5	17	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
Building D4.5											
D4.5	1	Exterior	D	Wall	Wood	Intact	White	0.7	Negative		0
D4.5	2	Exterior	D	Trim	Wood	Intact	Blue	0.7	Negative		0
D4.5	3	Exterior	D	Window Frame	Wood	Intact	Blue	0.7	Negative		0
D4.5	4	Exterior	C	Downspout	Metal	Intact	White	0.7	Negative		0
D4.5	5	Exterior	C	Hand Rail	Wood	Poor	White	0.7	Negative		0
D4.5	6	Exterior	C	Porch	Wood	Fair	Grey	0.7	Negative		0
D4.5	7	Exterior	D	Wall	Wood	Intact	White	0.7	Negative		0
D4.5	8	Exterior	D	Trim	Wood	Intact	Blue	0.7	Negative		0
D4.5	9	Exterior	D	Window Frame	Wood	Intact	Blue	0.7	Negative		0
D4.5	10	Exterior	C	Downspout	Metal	Intact	White	0.7	Negative		0
D4.5	11	Exterior	C	Hand Rail	Wood	Poor	White	0.7	Negative		0
D4.5	12	Exterior	C	Porch	Wood	Fair	Grey	0.7	Negative		0
D4.5	13	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0
D4.5	14	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
D4.5	15	Exterior	C	Fascia	Wood	Fair	Blue	0.7	Negative		0
D4.5	16	Interior	D	Door Frame	Metal	Intact	Grey	0.7	Negative		0
D4.5	17	Interior	C	Door Frame	Metal	Intact	Blue	0.7	Negative		0
D4.5	18	Interior	C	Door	Metal	Intact	Blue	0.7	Negative		0
Building D5											
D5	1	Exterior	C	Door	Wood	Fair	Blue	0.7	Negative		0
D5	2	Exterior	C	Door Frame	Wood	Poor	Blue	0.7	Negative		0.08
D5	3	Exterior	C	Hand Rail	Metal	Poor	Blue	0.7	Negative		0.06
D5	4	Exterior	C	Door Canopy	Metal	Poor	Blue	0.7	Negative		0
D5	5	Exterior	C	Door Canopy	Metal	Poor	White	0.7	Negative		0
D5	**6**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**1,825 sf**	**1.39**
D5	**7**	**Exterior**	**C**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**26 each**	**1.26**
D5	8	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.02
D5	**9**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 6**	**1.24**
D5	**10**	**Exterior**	**D**	**Porch Beams**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**14 each**	**1.61**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
D5	**11**	**Exterior**	**D**	**Porch Canopy**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**200 sf**	**1.88**
D5	**12**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**130 ft**	**0.7**
D5	**13**	**Exterior**	**D**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 7**	**1.6**
D5	14	Interior	C	Wall	Drywall	Intact	Tan	0.7	Negative		0.39
D5	15	Interior	B	Door Frame	Wood	Intact	White	0.7	Negative		0
D5	16	Interior	B	Door	Wood	Intact	White	0.7	Negative		0.2
D5	17	Interior	B	Wall	Drywall	Intact	Green	0.7	Negative		0
D5	18	Interior	A	Wall	Drywall	Intact	Black	0.7	Negative		0.02
D5	19	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0.06
Building D5 Annex											
D5 Annex	1	Interior	C	Wall	Plastic	Intact	White	0.7	Negative		0
D5 Annex	2	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0
D5 Annex	3	Interior	A	Window Frame	Metal	Intact	White	0.7	Negative		0
D5 Annex	4	Interior	D	Door Frame	Metal	Intact	Blue	0.7	Negative		0
D5 Annex	5	Interior	D	Door	Metal	Intact	Blue	0.7	Negative		0
D5 Annex	6	Exterior	D	Door	Metal	Intact	Blue	0.7	Negative		0
D5 Annex	7	Exterior	D	Wall	Wood	Intact	White	0.7	Negative		0
D5 Annex	8	Exterior	D	Trim	Wood	Intact	Blue	0.7	Negative		0
D5 Annex	9	Exterior	D	Downspout	Metal	Intact	White	0.7	Negative		0
D5 Annex	10	Exterior	A	Window Frame	Metal	Intact	Blue	0.7	Negative		0
Building D5.5											
D5.5	1	Exterior	C	Window Frame	Wood	Fair	Blue	0.7	Negative		0
D5.5	2	Exterior	C	Door Frame	Wood	Fair	Blue	0.7	Negative		0
D5.5	3	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
D5.5	4	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
D5.5	5	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
D5.5	6	Exterior	C	Trim	Wood	Fair	Blue	0.7	Negative		0
D5.5	7	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
D5.5	8	Interior	C	Door Frame	Wood	Intact	White	0.7	Negative		0
D5.5	9	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
D5.5	10	Interior	B	Door Frame	Metal	Intact	Grey	0.7	Negative		0.11
D5.5	11	Interior	B	Wall	Drywall	Intact	Black	0.7	Negative		0
D5.5	12	Interior	C	Window Frame	Wood	Intact	White	0.7	Negative		0.02
D5.5	**13**	**Interior**	**C**	**Window Casing**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**2 each**	**2.21**
D5.5	14	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0.08
D5.5	15	Interior	B	Door Frame	Metal	Intact	Grey	0.7	Negative		0.05
D5.5	16	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
D5.5	17	Interior	B	Wall	Drywall	Intact	Brown	0.7	Negative		0
D5.5	18	Interior	C	Wall	Drywall	Intact	Orange	0.7	Negative		0
D5.5	19	Interior	C	Wall	Drywall	Intact	Grey	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Building D6											
D6	1	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0.27
D6	**2**	**Exterior**	**D**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**37 each**	**2.58**
D6	**3**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**1,550 sf**	**3.01**
D6	4	Exterior	B	Porch	Wood	Poor	Blue	0.7	Negative		0.06
D6	**5**	**Exterior**	**B**	**Porch Beams**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**3 each**	**0.83**
D6	**6**	**Exterior**	**B**	**Porch Canopy**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**60 sf**	**1.16**
D6	**7**	**Exterior**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**120 feet**	**2.21**
D6	8	Exterior	B	Wall	Stucco	Fair	White	0.7	Negative		0
D6	**9**	**Exterior**	**C**	**Fire Pipe**	**Metal**	**Poor**	**Red**	**0.7**	**Positive**	**10 ft**	**0.8**
D6	**10**	**Exterior**	**B**	**Pipe**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**15 ft**	**0.81**
D6	11	Interior	B	Wall	Drywall	Intact	Blue	0.7	Negative		0.26
D6	12	Interior	B	Door Frame	Wood	Intact	White	0.7	Negative		0
D6	13	Interior	B	Wall	Drywall	Intact	Blue	0.7	Negative		0.27
D6	14	Interior	A	Window Frame	Wood	Intact	White	0.7	Negative		0
D6	**15**	**Interior**	**A**	**Window Casing**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**same as 2**	**0.99**
D6	16	Interior	A	Wall	Drywall	Intact	Beige	0.7	Negative		0
D6	17	Interior	D	Wall	Drywall	Intact	Grey	0.7	Negative		0
Building D9											
D9	1	Exterior	D	Wall	Stucco	Intact	White	0.7	Negative		0
D9	2	Exterior	D	Hand Rail	Metal	Intact	Black	0.7	Negative		0
D9	3	Exterior	D	Window Frame	Metal	Intact	Black	0.7	Negative		0
D9	4	Exterior	D	Door Frame	Metal	Intact	Black	0.7	Negative		0
D9	5	Exterior	C	Fire Pipe	Metal	Intact	Red	0.7	Negative		0
D9	6	Exterior	B	Downspout	Metal	Intact	White	0.7	Negative		0
D9	7	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
D9	8	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
D9	9	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0
D9	10	Interior	B	Door Frame	Metal	Intact	Black	0.7	Negative		0
D9	11	Interior	D	Wall	Drywall	Intact	Purple	0.7	Negative		0
D9	12	Interior	D	Wall	Drywall	Intact	Blue	0.7	Negative		0
D9	13	Interior	C	Wall Tile	Ceramic	Intact	Beige	0.7	Negative		0
D9	14	Interior	C	Wall Tile	Ceramic	Intact	Blue	0.7	Negative		0
D9	15	Interior	D	Wall	Drywall	Intact	Yellow	0.7	Negative		0
D9	16	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
D9	**17**	**Exterior**	**Roof**	**Pipe**	**Metal**	**Intact**	**Silver**	**0.7**	**Positive**	**5 each**	**5**
E Hallway											
E Hallway	1	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
E Hallway	2	Interior	A	Wall	Drywall	Intact	Tan	0.7	Negative		0.04
E Hallway	3	Interior	C	Window Frame	Wood	Poor	Tan	0.7	Negative		0.01
E Hallway	**4**	**Interior**	**C**	**Window Casing**	**Wood**	**Poor**	**Tan**	**0.7**	**Positive**		**1.53**
E Hallway	5	Interior	C	Door Frame	Wood	Fair	Tan	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
E Hallway	**6**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**		**2.97**
E Hallway	7	Exterior	A	Door Frame	Wood	Fair	Blue	0.7	Negative		0
E Hallway	8	Exterior	A	Door	Wood	Fair	Blue	0.7	Negative		0
E Hallway	9	Interior	0	Ceiling	Wood	Poor	Tan	0.7	Negative		0.02
E Hallway	10	Interior	0	Pipe	Wood	Poor	Silver	0.7	Negative		0.09
Building E1											
E1	1	Exterior	D	Wall	Brick	Intact	White	0.7	Negative		0
E1	2	Exterior	D	Door Frame	Metal	Intact	Blue	0.7	Negative		0.13
E1	3	Exterior	D	Door	Metal	Intact	Blue	0.7	Negative		0.01
Building E1 Annex											
E1 Annex	1	Exterior	D	Wall	Wood	Intact	Peach	0.7	Negative		0
E1 Annex	2	Exterior	D	Door	Metal	Intact	Blue	0.7	Negative		0
E1 Annex	3	Interior	B	Wall	Brick	Intact	White	0.7	Negative		0
E1 Annex	4	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
E1 Annex	5	Interior	D	Downspout	Metal	Intact	White	0.7	Negative		0
Building E2											
E2	1	Interior	D	Window Frame	Wood	Fair	White	0.7	Negative		0.28
E2	**2**	**Interior**	**D**	**Window Casing**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**13 each**	**1.47**
E2	3	Interior	D	Floor	Drywall	Fair	Blue	0.7	Negative		0
E2	4	Interior	D	Window Frame	Wood	Fair	White	0.7	Negative		0.28
E2	**5**	**Interior**	**D**	**Window Casing**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**same as 2**	**1.47**
E2	6	Interior	D	Floor	Drywall	Fair	Blue	0.7	Negative		0
E2	7	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0
E2	8	Interior	A	Wall	Drywall	Fair	Tan	0.7	Negative		0.05
E2	**9**	**Interior**	**A**	**Window Casing**	**Drywall**	**Fair**	**Tan**	**0.7**	**Positive**	**same as 2**	**1.73**
E2	10	Interior	A	Door Frame	Wood	Fair	Tan	0.7	Negative		0
E2	11	Interior	A	Beam	Wood	Fair	White	0.7	Negative		0.15
E2	12	Interior	A	Fire Alarm	Metal	Fair	Red	0.7	Negative		0.03
E2	13	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0.52
E2	14	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0.01
E2	15	Interior	B	Door	Wood	Fair	White	0.7	Negative		0
E2	16	Interior	D	Window Frame	Wood	Fair	White	0.7	Negative		0.28
E2	**17**	**Interior**	**D**	**Window Casing**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**same as 2**	**1.47**
E2	18	Interior	D	Floor	Drywall	Fair	Blue	0.7	Negative		0
Building E2 South											
E2 South	1	Exterior	D	Wall	Wood	Fair	White	0.7	Negative		0.07
E2 South	**2**	**Exterior**	**D**	**Window Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**6 each**	**2.86**
E2 South	3	Exterior	D	Hand Rail	Metal	Fair	Blue	0.7	Negative		0.06
E2 South	**4**	**Exterior**	**D**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**3 each**	**2.25**
E2 South	5	Exterior	D	Beam	Wood	Fair	Blue	0.7	Negative		0
E2 South	6	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0
E2 South	7	Exterior	D	Door Frame	Metal	Fair	Blue	0.7	Negative		0.17

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
E2 South	8	Exterior	D	Door	Wood	Fair	Blue	0.7	Negative		0
E2 South	**9**	**Exterior**	**D**	**Door Canopy**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**25 sf**	**2.16**
E2 South	10	Exterior	D	Window Frame	Wood	Fair	Blue	0.7	Negative		0.01
E2 South	11	Exterior	C	Window Frame	Stucco	Fair	White	0.7	Negative		0
E2 South	**12**	**Exterior**	**C**	**Fire Pipe**	**Metal**	**Poor**	**Red**	**0.7**	**Positive**	**10 feet**	**0.7**
E2 South	13	Exterior	D	Flashing	Metal	Fair	White	0.7	Negative		0
E2 South	**14**	**Exterior**	**D**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**100 ft**	**3.26**
E2 South	15	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.01
E2 South	16	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0.04
E2 South	17	Interior	D	Door Frame	Metal	Intact	White	0.7	Negative		0.02
E2 South	18	Interior	A	Wall	Drywall	Intact	Tan	0.7	Negative		0
E2 South	19	Interior	B	Wall	Wood	Intact	White	0.7	Negative		0
E2 South	20	Interior	B	Wall	Drywall	Intact	Blue	0.7	Negative		0
E2 South	21	Interior	B	Window Frame	Wood	Intact	White	0.7	Negative		0
E2 South	22	Interior	D	Wall	Drywall	Intact	Beige	0.7	Negative		0
E2 South	23	Interior	D	Window Frame	Wood	Intact	White	0.7	Negative		0
E2 South	**24**	**Interior**	**D**	**Window Casing**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**same as 2**	**1.38**
E2 South	25	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
Building E2.5											
E2.5	1	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
E2.5	2	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0.07
E2.5	3	Exterior	D	Door Frame	Metal	Intact	Blue	0.7	Negative		0.07
E2.5	4	Exterior	D	Door Canopy	Metal	Intact	Blue	0.7	Negative		0
E2.5	9	Exterior	D	Wall	Wood	Intact	White	0.7	Negative		0
E2.5	10	Exterior	D	Trim	Wood	Intact	Blue	0.7	Negative		0
Building E3											
E3	1	Exterior	D	Wall	Stucco	Intact	White	0.7	Negative		0
E3	2	Exterior	C	Door Frame	Metal	Intact	Blue	0.7	Negative		0
E3	3	Exterior	C	Door	Metal	Intact	Blue	0.7	Negative		0
E3	4	Exterior	C	Hand Rail	Metal	Poor	White	0.7	Negative		0
E3	5	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
E3	6	Exterior	C	Porch	Wood	Fair	Grey	0.7	Negative		0
E3	7	Exterior	C	Trim	Wood	Fair	Blue	0.7	Negative		0
E3	8	Exterior	C	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
E3	**9**	**Exterior**	**B**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**17 each**	**0.7**
E3	**10**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**2,025 sf**	**2.03**
E3	11	Exterior	B	Fascia	Wood	Fair	Blue	0.7	Negative		0.51
E3	12	Interior	A	Door	Wood	Fair	Beige	0.7	Negative		0.2
E3	13	Interior	A	Door Frame	Wood	Fair	White	0.7	Negative		0.18
E3	14	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0.17
E3	15	Interior	B	Wall	Drywall	Fair	Beige	0.7	Negative		0.03
E3	**16**	**Interior**	**B**	**Door Frame**	**Drywall**	**Fair**	**Beige**	**0.7**	**Positive**	**1 each**	**0.7**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
E3	17	Interior	B	Door Canopy	Wood	Fair	Beige	0.7	Negative		0
E3	18	Interior	D	Door Frame	Wood	Fair	White	0.7	Negative		0.16
E3	19	Interior	B	Furnace	Metal	Fair	White	0.7	Negative		0.49
E3	20	Interior	B	Window Frame	Wood	Fair	White	0.7	Negative		0.26
E3	**21**	**Exterior**	**A**	**Door Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**1 each**	**1.37**
E3	22	Exterior	A	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
E3	**23**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 10**	**2.47**
Building E4											
E4	1	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0.16
E4	**2**	**Exterior**	**D**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**10 each**	**1.36**
E4	**3**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**525 sf**	**1.58**
E4	4	Exterior	D	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
E4	**5**	**Exterior**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**30 ft**	**0.7**
E4	6	Exterior	D	Ramp	Wood	Poor	Blue	0.7	Negative		0
E4	7	Exterior Shed	D	Wall	Metal	Poor	White	0.7	Negative		0.01
E4	8	Exterior	D	Wall	Stucco	Intact	White	0.7	Negative		0
E4	9	Exterior	D	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
E4	10	Exterior	C	Fascia	Wood	Intact	Blue	0.7	Negative		0
E4	11	Interior	C	Door Frame	Wood	Intact	Blue	0.7	Negative		0.05
E4	12	Interior	C	Door	Wood	Intact	Blue	0.7	Negative		0
E4	13	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
E4	14	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
E4	15	Interior	C	Wall	Wood	Intact	White	0.7	Negative		0
E4	16	Interior	C	Furnace	Metal	Intact	Silver	0.7	Negative		0.09
E4	17	Interior	C	Wall	Drywall	Intact	Orange	0.7	Negative		0
E4	18	Interior	C	Cabinet	Wood	Intact	Green	0.7	Negative		0
E4	19	Interior	D	Wall	Drywall	Intact	Brown	0.7	Negative		0
E4	20	Interior	D	Door	Metal	Intact	Brown	0.7	Negative		0
Building E4 East											
E4 East	1	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		0
E4 East	2	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
E4 East	3	Interior	C	Wall	Wood	Intact	White	0.7	Negative		0
E4 East	4	Interior	A	Window Frame	Wood	Intact	White	0.7	Negative		0
Building E4 East Annex											
E4 East Annex	1	Exterior	A	Trim	Wood	Intact	Blue	0.7	Negative		0
E4 East Annex	**2**	**Exterior**	**A**	**Window Frame**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**4 each**	**0.7**
E4 East Annex	**3**	**Exterior**	**A**	**Window Frame**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**same as 2**	**0.7**
E4 East Annex	4	Exterior	A	Wall	Wood	Intact	White	0.7	Negative		0
E4 East Annex	5	Exterior	D	Wall	Wood	Intact	White	0.7	Negative		0
E4 East Annex	6	Exterior	B	Trim	Wood	Intact	Blue	0.7	Negative		0
E4 East Annex	7	Exterior	C	Wall	Wood	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Building E4 West											
E4 West	1	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
E4 West	2	Interior	C	Door Frame	Wood	Intact	White	0.7	Negative		0
E4 West	3	Interior	C	Wall	Wood	Intact	White	0.7	Negative		0
E4 West	4	Interior	A	Window Frame	Wood	Intact	White	0.7	Negative		0
E4 West	5	Exterior	C	Wall	Wood	Fair	Grey	0.7	Negative		0
E4 West	6	Exterior	C	Door Frame	Metal	Fair	Grey	0.7	Negative		0
E4 West	7	Exterior	C	Door Frame	Wood	Fair	Grey	0.7	Negative		0.15
E4 West	**8**	**Exterior**	**C**	**Wall**	**Wood**	**Fair**	**Grey**	**0.7**	**Positive**	**100 sf**	**2.35**
E4 West	9	Exterior	C	Beam	Wood	Fair	Grey	0.7	Negative		0
E4 West	10	Exterior	C	Pipe	Metal	Fair	Grey	0.7	Negative		0
Building E4 West Annex											
E4 West Annex	1	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0
E4 West Annex	2	Exterior	A	Wall	Wood	Intact	White	0.7	Negative		0
E4 West Annex	3	Exterior	A	Trim	Wood	Intact	Blue	0.7	Negative		0
E4 West Annex	4	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0
E4 West Annex	5	Exterior	D	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
E4 West Annex	6	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0
Building E5											
E5	1	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.04
E5	2	Exterior	C	Door Frame	Wood	Poor	Blue	0.7	Negative		0
E5	3	Exterior	A	Hand Rail	Wood	Poor	Blue	0.7	Negative		0.03
E5	4	Exterior	A	Porch	Wood	Poor	Blue	0.7	Negative		0
E5	**5**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**225 sf**	**3.51**
E5	6	Exterior	A	Door Frame	Wood	Poor	Blue	0.7	Negative		0.22
E5	7	Exterior	A	Door	Wood	Fair	Blue	0.7	Negative		0
E5	**8**	**Exterior**	**A**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**15 ft**	**1.63**
E5	9	Exterior	A	Window Frame	Wood	Fair	Blue	0.7	Negative		0
E5	10	Exterior	B	Fire Pipe	Metal	Fair	Red	0.7	Negative		0.02
E5	11	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
E5	12	Exterior	A	Duct	Metal	Fair	White	0.7	Negative		0
E5	13	Exterior	D	Wall	Stucco	Intact	White	0.7	Negative		0
E5	14	Interior	A	Wall	Drywall	Fair	White	0.7	Negative		0
E5	15	Interior	A	Wall	Drywall	Fair	Tan	0.7	Negative		0
E5	16	Interior	D	Door Frame	Wood	Fair	Tan	0.7	Negative		0
E5	17	Interior	D	Door	Wood	Fair	Tan	0.7	Negative		0
E5	**18**	**Interior**	**C**	**Window Casing**	**Wood**	**Fair**	**Tan**	**0.7**	**Positive**	**2 each**	**1.82**
E5	19	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
E5	20	Interior	C	Door Frame	Metal	Intact	Beige	0.7	Negative		0
E5	21	Interior	D	Door Frame	Metal	Intact	Brown	0.7	Negative		0.05
E5	22	Exterior	C	Wall	Stucco	Intact	White	0.7	Negative		0
E5	23	Exterior	C	Door	Wood	Intact	Blue	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
E5	24	Exterior	C	Hand Rail	Metal	Intact	Blue	0.7	Negative		0
E5	25	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.11
E5	26	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0.04
Building E6											
E6	**1**	**Exterior**	**A**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**1,830 sf**	**1.65**
E6	2	Exterior	A	Door Frame	Wood	Fair	Blue	0.7	Negative		0
E6	3	Exterior	A	Door	Wood	Fair	Blue	0.7	Negative		0
E6	**4**	**Exterior**	**A**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**3 each**	**1.89**
E6	**5**	**Exterior**	**A**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**3 each**	**1.34**
E6	6	Exterior	A	Shutters	Wood	Fair	Blue	0.7	Negative		0.06
E6	7	Exterior	A	Trim	Wood	Fair	Blue	0.7	Negative		0.39
E6	**8**	**Exterior**	**A**	**Window Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**13 each**	**2.04**
E6	9	Exterior	A	Downspout	Metal	Fair	White	0.7	Negative		0
E6	**10**	**Exterior**	**A**	**Door Canopy**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**40 sf**	**1.11**
E6	**11**	**Exterior**	**A**	**Eave**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**195 ft**	**1.84**
E6	12	Exterior	D	Wall	Stucco	Intact	White	0.7	Negative		0
E6	13	Exterior	D	Window Frame	Wood	Intact	Blue	0.7	Negative		0
E6	14	Exterior	D	Hand Rail	Metal	Intact	Blue	0.7	Negative		0
E6	15	Exterior	D	Beam	Metal	Intact	White	0.7	Negative		0
E6	16	Exterior	D	Door Canopy	Metal	Intact	Black	0.7	Negative		0
E6	17	Exterior	D	Eave	Wood	Intact	White	0.7	Negative		0
E6	18	Exterior	D	Downspout	Metal	Intact	White	0.7	Negative		0
E6	19	Exterior	D	Gutter	Metal	Intact	Blue	0.7	Negative		0
E6	20	Exterior	D	Fascia	Wood	Intact	Blue	0.7	Negative		0
E6	**21**	**Exterior**	**D**	**Fire Pipe**	**Metal**	**Intact**	**Red**	**0.7**	**Positive**		**0.7**
E6	22	Exterior	C	Window Frame	Wood	Intact	Blue	0.7	Negative		0
E6	23	Exterior	C	Window Frame	Wood	Intact	Blue	0.7	Negative		0.5
E6	**24**	**Exterior**	**C**	**Wall**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**1,830 sf**	**0.99**
E6	25	Exterior	C	Duct	Metal	Intact	White	0.7	Negative		0
E6	26	Exterior	C	Door	Wood	Intact	Blue	0.7	Negative		0
E6	27	Exterior	B	Window Frame	Wood	Intact	Blue	0.7	Negative		0.02
E6	28	Interior	B	Door Frame	Wood	Intact	Grey	0.7	Negative		0
E6	29	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0.13
E6	30	Interior	A	Wall	Wood	Intact	White	0.7	Negative		0.23
E6	31	Interior	A	Window Frame	Wood	Intact	White	0.7	Negative		0.08
E6	32	Interior Dark Room	C	Wall	Drywall	Intact	Black	0.7	Negative		0
E6	**33**	**Interior Restroom**	**A**	**Wall Tile**	**Ceramic**	**Intact**	**Blue**	**0.7**	**Positive**	**13 sf**	**3.61**
E6	**34**	**Interior Restroom**	**A**	**Wall Tile**	**Ceramic**	**Intact**	**Beige**	**0.7**	**Positive**	**52 sf**	**5**
E6	35	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
E6	36	Interior	B	Wall	Drywall	Intact	Grey	0.7	Negative		0
E6	**37**	**Interior**	**C**	**Wall Tile**	**Ceramic**	**Intact**	**Pink**	**0.7**	**Positive**	**1,125 sf**	**5**
E6	38	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
E6	**39**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**Red**	**0.7**	**Positive**	**12 sf**	**5**
E6	40	Interior	D	Wall	Drywall	Intact	Yellow	0.7	Negative		0
E6	41	Interior	D	Window Frame	Wood	Intact	White	0.7	Negative		0
E6	42	Interior	D	Shutters	Wood	Intact	White	0.7	Negative		0
E6	43	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		0
E6	44	Interior	D	Wall	Stucco	Intact	Yellow	0.7	Negative		0
Building E6 Annex											
E6 Annex	1	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
E6 Annex	2	Exterior	B	Door	Wood	Fair	Blue	0.7	Negative		0
E6 Annex	3	Exterior Shed	C	Wall	Wood	Fair	White	0.7	Negative		0.63
E6 Annex	**4**	**Exterior Shed**	**C**	**Trim**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**120 ft**	**2.57**
E6 Annex	5	Exterior Shed	C	Gutter	Metal	Fair	Blue	0.7	Negative		0
E6 Annex	6	Exterior Shed	C	Downspout	Metal	Fair	Blue	0.7	Negative		0
E6 Annex	7	Exterior Shed	B	Door	Wood	Poor	Blue	0.7	Negative		0.1
E6 Annex	**8**	**Exterior Shed**	**B**	**Door Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**1 each**	**1.17**
E6 Annex	**9**	**Exterior Shed**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**150 ft**	**0.8**
E6 Annex	10	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
E6 Annex	11	Exterior	B	Window Frame	Wood	Fair	Blue	0.7	Negative		0
E6 Annex	12	Exterior	B	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
E6 Annex	13	Exterior	B	Door Frame	Wood	Fair	Blue	0.7	Negative		0
E6 Annex	14	Exterior	B	Door Frame	Metal	Fair	Blue	0.7	Negative		0.03
E6 Annex	**15**	**Exterior**	**B**	**Downspout**	**Metal**	**Fair**	**Blue**	**0.7**	**Positive**	**1 each**	**0.7**
E6 Annex	16	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
E6 Annex	17	Exterior	B	Door	Wood	Fair	Blue	0.7	Negative		0
E6 Annex	18	Exterior Shed	B	Wall	Wood	Fair	White	0.7	Negative		0.63
F Corridor											
F Corridor	1	Exterior	A	Wall	Wood	Poor	White	0.7	Negative		0.01
F Corridor	2	Exterior	A	Fascia	Metal	Fair	White	0.7	Negative		0
F Corridor	3	Exterior	A	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
F Corridor	4	Exterior	A	Hand Rail	Wood	Fair	Blue	0.7	Negative		0.06
F Corridor	**5**	**Exterior**	**A**	**Beam**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**1,110 ft**	**1.88**
F Corridor	**6**	**Exterior**	**A**	**Beam**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**825 ft**	**2.03**
F Corridor	7	Exterior	A	Porch	Wood	Poor	Grey	0.7	Negative		0
F Corridor	8	Exterior	0	Pipe	Metal	Poor	White	0.7	Negative		0
F Corridor	**9**	**Exterior**	**0**	**Beam**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**900 ft**	**1.04**
F Corridor	**10**	**Exterior**	**0**	**Ceiling**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**6,250 sf**	**2.08**
F Corridor	11	Exterior	0	Pipe	Metal	Poor	Silver	0.7	Negative		0.04
F Corridor	**12**	**Exterior**	**A**	**Fascia**	**Wood**	**Poor**	**Green**	**0.7**	**Positive**	**1,270 ft**	**2.7**
Building F0											
F0	1	Exterior	D	Beam	Metal	Fair	Red	0.7	Negative		0
F0	2	Exterior	A	Beam	Metal	Fair	Red	0.7	Negative		0.01
F0	3	Exterior	A	Wall	Metal	Intact	White	0.7	Negative		0.01

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
F0	4	Interior	A	Door Frame	Metal	Intact	White	0.7	Negative		0
F0	5	Interior	A	Door	Metal	Intact	White	0.7	Negative		0
F0	6	Interior	D	Wall	Plaster	Intact	White	0.7	Negative		0
Building F1											
F1	1	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
F1	2	Exterior	A	Door Frame	Metal	Intact	Blue	0.7	Negative		0
F1	3	Exterior	A	Door	Metal	Intact	Blue	0.7	Negative		0
F1	4	Interior	A	Door	Metal	Intact	White	0.7	Negative		0
F1	5	Interior	A	Door Frame	Metal	Intact	White	0.7	Negative		0
F1	6	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0.5
F1	7	Interior	0	Floor	Concrete	Intact	Grey	0.7	Negative		0
F1	8	Interior	0	Floor	Concrete	Intact	Blue	0.7	Negative		0
F1	**9**	**Exterior**	**B**	**Door**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**1 each**	**0.9**
Building F2											
F2	1	Exterior	D	Window Frame	Wood	Intact	Blue	0.7	Negative		0
F2	**2**	**Exterior**	**D**	**Window Casing**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**1 each**	**1.96**
F2	3	Exterior	D	Flashing	Metal	Intact	White	0.7	Negative		0
F2	4	Exterior	D	Wall	Stucco	Intact	White	0.7	Negative		0
F2	5	Exterior	D	Door	Wood	Intact	Blue	0.7	Negative		0
F2	6	Exterior	D	Door Frame	Wood	Intact	Blue	0.7	Negative		0
F2	7	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0.34
F2	8	Exterior	B	Wall	Stucco	Intact	Yellow	0.7	Negative		0
Building F3											
F3	**1**	**Exterior**	**A**	**Window Casing**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**2 each**	**1.78**
F3	**2**	**Exterior**	**A**	**Door**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**1 each**	**1.44**
F3	3	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0
F3	4	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0.07
F3	5	Interior	C	Door Frame	Wood	Intact	White	0.7	Negative		0
F3	6	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
F3	7	Interior	D	Wall	Drywall	Intact	Blue	0.7	Negative		0
F3	8	Exterior	C	Door	Wood	Poor	White	0.7	Negative		0
F3	9	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0
Building F3.5											
F3.5	1	Exterior	D	Wall	Metal	Intact	White	0.7	Negative		0
F3.5	2	Exterior	A	Door	Metal	Poor	Blue	0.7	Negative		0
F3.5	3	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
F3.5	4	Interior	C	Door Frame	Wood	Intact	Purple	0.7	Negative		0
F3.5	5	Interior	C	Door	Wood	Intact	Purple	0.7	Negative		0
F3.5	6	Interior	D	Wall	Drywall	Intact	Purple	0.7	Negative		0
F3.5	7	Interior	A	Door Frame	Metal	Intact	Grey	0.7	Negative		0
F3.5	8	Interior	D	Door Frame	Metal	Intact	Brown	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
F3.5	9	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
F3.5	10	Interior	0	Beam	Metal	Intact	Red	0.7	Negative		0
F3.5	11	Interior	C	Door	Wood	Intact	Beige	0.7	Negative		0
Building F4											
F4	**1**	**Exterior**	**A**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**1,680 sf**	**3.26**
F4	2	Exterior	A	Wall	Wood	Fair	White	0.7	Negative		0
F4	3	Exterior	A	Fire Alarm	Metal	Fair	Red	0.7	Negative		0
F4	4	Exterior	D	Window Frame	Wood	Fair	Blue	0.7	Negative		0.12
F4	**5**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 1**	**2.21**
F4	**6**	**Exterior**	**D**	**Fascia**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**12 ft**	**1.24**
F4	7	Exterior	D	Window Frame	Wood	Poor	Blue	0.7	Negative		0.24
F4	**8**	**Exterior**	**B**	**Trim**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**30 ft**	**1.48**
F4	**9**	**Exterior**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**60 ft**	**1.81**
F4	10	Exterior	B	Window Frame	Wood	Poor	Blue	0.7	Negative		0.05
F4	11	Exterior	B	Door Frame	Wood	Intact	Blue	0.7	Negative		0
F4	12	Exterior	B	Door	Wood	Intact	Blue	0.7	Negative		0
F4	13	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
F4	**14**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 1**	**1.13**
F4	15	Exterior	B	Wall	Wood	Poor	White	0.7	Negative		0
F4	16	Interior	B	Door	Wood	Intact	White	0.7	Negative		0
F4	17	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
F4	18	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0
F4	19	Interior	D	Wall	Drywall	Intact	Grey	0.7	Negative		0
F4	20	Interior	B	Wall	Drywall	Intact	Tan	0.7	Negative		0
F4	21	Interior	D	Wall	Drywall	Intact	Pink	0.7	Negative		0
F4	22	Interior	B	Wall	Drywall	Intact	Purple	0.7	Negative		0
Building F4.5											
F4.5	1	Exterior	A	Wall	Wood	Intact	White	0.7	Negative		0
F4.5	2	Exterior	A	Trim	Wood	Intact	Blue	0.7	Negative		0
F4.5	3	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0
F4.5	4	Exterior	D	Door Frame	Wood	Intact	Blue	0.7	Negative		0
F4.5	5	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
F4.5	6	Interior	B	Wall	Drywall	Intact	Green	0.7	Negative		0
F4.5	7	Interior	D	Wall	Drywall	Intact	Tan	0.7	Negative		0
Building F5											
F5	1	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
F5	2	Interior	D	Wall	Plaster	Intact	White	0.7	Negative		0
F5	3	Interior	D	Window Frame	Wood	Intact	White	0.7	Negative		0.14
F5	**4**	**Interior**	**D**	**Window Casing**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**7 each**	**2.88**
F5	5	Interior	B	Window Casing	Wood	Poor	White	0.7	Negative		0.23
F5	6	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0
F5	7	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
F5	8	Exterior	A	Door	Wood	Intact	Blue	0.7	Negative		0
F5	9	Exterior	D	Window Casing	Wood	Poor	Blue	0.7	Negative		0.42
F5	10	Exterior	D	Window Casing	Wood	Poor	Blue	0.7	Negative		0.33
Building F5 Annex											
F5 Annex	1	Exterior	C	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
F5 Annex	2	Exterior	C	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
F5 Annex	3	Exterior	C	Pipe	Metal	Poor	White	0.7	Negative		0
F5 Annex	4	Exterior	C	Window Frame	Metal	Poor	Blue	0.7	Negative		0
F5 Annex	5	Exterior	C	Door Frame	Metal	Poor	Blue	0.7	Negative		0
F5 Annex	6	Exterior	C	Door	Metal	Poor	Blue	0.7	Negative		0
F5 Annex	7	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
F5 Annex	8	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
F5 Annex	9	Interior	D	Wall	Plaster	Intact	White	0.7	Negative		0
F5 Annex	10	Interior	B	Window Casing	Wood	Poor	White	0.7	Negative		0.23
F5 Annex	11	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0
F5 Annex	12	Exterior	B	Wall	Wood	Fair	Green	0.7	Negative		0
Building F6											
F6	1	Exterior	D	Wall	Stucco	Fair	Green	0.7	Negative		0
F6	**2**	**Exterior**	**D**	**Window Casing**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**9 each**	**2.37**
F6	**3**	**Exterior**	**D**	**Vent**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**45 sf**	**1.91**
F6	4	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
F6	5	Interior	B	Door Frame	Wood	Intact	White	0.7	Negative		0.03
F6	6	Interior	B	Door	Wood	Intact	White	0.7	Negative		0
F6	**7**	**Interior**	**B**	**Wall**	**Drywall**	**Intact**	**Beige**	**0.7**	**Positive**	**400 sf**	**0.7**
F6	**8**	**Interior**	**B**	**Wall**	**Drywall**	**Intact**	**Black**	**0.7**	**Positive**	**450 sf**	**0.7**
F6	9	Interior	A	Wall	Wood	Intact	Blue	0.7	Negative		0
F6	10	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		0
F6	11	Interior	C	Wall	Drywall	Intact	Beige	0.7	Negative		0.01
F6	12	Interior	B	Wall	Drywall	Intact	Beige	0.7	Negative		0.1
F6 Shed	13	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.39
F6 Shed	**14**	**Exterior**	**A**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**36 sf**	**1.07**
F6 Shed	15	Exterior	A	Door	Wood	Poor	White	0.7	Negative		0.54
F6 Shed	16	Exterior	A	Wall	Metal	Poor	White	0.7	Negative		0.02
F6 Shed	17	Exterior	A	Fascia	Wood	Poor	White	0.7	Negative		0.23
Building F7											
F7	**1**	**Exterior**	**D**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**19 each**	**0.96**
F7	2	Exterior	D	Fascia	Wood	Poor	Blue	0.7	Negative		0.4
F7	**3**	**Exterior**	**D**	**Vent**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**67.5**	**2.4**
F7	**4**	**Exterior**	**C**	**Fire Pipe**	**Metal**	**Poor**	**Red**	**0.7**	**Positive**	**10 ft**	**0.7**
F7	5	Interior	A	Wall	Drywall	Intact	Tan	0.7	Negative		0.12
F7	6	Interior	A	Ceiling	Drywall	Intact	White	0.7	Negative		0.12
F7	7	Interior	A	Door Frame	Wood	Intact	White	0.7	Negative		0.03

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
F7	8	Interior	A	Door	Wood	Intact	White	0.7	Negative		0.09
F7	9	Interior	D	Wall	Wood	Intact	White	0.7	Negative		0.03
F7	10	Exterior	Roof	Wall	Wood	Poor	White	0.7	Negative		0
F7	11	Exterior	D	Door	Wood	Poor	Blue	0.7	Negative		0.01
F7 Shed	12	Exterior	B	Door	Wood	Poor	White	0.7	Negative		0.63
Building F8											
F8	1	Exterior	C	Wall	Wood	Poor	White	0.7	Negative		0
F8	2	Exterior	D	Door	Wood	Fair	Blue	0.7	Negative		0
F8	3	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0
F8	4	Exterior	D	Door Canopy	Metal	Fair	Blue	0.7	Negative		0
F8	5	Exterior	D	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
F8	**6**	**Exterior**	**D**	**Wall**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**2,250 sf**	**1.27**
F8	7	Exterior	D	Baseboard	Wood	Poor	White	0.7	Negative		0.08
F8	**8**	**Exterior**	**D**	**Window Frame**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**29 each**	**1.15**
F8	9	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
F8	10	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0.01
F8	11	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
F8	12	Interior	A	Door Frame	Wood	Intact	Grey	0.7	Negative		0
F8	13	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
F8	14	Interior	0	Beam	Metal	Intact	White	0.7	Negative		0.15
F8	15	Interior	0	Ceiling	Metal	Intact	Grey	0.7	Negative		0.13
F8	16	Exterior	A	Fascia	Wood	Poor	Blue	0.7	Negative		0.02
F8	17	Exterior	A	Eave	Wood	Poor	White	0.7	Negative		0.01
F8 Shed	18	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.18
Building F9											
F9	1	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
F9	2	Interior	C	Door Frame	Metal	Intact	White	0.7	Negative		0
F9	**3**	**Interior**	**B**	**Wall**	**Drywall**	**Intact**	**White**	**0.7**	**Positive**	**48 sf**	**0.7**
F9	4	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0.23
F9	5	Interior	0	Ceiling	Drywall	Poor	White	0.7	Negative		0.04
F9	6	Interior	0	Beam	Metal	Intact	White	0.7	Negative		0.1
F9	7	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0.08
F9	8	Interior	D	Window Frame	Metal	Poor	White	0.7	Negative		0.09
F9	9	Interior	D	Baseboard	Ceramic	Intact	White	0.7	Negative		0.02
F9	10	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.1
F9	**11**	**Exterior**	**D**	**Wall**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**2, 250 sf**	**1.39**
F9	**12**	**Exterior**	**D**	**Window Frame**	**Metal**	**Fair**	**Brown**	**0.7**	**Positive**	**5 each**	**1.2**
F9	**13**	**Exterior**	**D**	**Door Frame**	**Metal**	**Fair**	**Brown**	**0.7**	**Positive**	**1 each**	**2.21**
F9	14	Exterior	D	Door	Wood	Fair	Brown	0.7	Negative		0
F9	15	Exterior	D	Door Frame	Wood	Fair	White	0.7	Negative		0.06
F9	**16**	**Exterior**	**D**	**Eave**	**Metal**	**Fair**	**White**	**0.7**	**Positive**	**540 sf**	**0.7**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Building F10											
F10	1	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
F10	2	Exterior	B	Trim	Wood	Fair	Blue	0.7	Negative		0
F10	3	Exterior	B	Window Frame	Wood	Fair	Blue	0.7	Negative		0
F10	4	Exterior	B	Door Frame	Metal	Intact	Black	0.7	Negative		0
F10	5	Exterior	B	Hand Rail	Metal	Intact	Black	0.7	Negative		0
F10	6	Exterior	B	Door Canopy	Metal	Intact	Blue	0.7	Negative		0
F10	7	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
F10	8	Interior	B	Door Frame	Metal	Intact	Brown	0.7	Negative		0
F10	9	Interior	B	Wall	Drywall	Intact	Green	0.7	Negative		0
F10	10	Interior	A	Wall	Drywall	Intact	Tan	0.7	Negative		0
F10	11	Interior	C	Wall	Drywall	Intact	Green	0.7	Negative		0
F10	12	Interior	B	Wall	Drywall	Intact	Orange	0.7	Negative		0
Building H1											
H1	1	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
H1	2	Exterior	C	Security Bars	Metal	Fair	Black	0.7	Negative		0
H1	3	Exterior	C	Door Frame	Wood	Fair	Blue	0.7	Negative		0.03
H1	4	Exterior	C	Door	Wood	Fair	White	0.7	Negative		0
H1	5	Exterior	C	Door Canopy	Metal	Fair	White	0.7	Negative		0.01
H1	6	Exterior	A	Fascia	Wood	Fair	Blue	0.7	Negative		0.05
H1	7	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
Harbor UCLA Professional Building											
Harbor UCLA Professional Bldg	1	Interior	A	Wall	Drywall	Intact	Beige	0.7	Negative		0
Harbor UCLA Professional Bldg	2	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
Harbor UCLA Professional Bldg	**3**	**Interior**	**A**	**Wall Tile**	**Ceramic**	**Intact**	**Green**	**0.7**	**Positive**	**1,284 sf**	**5**
Harbor UCLA Professional Bldg	4	Interior	A	Floor	Tile	Intact	Grey	0.7	Negative		0
Harbor UCLA Professional Bldg	5	Interior	D	Door Frame	Metal	Intact	Brown	0.7	Negative		0
Harbor UCLA Professional Bldg	6	Interior	D	Window Frame	Metal	Intact	Black	0.7	Negative		0
Harbor UCLA Professional Bldg	7	Interior	D	Trim	Wood	Intact	White	0.7	Negative		0
Harbor UCLA Professional Bldg	**8**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**White**	**0.7**	**Positive**	**58 sf**	**4.69**
Harbor UCLA Professional Bldg	**9**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**Grey**	**0.7**	**Positive**	**1,284 sf**	**5**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Harbor UCLA Professional Bldg	10	Interior	A	Wall	Drywall	Intact	Grey	0.7	Negative		0
Harbor UCLA Professional Bldg	11	Interior	A	Wall	Drywall	Intact	Green	0.7	Negative		0
Harbor UCLA Professional Bldg	12	Interior	A	Door	Wood	Intact	Yellow	0.7	Negative		0
Harbor UCLA Professional Bldg	13	Interior	D	Wall	Drywall	Intact	Yellow	0.7	Negative		0
Harbor UCLA Professional Bldg	14	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
Harbor UCLA Professional Bldg	15	Exterior	B	Wall	Stucco	Intact	Orange	0.7	Negative		0
Harbor UCLA Professional Bldg	16	Exterior	B	Wall	Stucco	Intact	Green	0.7	Negative		0
Harbor UCLA Professional Bldg	17	Exterior	B	Trim	Metal	Intact	Black	0.7	Negative		0
Harbor UCLA Professional Bldg	18	Exterior	B	Pillar	Concrete	Intact	Grey	0.7	Negative		0
Harbor UCLA Professional Bldg	19	Exterior	D	Window Frame	Metal	Intact	Black	0.7	Negative		0
Harbor UCLA Professional Bldg	20	Exterior	B	Wall	Stucco	Intact	Violet	0.7	Negative		0
Harbor UCLA Professional Bldg	21	Exterior	A	Door	Metal	Intact	Beige	0.7	Negative		0
Harbor UCLA Professional Bldg	22	Exterior	A	Fascia	Metal	Intact	Black	0.7	Negative		0
Harbor UCLA Professional Bldg	23	Exterior	Roof	Pipe	Metal	Intact	Black	0.7	Negative		0.01
Harbor UCLA Professional Bldg	24	Exterior	Roof	Pipe	Metal	Intact	Silver	0.7	Negative		0
Imaging Center											
Imaging Center	1	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
Imaging Center	2	Exterior	B	Trim	Wood	Intact	Blue	0.7	Negative		0
Imaging Center	3	Exterior	B	Trim	Wood	Intact	Green	0.7	Negative		0
Imaging Center	4	Exterior	B	Wall	Stucco	Intact	Grey	0.7	Negative		0
Imaging Center	5	Exterior	B	Flashing	Metal	Intact	White	0.7	Negative		0
Imaging Center	**6**	**Exterior**	**Roof**	**Pipe**	**Metal**	**Intact**	**Grey**	**0.7**	**Positive**	**15 each**	**5**
Imaging Center	7	Exterior	Roof	Wall	Stucco	Intact	White	0.7	Negative		0
Imaging Center	8	Exterior	Roof	Window Frame	Wood	Intact	Peach	0.7	Negative		0
Imaging Center	9	Exterior	C	Bench	Wood	Intact	Grey	0.7	Negative		0
Imaging Center	10	Exterior	A	Door Frame	Metal	Intact	Grey	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Imaging Center	11	Exterior	A	Door	Metal	Intact	Grey	0.7	Negative		0
Imaging Center	12	Exterior	A	Window Frame	Wood	Intact	Grey	0.7	Negative		0
Imaging Center	13	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
Imaging Center	14	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0
Imaging Center	15	Interior	C	Door	Metal	Intact	Grey	0.7	Negative		0
Imaging Center	16	Interior	C	Wall Tile	Ceramic	Intact	Grey	0.7	Negative		0
Imaging Center	17	Interior	C	Wall Tile	Ceramic	Intact	Pink	0.7	Negative		0
Imaging Center	18	Interior	B	Wall	Ceramic	Intact	Tan	0.7	Negative		0
Imaging Center	19	Interior	D	Wall	Drywall	Intact	Grey	0.7	Negative		0
Library											
Library	1	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
Library	2	Interior	C	Wall	Drywall	Intact	Black	0.7	Negative		0
Library	3	Interior	D	Door Frame	Metal	Intact	Brown	0.7	Negative		0
Library	4	Interior	C	Wall	Drywall	Intact	Grey	0.7	Negative		0
Library	5	Interior	A	Door	Metal	Intact	Brown	0.7	Negative		0
Library	6	Interior	B	Wall	Brick	Intact	White	0.7	Negative		0
Library	**7**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**Beige**	**0.7**	**Positive**	**75 sf**	**0.7**
Library	8	Exterior	B	Wall	Concrete	Intact	Beige	0.7	Negative		0
Library	9	Interior	B	Hand Rail	Metal	Fair	Beige	0.7	Negative		0.02
Library	10	Interior	A	Wall	Drywall	Intact	Green	0.7	Negative		0
Library	11	Interior	B	Wall Tile	Ceramic	Intact	Beige	0.7	Negative		0
Library	12	Interior	B	Wall Tile	Ceramic	Intact	Blue	0.7	Negative		0
Library	**13**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**Beige**	**0.7**	**Positive**	**same as 7**	**0.7**
Library	14	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
Library	15	Interior	A	Wall	Drywall	Intact	Tan	0.7	Negative		0
Library	16	Interior	B	Wall	Brick	Intact	Tan	0.7	Negative		0
Library	17	Exterior	A	Wall	Concrete	Intact	Brown	0.7	Negative		0
Library	18	Exterior	A	Eave	Wood	Intact	Brown	0.7	Negative		0
Building M1											
M1	1	Exterior	A	Wall	Metal	Fair	Beige	0.7	Negative		0
M1	2	Exterior	A	Downspout	Metal	Fair	Beige	0.7	Negative		0
M1	3	Exterior	A	Door Frame	Metal	Fair	Blue	0.7	Negative		0
M1	4	Exterior	A	Door	Metal	Fair	Blue	0.7	Negative		0
M1	5	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
M1	6	Interior	A	Door Frame	Metal	Intact	Brown	0.7	Negative		0.05
M1	7	Interior	D	Door Frame	Metal	Intact	Grey	0.7	Negative		0
M1	8	Interior	D	Door	Wood	Intact	White	0.7	Negative		0
M1	9	Interior	A	Beam	Metal	Intact	Brown	0.7	Negative		0.01
M1	10	Interior	A	Wall	Metal	Intact	Grey	0.7	Negative		0
M1	11	Interior	A	Beam	Metal	Intact	Yellow	0.7	Negative		0.01

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Building N6											
N6	**1**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**33,750 sf**	**1.67**
N6	2	Exterior	B	Door	Wood	Fair	Blue	0.7	Negative		0
N6	3	Exterior	B	Door Frame	Wood	Fair	Blue	0.7	Negative		0
N6	4	Exterior	B	Window Frame	Wood	Poor	Blue	0.7	Negative		0.07
N6	5	Exterior	B	Window Casing	Wood	Poor	Blue	0.7	Negative		0.56
N6	6	Exterior	B	Window Sill	Wood	Poor	Blue	0.7	Negative		0.03
N6	7	Exterior	B	Hand Rail	Metal	Poor	Black	0.7	Negative		0
N6	8	Exterior	C	Trim	Wood	Poor	Blue	0.7	Negative		0.18
N6	9	Exterior	C	Window Frame	Wood	Poor	Blue	0.7	Negative		0.24
N6	**10**	**Exterior**	**C**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**33,750 sf**	**3.71**
N6	11	Exterior	C	Pipe	Metal	Fair	White	0.7	Negative		0
N6	12	Exterior 2 Inch	C	Pipe	Metal	Fair	White	0.7	Negative		0.17
N6	**13**	**Exterior**	**C**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**230 ft**	**1.79**
N6	14	Exterior	C	Flashing	Metal	Fair	White	0.7	Negative		0
N6	15	Exterior Vent Shed	roof	Flashing	Metal	Poor	White	0.7	Negative		0
N6	**16**	**Exterior Vent Shed**	**roof**	**Trim**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**14 ft**	**2.89**
N6	**17**	**Exterior Vent Shed**	**roof**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**28 sf**	**2.23**
N6	18	Exterior	roof	Pipe	Metal	Poor	White	0.7	Negative		0
N6	19	Interior	Side B	Door	Wood	Poor	White	0.7	Negative		0
N6	**20**	**Interior**	**Side B**	**Door Frame**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**1 each**	**0.7**
N6	21	Interior	Side B	Wall	Drywall	Fair	White	0.7	Negative		0
N6	22	Interior	Side B	Window Frame	Wood	Fair	White	0.7	Negative		0
N6	**23**	**Interior**	**Side B**	**Window Casing**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**17 each**	**0.98**
N6	**24**	**Interior**	**C**	**Window Casing**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**17 each**	**1.5**
N6	25	Interior	C	Window Sill	Wood	Fair	White	0.7	Negative		0.05
N6	26	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0
N6	27	Interior	C	Door Frame	Metal	Fair	Grey	0.7	Negative		0.01
N6	28	Interior	C	Door Frame	Wood	Fair	White	0.7	Negative		0
N6	29	Interior	C	Door	Wood	Fair	White	0.7	Negative		0
N6	30	Exterior	C	Door Canopy	Metal	Fair	White	0.7	Negative		0.01
Building N7											
N7	1	Exterior	D	Wall	Stucco	Fair	White	0.7	Negative		0
N7	2	Exterior	D	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N7	3	Exterior	D	Porch	Wood	Fair	Grey	0.7	Negative		0
N7	4	Exterior	D	Door	Wood	Fair	Blue	0.7	Negative		0.01
N7	5	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0.04
N7	6	Exterior	D	Beam	Wood	Fair	Blue	0.7	Negative		0.01
N7	7	Exterior	D	Fascia	Wood	Fair	Blue	0.7	Negative		0.01
N7	8	Exterior	D	Flashing	Metal	Fair	White	0.7	Negative		0
N7	9	Exterior Eave	D	Door Canopy	Wood	Fair	White	0.7	Negative		0.01
N7	10	Exterior Eave	D	Door Canopy	Wood	Fair	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N7	11	Exterior	Side A	Security Bars	Metal	Fair	Black	0.7	Negative		0.05
N7	12	Exterior	Side A	Trim	Metal	Fair	Blue	0.7	Negative		0.04
N7	13	Exterior	Side B	Wall	Stucco	Fair	White	0.7	Negative		0
N7	14	Exterior	Side B	Door	Wood	Fair	Blue	0.7	Negative		0.05
N7	**15**	**Exterior**	**Side B**	**Door Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**1 each**	**0.7**
N7	16	Exterior	Side B	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N7	17	Exterior	Side B	Vent	Metal	Fair	White	0.7	Negative		0
N7	18	Exterior	A	Eave	Wood	Fair	White	0.7	Negative		0.02
N7	19	Exterior	A	Fascia	Wood	Poor	Blue	0.7	Negative		0.03
N7	20	Exterior	roof	Pipe	Metal	Fair	White	0.7	Negative		0
N7	21	Interior	Side B	Wall	Drywall	Intact	Blue	0.7	Negative		0
N7	22	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
N7	23	Interior	B	Door Frame	Wood	Intact	White	0.7	Negative		0
N7	24	Interior	D	Wall	Drywall	Intact	Grey	0.7	Negative		0
N7	25	Interior	0	Vent	Metal	Intact	White	0.7	Negative		0
Building N8											
N8	1	Exterior	B	Wall	Stucco	Fair	White	0.7	Negative		0
N8	2	Exterior	B	Trim	Metal	Fair	White	0.7	Negative		0
N8	3	Exterior	B	Downspout	Metal	Fair	White	0.7	Negative		0.03
N8	4	Exterior	B	Door	Metal	Fair	Blue	0.7	Negative		0
N8	5	Exterior	B	Door Frame	Metal	Fair	Blue	0.7	Negative		0
N8	6	Exterior 1 Inch	B	Pipe	Metal	Fair	White	0.7	Negative		0.01
N8	7	Exterior	D	Flashing	Metal	Fair	White	0.7	Negative		0.01
N8	8	Exterior	C	Gutter	Metal	Fair	White	0.7	Negative		0
N8	9	Exterior	C	Eave	Wood	Fair	White	0.7	Negative		0
N8	10	Exterior	C	Door	Wood	Poor	Blue	0.7	Negative		0
N8	11	Exterior	C	Trim	Metal	Fair	Blue	0.7	Negative		0
N8	12	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0
N8	13	Interior	C	Door	Wood	Intact	White	0.7	Negative		0.08
N8	14	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0.03
N8	15	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
N8	16	Interior	B	Door	Metal	Intact	White	0.7	Negative		0
N8	17	Interior	B	Door Frame	Metal	Intact	White	0.7	Negative		0
N8	18	Interior	0	Beam	Metal	Fair	Red	0.7	Negative		0
Building N9											
N9	1	Exterior	D	Door	Metal	Fair	Blue	0.7	Negative		0
N9	2	Exterior	D	Door Frame	Metal	Fair	Blue	0.7	Negative		0
N9	3	Exterior	D	Wall	Metal	Fair	White	0.7	Negative		0
N9	4	Exterior	D	Door Jamb	Metal	Fair	White	0.7	Negative		0
N9	5	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0
N9	6	Interior	D	Door Frame	Metal	Fair	White	0.7	Negative		0
N9	7	Interior	Side B	Door	Metal	Fair	Blue	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N9	8	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
N9	9	Interior	0	Ceiling	Wood	Intact	Grey	0.7	Negative		0
N9	10	Interior	A	Pillar	Concrete	Intact	White	0.7	Negative		0
N9	11	Interior	B	Door Frame	Metal	Intact	Brown	0.7	Negative		0.04
N9	**12**	**Interior**	**D**	**Beam**	**Metal**	**Intact**	**Yellow**	**0.7**	**Positive**	**27 each**	**1.9**
N9	13	Interior	D	Beam	Metal	Intact	Red	0.7	Negative		0
N9	14	Interior	0	Hand Rail	Metal	Intact	Grey	0.7	Negative		0
N9	**15**	**Interior**	**0**	**Beam**	**Metal**	**Intact**	**Yellow**	**0.7**	**Positive**	**27 each**	**1.5**
N9	16	Exterior	B	Wall	Metal	Intact	White	0.7	Negative		0
N9	17	Exterior	B	Fire Pipe	Metal	Intact	Red	0.7	Negative		0.05
N9	18	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
N9	19	Exterior	C	Eave	Wood	Fair	White	0.7	Negative		0
N9	20	Exterior	C	Fascia	Wood	Fair	White	0.7	Negative		0
N9	21	Exterior	C	Window Frame	Wood	Fair	White	0.7	Negative		0
N9	22	Exterior	A	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
Building N11											
N11	1	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0.02
N11	2	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0
N11	3	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		0
N11	4	Interior	D	Window Frame	Wood	Intact	White	0.7	Negative		0
N11	5	Interior	D	Window Casing	Wood	Intact	White	0.7	Negative		0.14
N11	6	Interior	0	Vent	Metal	Intact	White	0.7	Negative		0
N11	7	Interior	0	Ceiling	Drywall	Intact	White	0.7	Negative		0.02
N11	8	Interior Restroom	B	Window Frame	Metal	Intact	White	0.7	Negative		0.15
N11	9	Interior Restroom	B	Window Frame	Metal	Intact	White	0.7	Negative		0.02
N11	10	Interior Restroom	B	Window Casing	Metal	Intact	White	0.7	Negative		0.13
N11	11	Interior	A	Door	Wood	Intact	White	0.7	Negative		0
N11	12	Interior	A	Door Frame	Wood	Intact	White	0.7	Negative		0.11
N11	13	Interior	A	Wall	Concrete	Intact	White	0.7	Negative		0.11
N11	14	Interior	D	Light Fixture	Ceramic	Intact	White	0.7	Negative		0.01
N11	15	Interior	Side A	Wall	Acoustic Tile	Intact	White	0.7	Negative		0
N11	16	Exterior	Side A	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N11	17	Exterior	Side A	Porch	Wood	Fair	Blue	0.7	Negative		0
N11	18	Exterior	Side A	Door	Metal	Fair	Blue	0.7	Negative		0
N11	19	Exterior	Side A	Door Frame	Metal	Fair	Blue	0.7	Negative		0.54
N11	20	Exterior	Side A	Wall	Brick	Fair	White	0.7	Negative		0.07
N11	**21**	**Exterior**	**Side B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**750 sf**	**1.46**
N11	**22**	**Exterior**	**Side B**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**7 each**	**1.21**
N11	23	Exterior	Side B	Security Bars	Metal	Poor	Black	0.7	Negative		0
N11	24	Exterior	Side B	Electrical Box	Metal	Poor	White	0.7	Negative		0.52
N11	25	Exterior	Side B	Vent	Metal	Poor	White	0.7	Negative		0.01
N11	26	Exterior	Side B	Pipe	Metal	Poor	White	0.7	Positive		0.7

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N11	**27**	**Exterior**	**D**	**Door**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**1 each**	**1.4**
N11	**28**	**Exterior**	**D**	**Door Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**1 each**	**0.98**
N11	29	Exterior	D	Hand Rail	Wood	Poor	Blue	0.7	Negative		0.37
N11	30	Exterior	D	Porch	Wood	Poor	Blue	0.7	Negative		0.24
N11	**31**	**Exterior**	**D**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**750 sf**	**1.18**
N11	32	Exterior	D	Door	Wood	Poor	Blue	0.7	Negative		0
N11	33	Exterior	D	Door Frame	Wood	Poor	Blue	0.7	Negative		0.43
N11	34	Exterior	D	Trim	Wood	Poor	Blue	0.7	Negative		0.08
N11	**35**	**Exterior**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**135 ft**	**1.36**
N11	36	Exterior	B	Flashing	Metal	Poor	Blue	0.7	Negative		0.07
N11	37	Exterior	roof	Vent	Metal	Poor	White	0.7	Negative		0.14
Building N12											
N12	1	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
N12	2	Interior	A	Door	Metal	Intact	White	0.7	Negative		0
N12	3	Interior	A	Door Frame	Metal	Intact	White	0.7	Negative		0
N12	4	Interior	A	Door Jamb	Metal	Intact	Blue	0.7	Negative		0.05
N12	5	Interior	C	Door Frame	Wood	Intact	White	0.7	Negative		0
N12	6	Interior	C	Window Sill	Drywall	Intact	White	0.7	Negative		0
N12	7	Interior	0	Beam	Metal	Intact	Blue	0.7	Negative		0
N12	8	Interior	D	Wall	Wood	Intact	White	0.7	Negative		0
N12	9	Interior	D	Window Frame	Wood	Intact	White	0.7	Negative		0
N12	10	Exterior	A	Window Frame	Wood	Intact	Blue	0.7	Negative		0
N12	11	Exterior	A	Door Frame	Wood	Intact	Blue	0.7	Negative		0
N12	12	Exterior	A	Door Frame	Metal	Intact	Blue	0.7	Negative		0
N12	13	Exterior	A	Door	Metal	Intact	Blue	0.7	Negative		0
N12	14	Exterior	A	Beam	Wood	Intact	Blue	0.7	Negative		0
N12	15	Exterior	A	Hand Rail	Metal	Intact	Blue	0.7	Negative		0
N12	16	Exterior	A	Wall	Wood	Intact	White	0.7	Negative		0
N12	17	Exterior	A	Door Canopy	Wood	Intact	White	0.7	Negative		0
N12	18	Exterior	D	Trim	Wood	Intact	Blue	0.7	Negative		0
N12	19	Exterior	D	Fire Pipe	Metal	Intact	White	0.7	Negative		0
N12	20	Exterior	C	Porch	Wood	Intact	Blue	0.7	Negative		0
N12	21	Exterior	D	Fascia	Wood	Intact	Blue	0.7	Negative		0
Building N14											
N14	**1**	**Exterior**	**A**	**Door**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**3 each**	**2.09**
N14	**2**	**Exterior**	**A**	**Door Frame**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**3 each**	**2.5**
N14	3	Exterior	A	Hand Rail	Metal	Intact	Blue	0.7	Negative		0
N14	4	Exterior	A	Downspout	Metal	Intact	Blue	0.7	Negative		0
N14	5	Exterior	A	Porch	Concrete	Intact	Blue	0.7	Negative		0
N14	**6**	**Exterior**	**A**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**6,240 sf**	**2.08**
N14	7	Exterior	A	Porch	Wood	Intact	White	0.7	Negative		0
N14	8	Exterior	D	Porch Wall	Wood	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N14	**9**	**Exterior**	**A**	**Porch Window Frame**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**1 each**	**1.63**
N14	**10**	**Exterior**	**A**	**Porch Beams**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**8 each**	**1.39**
N14	**11**	**Exterior**	**A**	**Porch Beams**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**same as 10**	**1.62**
N14	12	Exterior	A	Window Casing	Wood	Intact	Blue	0.7	Negative		0.12
N14	13	Exterior	A	Fire Pipe	Metal	Poor	Red	0.7	Negative		0
N14	14	Exterior	A	Pipe	Plastic	Poor	White	0.7	Negative		0
N14	15	Exterior	A	Wall	Stucco	Fair	White	0.7	Negative		0
N14	16	Exterior	B	Wall	Wood	Poor	Grey	0.7	Negative		0
N14	**17**	**Exterior**	**A**	**Wall**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**same as 6**	**2.35**
N14	**18**	**Exterior**	**A**	**Window Casing**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**49 each**	**1.76**
N14	**19**	**Exterior**	**A**	**Window Frame**	**Wood**	**Intact**	**Blue**	**0.7**	**Positive**	**same as 18**	**3.52**
N14	20	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
N14	21	Exterior	D	Downspout	Metal	Intact	White	0.7	Negative		0
N14	22	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.01
N14	23	Exterior	D	Wall	Stucco	Poor	White	0.7	Negative		0
N14	**24**	**Exterior**	**D**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 18**	**0.99**
N14	**25**	**Exterior**	**D**	**Trim**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**150 ft**	**0.81**
N14	26	Exterior	C	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N14	27	Exterior	C	Door	Wood	Fair	Blue	0.7	Negative		0
N14	28	Exterior	C	Door Frame	Wood	Fair	Blue	0.7	Negative		0
N14	**29**	**Exterior**	**C**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**same as 6**	**1.51**
N14	**30**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**same as 6**	**0.94**
N14	**31**	**Exterior**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**416 ft**	**3.15**
N14	32	Exterior	B	Flashing	Metal	Poor	Blue	0.7	Negative		0
N14	33	Exterior	B	Flashing	Metal	Poor	Blue	0.7	Negative		0.08
N14	34	Exterior Vent	Roof	Flashing	Metal	Poor	Blue	0.7	Negative		0.07
N14	35	Exterior Vent	Roof	Fascia	Wood	Poor	Blue	0.7	Negative		0.03
N14	36	Exterior Vent	Roof	Wall	Wood	Poor	White	0.7	Positive		0.7
N14	37	Exterior Shed	C	Wall	Plaster	Poor	White	0.7	Negative		0
N14	**38**	**Exterior Shed**	**C**	**Beam**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**170 ft**	**1.18**
N14	**39**	**Exterior Shed**	**D**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**3 each**	**2.25**
N14	40	Exterior Shed	C	Door	Wood	Poor	Blue	0.7	Negative		0
N14	**41**	**Exterior Shed**	**D**	**Door Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**2 each**	**0.96**
N14	**42**	**Exterior Shed**	**D**	**Window Frame**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**same as 39**	**1.18**
N14	**43**	**Exterior Shed**	**C**	**Vent**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**4 sf**	**1.55**
N14	44	Exterior Shed	C	Fascia	Wood	Poor	Blue	0.7	Negative		0.12
N14	**45**	**Exterior Shed**	**C**	**Eave**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**40 sf**	**0.8**
N14	**46**	**Exterior Shed**	**D**	**Wall**	**Plaster**	**Poor**	**White**	**0.7**	**Positive**	**400 sf**	**1.44**
N14	47	Exterior Hvac	D	Wall	Metal	Poor	Blue	0.7	Negative		0.21
N14	48	Exterior Enclosure	D	Wall	Wood	Poor	White	0.7	Negative		0.02
N14	49	Exterior Shed	D	Door	Wood	Fair	Blue	0.7	Negative		0
N14	50	Exterior Shed	D	Door	Wood	Fair	Blue	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N14	**51**	**Exterior Shed**	**D**	**Door Frame**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**same as 41**	**1.1**
N14	52	Exterior Shed	D	Wall	Stucco	Fair	White	0.7	Negative		0
N14	53	Interior	A	Door	Wood	Fair	Blue	0.7	Negative		0.33
N14	54	Interior	B	Wall	Drywall	Fair	Blue	0.7	Negative		0.19
N14	55	Interior	B	Trim	Wood	Fair	Blue	0.7	Negative		0.24
N14	56	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0.09
N14	57	Interior	D	Wall	Wood	Intact	White	0.7	Negative		0.1
N14	58	Interior	D	Door Frame	Wood	Intact	White	0.7	Negative		0.32
N14	59	Interior	B	Shutters	Wood	Intact	White	0.7	Negative		0
N14	60	Interior	B	Window Frame	Wood	Intact	White	0.7	Negative		0.48
N14	**61**	**Interior**	**B**	**Window Casing**	**Wood**	**Intact**	**White**	**0.7**	**Positive**	**same as 18**	**1.88**
N14	62	Interior	C	Wall	Drywall	Intact	Peach	0.7	Negative		0
N14	63	Interior	D	Wall	Drywall	Intact	Grey	0.7	Negative		0.31
N14	**64**	**Interior Restroom**	**D**	**Wall**	**Tile**	**Intact**	**Green**	**0.7**	**Positive**	**36 sf**	**5**
N14	**65**	**Interior Restroom**	**D**	**Floor**	**Tile**	**Intact**	**Green**	**0.7**	**Positive**	**12 sf**	**5**
N14	66	Interior Restroom	D	Sink Top	Ceramic	Intact	Grey	0.7	Negative		0
N14	67	Interior Restroom	D	Wall	Drywall	Intact	White	0.7	Negative		0.19
N14	68	Interior Restroom	D	Window Frame	Wood	Intact	White	0.7	Negative		0.09
N14	69	Interior Restroom	D	Window Casing	Wood	Intact	White	0.7	Negative		0.11
N14	70	Interior Restroom	D	Window Casing	Wood	Intact	White	0.7	Negative		0
N14	71	Exterior	B	Planter	Brick	Intact	Red	0.7	Negative		0
N14	72	Exterior Canopy Cover	A	Hand Rail	Wood	Poor	Blue	0.7	Negative		0
N14	73	Exterior Canopy Cover	A	Beam	Wood	Poor	Blue	0.7	Negative		0.01
N14	74	Exterior Canopy Cover	A	Beam	Wood	Poor	White	0.7	Negative		0.28
N14	**75**	**Exterior Canopy Cover**	**A**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**25 sf**	**1.77**
Building N16											
N16	1	Exterior	D	Hand Rail	Metal	Poor	Blue	0.7	Negative		0
N16	2	Exterior	D	Trim	Wood	Poor	Blue	0.7	Negative		0
N16	3	Exterior	D	Wall	Wood	Poor	White	0.7	Negative		0.03
N16	4	Exterior	D	Door	Wood	Poor	Blue	0.7	Negative		0
N16	5	Exterior	D	Door Casing	Wood	Poor	Blue	0.7	Negative		0
N16	6	Exterior	D	Door Canopy	Wood	Poor	Blue	0.7	Negative		0
N16	7	Exterior	D	Door Canopy	Wood	Poor	White	0.7	Negative		0
N16	8	Exterior	D	Window Casing	Wood	Poor	Blue	0.7	Negative		0
N16	9	Exterior	D	Window Casing	Metal	Poor	Blue	0.7	Negative		0
N16	10	Exterior	A	Steps	Metal	Poor	Blue	0.7	Negative		0
N16	11	Exterior	A	Door	Metal	Poor	Blue	0.7	Negative		0
N16	12	Exterior	B	Fire Pipe	Metal	Poor	Red	0.7	Negative		0.05
N16	13	Exterior 2 Inch	B	Pipe	Metal	Poor	White	0.7	Negative		0.04
N16	14	Exterior	A	Fascia	Wood	Fair	Blue	0.7	Negative		0.02
N16	15	Exterior	A	Gutter	Metal	Fair	White	0.7	Negative		0
N16	16	Interior	C	Wall	Wood	Intact	Pink	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N16	17	Interior	A	Wall	Wood	Intact	White	0.7	Negative		0
N16	18	Interior	A	Window Sill	Wood	Intact	White	0.7	Negative		0
N16	19	Interior	A	Door Frame	Wood	Intact	White	0.7	Negative		0
N16	20	Interior	D	Cabinet	Wood	Intact	Grey	0.7	Negative		0
N16	21	Interior	D	Counter Top	Wood	Intact	Grey	0.7	Negative		0
N16	22	Interior	D	Door	Wood	Intact	White	0.7	Negative		0
N16	23	Restroom	B	Wall	Plastic	Intact	White	0.7	Negative		0
N16	24	Restroom	C	Wall	Wood	Intact	Beige	0.7	Negative		0
N16	25	Restroom	D	Cabinet	Wood	Intact	White	0.7	Negative		0
Building N17											
N17	1	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
N17	2	Interior	C	Window Sill	Wood	Intact	White	0.7	Negative		0
N17	3	Interior	Side B	Door Frame	Metal	Intact	Brown	0.7	Negative		0
N17	4	Interior	A	Door Frame	Wood	Intact	White	0.7	Negative		0
N17	5	Interior	A	Door	Wood	Intact	White	0.7	Negative		0.26
N17	6	Interior	A	Window Casing	Metal	Intact	White	0.7	Negative		0
N17	7	Interior	A	Wall	Drywall	Intact	Blue	0.7	Negative		0
N17	8	Exterior	A	Wall	Stucco	Fair	White	0.7	Negative		0
N17	**9**	**Exterior**	**A**	**Door Canopy**	**Metal**	**Fair**	**Blue**	**0.7**	**Positive**	**6 sf**	**1.29**
N17	**10**	**Exterior**	**A**	**Door**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**1 each**	**1.45**
N17	11	Exterior	A	Door Frame	Wood	Fair	Blue	0.7	Negative		0.15
N17	12	Exterior	A	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N17	13	Exterior	A	Ramp	Wood	Fair	Blue	0.7	Negative		0
N17	**14**	**Exterior**	**A**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**260 ft**	**1.93**
N17	15	Exterior	A	Flashing	Metal	Fair	White	0.7	Negative		0
N17	16	Exterior	A	Security Bars	Metal	Fair	Black	0.7	Negative		0
N17	**17**	**Exterior**	**A**	**Window Sill**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**11 each**	**1.24**
N17	18	Exterior	C	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
N17	19	Exterior	C	Window Sill	Wood	Poor	Blue	0.7	Negative		0.37
N17	20	Exterior	C	Window Sill	Wood	Poor	Blue	0.7	Negative		0.12
N17	**21**	**Exterior**	**C**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**11 each**	**2.1**
N17	22	Exterior	C	Gutter	Metal	Poor	Blue	0.7	Negative		0
N17	23	Snack Bar	A	Wall	Drywall	Intact	White	0.7	Negative		0
N17	24	Snack Bar	A	Window Sill	Wood	Intact	White	0.7	Negative		0
N17	25	Snack Bar	roof	Ceiling	Wood	Intact	White	0.7	Negative		0
Building N18											
N18	1	Exterior	roof	Pipe	Metal	Fair	Beige	0.7	Negative		0.01
N18	2	Exterior	C	Fascia	Metal	Fair	Blue	0.7	Negative		0.04
N18	3	Exterior	C	Eave	Wood	Fair	White	0.7	Negative		0
N18	4	Exterior	C	Eave	Wood	Fair	White	0.7	Negative		0.01
N18	5	Exterior	C	Wall	Stucco	Fair	White	0.7	Negative		0
N18	6	Exterior	C	Hand Rail	Wood	Fair	Blue	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N18	7	Exterior	C	Ramp	Wood	Fair	Blue	0.7	Negative		0
N18	8	Exterior	C	Door	Wood	Fair	Blue	0.7	Negative		0
N18	9	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
N18	10	Interior	C	Door Frame	Wood	Intact	Pink	0.7	Negative		0
N18	11	Interior	C	Door Frame	Wood	Intact	Pink	0.7	Negative		0
N18	12	Interior	B	Wall	Drywall	Intact	Pink	0.7	Negative		0
N18	13	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
N18	14	Interior	B	Door Frame	Wood	Intact	Blue	0.7	Negative		0
Building N20											
N20	1	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0
N20	2	Interior	A	Door	Metal	Intact	Black	0.7	Negative		0
N20	3	Interior	A	Door Frame	Metal	Intact	Black	0.7	Negative		0
N20	4	Interior	B	Door Frame	Metal	Intact	Grey	0.7	Negative		0
N20	**5**	**Restroom**	**B**	**Tile**	**Ceramic**	**Intact**	**White**	**0.7**	**Positive**	**544 sf**	**0.7**
N20	**6**	**Restroom**	**B**	**Tile**	**Ceramic**	**Intact**	**Blue**	**0.7**	**Positive**	**100 sf**	**0.7**
N20	7	Restroom	0	Tile	Ceramic	Intact	Grey	0.7	Negative		0
N20	8	Interior	A	Door	Metal	Intact	Blue	0.7	Negative		0
N20	9	Interior	A	Door Frame	Metal	Intact	Blue	0.7	Negative		0
N20	10	Interior	B	Door	Metal	Intact	Tan	0.7	Negative		0
N20	11	Interior	B	Door Frame	Metal	Intact	Tan	0.7	Negative		0.07
N20	12	Interior	B	Door Casing	Metal	Intact	Tan	0.7	Negative		0.07
N20	13	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
N20	14	Exterior	A	Window Sill	Metal	Intact	Black	0.7	Negative		0
N20	15	Exterior	A	Downspout	Metal	Intact	White	0.7	Negative		0
N20	16	Exterior	C	Fire Pipe	Metal	Intact	Red	0.7	Negative		0
N20	17	Exterior	roof	Flashing	Metal	Fair	White	0.7	Negative		0
N20	18	Exterior	roof	Beam	Metal	Fair	Grey	0.7	Negative		0
N20	19	Exterior	roof	Vent	Metal	Fair	Grey	0.7	Negative		0
N20	**20**	**Exterior Vent Pipe**	**roof**	**Pipe**	**Metal**	**Fair**	**Grey**	**0.7**	**Positive**	**5 each**	**5**
Building N21											
N21	1	Exterior	B	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N21	2	Exterior	B	Steps	Wood	Intact	Grey	0.7	Negative		0.04
N21	3	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
N21	4	Exterior	B	Trim	Wood	Fair	Blue	0.7	Negative		0
N21	5	Exterior	B	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
N21	6	Exterior	A	Window Casing	Wood	Fair	Blue	0.7	Negative		0
N21	7	Exterior	A	Window Casing	Metal	Poor	Brown	0.7	Negative		0.01
N21	8	Interior	Side D	Door	Wood	Fair	Blue	0.7	Negative		0.01
N21	9	Interior	Side D	Door Frame	Metal	Fair	Blue	0.7	Negative		0.03
N21	10	Interior	Side D	Wall	Wood	Fair	White	0.7	Negative		0
N21	11	Interior	0	Ceiling	Wood	Intact	White	0.7	Negative		0
N21	12	Interior	A	Wall	Drywall	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N21	13	Interior	A	Window Frame	Wood	Intact	White	0.7	Negative		0
N21	14	Interior	A	Window Casing	Metal	Intact	Beige	0.7	Negative		0.05
N21	15	Exterior	Side D	Door	Wood	Intact	Blue	0.7	Negative		0.07
N21	16	Exterior	Side D	Door Frame	Metal	Intact	Blue	0.7	Negative		0.03
N21	17	Exterior	Side A	Fascia	Wood	Fair	Blue	0.7	Negative		0
N21	18	Exterior	roof		Metal	Fair	White	0.7	Negative		0
N21 Canopy Cover											
N21 canopy cover	1	Exterior	Side D	Beam	Wood	Intact	Blue	0.7	Negative		0
N21 canopy cover	2	Exterior	Side D	Hand Rail	Wood	Intact	Blue	0.7	Negative		0
N21 canopy cover	3	Exterior	0	Ceiling	Wood	Intact	White	0.7	Negative		0
N21 canopy cover	4	Exterior	0	Beam	Wood	Intact	White	0.7	Negative		0
N21 canopy cover	5	Exterior	0	Ramp	Wood	Intact	Blue	0.7	Negative		0
Building N22											
N22	1	Interior	Side D	Wall	Drywall	Fair	White	0.7	Negative		0
N22	2	Interior	Side A	Door Frame	Wood	Fair	White	0.7	Negative		0
N22	3	Interior	0	Ceiling	Drywall	Fair	White	0.7	Negative		0
N22	4	Interior	C	Window Sill	Wood	Fair	White	0.7	Negative		0
N22	**5**	**Interior**	**C**	**Window Casing**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**17 each**	**1.4**
N22	**6**	**Interior**	**C**	**Window Casing**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**17 each**	**1.98**
N22	7	Interior	C	Window Sill	Wood	Poor	White	0.7	Negative		0.13
N22	**8**	**Interior**	**C**	**Window Sill**	**Wood**	**Poor**	**White**	**0.7**	**Positive**		**0.7**
N22	9	Interior	B	Sink Top	Wood	Fair	Grey	0.7	Negative		0
N22	10	Interior	B	Cabinet	Wood	Fair	White	0.7	Negative		0
N22	**11**	**Interior**	**Side A**	**Window Casing**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**17 each**	**2.63**
N22	12	Interior	Side A	Window Sill	Wood	Poor	White	0.7	Negative		0.01
N22	**13**	**Exterior**	**Side A**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**17 each**	**1.74**
N22	**14**	**Exterior**	**Side A**	**Window Sill**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**17 each**	**1.4**
N22	15	Exterior	Side A	Hand Rail	Metal	Fair	Black	0.7	Negative		0
N22	16	Exterior	Side A	Security Bars	Metal	Fair	Black	0.7	Negative		0
N22	17	Exterior	Side A	Wall	Stucco	Fair	White	0.7	Negative		0
N22	18	Exterior	Side A	Door Frame	Wood	Fair	Blue	0.7	Negative		0.07
N22	**19**	**Exterior**	**Side A**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**260 ft**	**1.51**
N22	20	Exterior	Side A	Gutter	Metal	Fair	Blue	0.7	Negative		0
N22	21	Exterior	Side A	Flashing	Metal	Fair	White	0.7	Negative		0
N22	22	Exterior	C	Window Sill	Wood	Fair	Blue	0.7	Negative		0.09
N22	**23**	**Exterior**	**C**	**Window Casing**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**17 each**	**1.06**
N22	24	Exterior	Side D	Downspout	Metal	Fair	Grey	0.7	Negative		0
N22	25	Exterior	B	Door	Wood	Fair	Blue	0.7	Negative		0
N22	26	Exterior	B	Door Frame	Wood	Fair	Blue	0.7	Negative		0.05
N22	**27**	**Exterior**	**B**	**Beam**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**2 each**	**2.1**
N22	**28**	**Exterior**	**B**	**Beam**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**4 each**	**0.79**
N22	29	Exterior - 1 Inch	B	Pipe	Metal	Fair	White	0.7	Negative		0.07

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Building N24											
N24	1	Exterior Canopy Cover	0	Ceiling	Wood	Poor	White	0.7	Negative		0
N24	**2**	**Exterior Canopy Cover**	**0**	**Beam**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**76 each**	**0.88**
N24	3	Exterior Canopy Cover	0	Ceiling	Wood	Poor	White	0.7	Negative		0
N24	4	Exterior Canopy Cover 2 Inch	0	Pipe	Metal	Fair	White	0.7	Negative		0.06
N24	5	Exterior Canopy Cover 1 Inch	0	Pipe	Metal	Fair	White	0.7	Negative		0
N24	6	Exterior Canopy Cover	0	Beam	Wood	Fair	White	0.7	Negative		0
N24	**7**	**Exterior Canopy Cover**	**B**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**156 ft**	**0.92**
N24	8	Exterior	B	Wall	Stucco	Intact	White	0.7	Negative		0
N24	9	Exterior	B	Door	Wood	Intact	Blue	0.7	Negative		0
N24	10	Exterior	B	Door Frame	Wood	Intact	Blue	0.7	Negative		0
N24	11	Exterior	B	Door	Wood	Poor	White	0.7	Negative		0.06
N24	**12**	**Exterior**	**B**	**Eave**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**98 sf**	**0.91**
N24	13	Exterior	C	Wall	Plaster	Poor	White	0.7	Negative		0
N24	14	Exterior	C	Downspout	Metal	Poor	White	0.7	Negative		0
N24	15	Exterior	C	Window Frame	Metal	Poor	Blue	0.7	Negative		0.07
N24	16	Exterior	C	Window Casing	Wood	Poor	Blue	0.7	Negative		0.03
N24	**17**	**Exterior**	**B**	**Fascia**	**Wood**	**Fair**	**Blue**	**0.7**	**Positive**	**56 ft**	**0.92**
N24	18	Exterior	B	Flashing	Metal	Fair	Blue	0.7	Negative		0.09
N24	19	Exterior	B	Eave	Wood	Poor	White	0.7	Negative		0.46
N24	20	Exterior	B	Wall	Stucco	Poor	White	0.7	Negative		0
N24	21	Exterior	B	Fascia	Wood	Fair	Blue	0.7	Negative		0.03
N24	22	Exterior	roof	Beam	Metal	Fair	Blue	0.7	Negative		0
N24	23	Interior	B	Door	Wood	Fair	White	0.7	Negative		0
N24	24	Interior	B	Door Frame	Wood	Fair	White	0.7	Negative		0
N24	25	Interior	B	Door Frame	Metal	Fair	White	0.7	Negative		0
N24	26	Interior	Side A	Wall	Drywall	Fair	White	0.7	Negative		0
N24	27	Interior	Side A	Window Casing	Metal	Fair	White	0.7	Negative		0
N24	28	Interior	Side D	Wall	Stucco	Fair	White	0.7	Negative		0
N24	29	Interior	Side A	Wall	Drywall	Fair	Blue	0.7	Negative		0
N24	30	Interior	B	Door	Drywall	Fair	Blue	0.7	Negative		0
N24	31	Interior Restroom	B	Wall	Tile	Fair	White	0.7	Negative		0.01
N24	32	Interior Restroom	B	Door Frame	Metal	Fair	Grey	0.7	Negative		0.04
N24	33	Interior Restroom	B	Window Casing	Metal	Fair	Black	0.7	Negative		0
N24	34	Interior	B	Wall	Drywall	Intact	Orange	0.7	Negative		0
N24	35	Interior	B	Wall	Drywall	Intact	Green	0.7	Negative		0
N24	36	Interior Restroom	Side A	Wall	Tile	Intact	Beige	0.7	Negative		0
N24	37	Interior Restroom	Side A	Wall	Tile	Intact	Blue	0.7	Negative		0
N24	**38**	**Interior Restroom**	**Side D**	**Wall**	**Tile**	**Intact**	**Green**	**0.7**	**Positive**	**32 sf**	**4.02**
N24	39	Interior Restroom	Side A	Partition	Wood	Intact	Blue	0.7	Negative		0.19
N24	40	Interior Restroom	Side A	Partition	Metal	Intact	Blue	0.7	Negative		0.32
N24	41	Interior Restroom	Side A	Window Frame	Metal	Intact	Blue	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N24	42	Exterior	roof	Fascia	Wood	Poor	Blue	0.7	Negative		0.01
N24	**43**	**Exterior**	**roof**	**Window Frame**	**Metal**	**Poor**	**Blue**	**0.7**	**Positive**	**15 each**	**1.97**
N24	**44**	**Exterior**	**roof**	**Window Casing**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**15 each**	**2.36**
N24	45	Exterior	roof	Eave	Wood	Poor	Blue	0.7	Negative		0
N24	**46**	**Exterior**	**roof**	**Beam**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**96 each**	**0.92**
N24	47	Exterior	roof	Wall	Stucco	Poor	White	0.7	Negative		0.01
N24	**48**	**Exterior**	**roof**	**Fascia**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**56 ft**	**2.44**
N24	49	Exterior	roof	Flashing	Metal	Poor	Blue	0.7	Negative		0
N24	**50**	**Exterior**	**roof**	**Window Sill**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**15 each**	**2.48**
N24	51	Exterior	roof	Beam	Metal	Fair	White	0.7	Negative		0
N24	52	Exterior	roof	Flashing	Metal	Fair	Silver	0.7	Negative		0
N24	53	Exterior	roof	Roof	Stucco	Fair	White	0.7	Negative		0
N24	**54**	**Exterior**	**roof**	**Pipe**	**Metal**	**Fair**	**Grey**	**0.7**	**Positive**	**2 each**	**5**
Building N25											
N25	1	Exterior	Side A	Wall	Stucco	Fair	Blue	0.7	Negative		0
N25	2	Exterior	Side A	Wall	Stucco	Fair	White	0.7	Negative		0
N25	3	Exterior	Side A	Downspout	Metal	Fair	White	0.7	Negative		0
N25	4	Exterior	Side A	Downspout	Metal	Fair	Blue	0.7	Negative		0
N25	5	Exterior	Side A	Pipe	Metal	Fair	Red	0.7	Negative		0
N25	6	Exterior	Side A	Gutter	Metal	Fair	Blue	0.7	Negative		0
N25	7	Exterior	roof	Pipe	Metal	Fair	White	0.7	Negative		0
N25	8	Exterior	B	Fire Pipe	Metal	Fair	Red	0.7	Negative		0
N25	9	Exterior	C	Wall	Stucco	Fair	Blue	0.7	Negative		0
N25	10	Exterior	C	Door	Metal	Fair	Blue	0.7	Negative		0
N25	11	Exterior	C	Door Frame	Metal	Fair	Blue	0.7	Negative		0
N25	12	Exterior	C	Wall	Stucco	Fair	White	0.7	Negative		0
N25	13	Exterior	C	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
N25	14	Exterior	Side D	Downspout	Metal	Fair	Blue	0.7	Negative		0
N25	15	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
N25	16	Interior	Side A	Wall	Drywall	Intact	White	0.7	Negative		0
N25	17	Interior	Side A	Door Frame	Metal	Intact	Grey	0.7	Negative		0.02
N25	18	Interior	Side A	Door	Wood	Intact	Varnish	0.7	Negative		0
N25	19	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
N25	20	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0.03
N25	21	Restroom	C	Wall	Drywall	Intact	White	0.7	Negative		0
N25	22	Restroom	Side D	Wall	Drywall	Intact	White	0.7	Negative		0
N25	23	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
N25	24	Interior E118	B	Wall	Drywall	Intact	Blue	0.7	Negative		0
N25	25	Interior	B	Door	Wood	Intact	White	0.7	Negative		0
N25	26	Interior	B	Door Frame	Metal	Intact	White	0.7	Negative		0
N25	27	Interior	Side A	Tile	Ceramic	Intact	Grey	0.7	Negative		0
N25	**28**	**Interior**	**Side A**	**Tile**	**Ceramic**	**Intact**	**Grey**	**0.7**	**Positive**	**64 sf**	**0.7**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N25	29	Interior Neurology Center	Side A	Wall	Drywall	Intact	Green	0.7	Negative		0
N25	30	Interior Neurology Center	Side A	Wall	Drywall	Intact	White	0.7	Negative		0
N25	31	Interior Neurology Center	Side A	Door Frame	Metal	Intact	Grey	0.7	Negative		0
N25	32	Interior Neurology Center	Side D	Door	Wood	Intact	Varnish	0.7	Negative		0
Building N26											
N26	1	Interior	Side A	Wall	Wood	Intact	Blue	0.7	Negative		0
N26	2	Interior	Side A	Window Sill	Wood	Intact	White	0.7	Negative		0
N26	3	Interior	Side A	Door Frame	Metal	Intact	White	0.7	Negative		0
N26	4	Interior	Side A	Wall	Wood	Intact	White	0.7	Negative		0
N26	5	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
N26	6	Interior	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0
N26	7	Interior	Side B	Wall	Wood	Intact	Peach	0.7	Negative		0
N26	8	Interior	Side B	Wall	Plastic	Intact	Peach	0.7	Negative		0
N26	9	Interior	Side A	Wall	Wood	Intact	Beige	0.7	Negative		0
N26	10	Interior	Side A	Wall	Wood	Intact	Blue	0.7	Negative		0
N26	11	Interior	Side A	Wall	Wood	Intact	White	0.7	Negative		0
N26	12	Interior	Side A	Window Casing	Wood	Intact	Blue	0.7	Negative		0
N26	13	Interior	Side A	Door	Wood	Intact	Blue	0.7	Negative		0
Building N26A											
N26A	1	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
N26A	2	Exterior	B	Trim	Wood	Fair	Blue	0.7	Negative		0
N26A	3	Exterior	B	Door	Wood	Fair	Blue	0.7	Negative		0
N26A	4	Exterior	B	Door Frame	Metal	Fair	Blue	0.7	Negative		0
N26A	5	Exterior	B	Window Casing	Wood	Fair	Blue	0.7	Negative		0
N26A	6	Exterior	B	Skirting	Wood	Fair	White	0.7	Negative		0
N26A	7	Interior	Side A	Wall	Wall Paper	Fair	Blue	0.7	Negative		0
N26A	8	Interior	Side A	Door Frame	Wood	Fair	White	0.7	Negative		0
N26A	9	Interior	Side A	Vent	Metal	Fair	White	0.7	Negative		0
N26A	10	Interior	B	Window Sill	Wood	Fair	White	0.7	Negative		0
N26A	11	Interior	B	Ceiling	Drywall	Fair	White	0.7	Negative		0
N26A	12	Interior	C	Wall	Wood	Fair	White	0.7	Negative		0
N26A	13	Interior	Side A	Wall	Wood	Fair	Blue	0.7	Negative		0
Building N26B											
N26B	1	Exterior	Side A	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N26B	2	Exterior	Side A	Ramp	Wood	Fair	Blue	0.7	Negative		0
N26B	3	Exterior	Side A	Trim	Wood	Fair	Blue	0.7	Negative		0
N26B	4	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
N26B	5	Exterior	B	Window Casing	Wood	Fair	Blue	0.7	Negative		0
N26B	6	Exterior	Side D	Door	Wood	Fair	Blue	0.7	Negative		0
N26B	7	Exterior	Side D	Door Casing	Metal	Fair	Blue	0.7	Negative		0
N26B	8	Interior	0	Tile	Plastic	Intact	White	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N26B	9	Interior	B	Wall	Wood	Intact	White	0.7	Negative		0
N26B	10	Interior	C	Door	Wood	Intact	White	0.7	Negative		0
N26B	11	Interior	C	Door Grate	Metal	Intact	White	0.7	Negative		0
N26B	12	Interior	C	Door Frame	Metal	Intact	White	0.7	Negative		0
N26B	13	Interior	Side A	Vent	Metal	Intact	White	0.7	Negative		0
Building N26C											
N26C	1	Exterior	Side A	Wall	Wood	Fair	White	0.7	Negative		0
N26C	2	Exterior	Side A	Window Casing	Wood	Fair	Blue	0.7	Negative		0
N26C	3	Exterior	Side A	Door	Wood	Fair	Blue	0.7	Negative		0
N26C	4	Exterior	Side A	Door Casing	Wood	Fair	Blue	0.7	Negative		0
N26C	5	Exterior	Side A	Door Frame	Metal	Fair	Blue	0.7	Negative		0
N26C	6	Exterior	Side A	Door	Metal	Fair	Blue	0.7	Negative		0
N26C	7	Interior	Side A	Door	Metal	Intact	White	0.7	Negative		0
N26C	8	Interior	Side A	Wall	Drywall	Intact	Blue	0.7	Negative		0
N26C	9	Interior	Side B	Wall	Wood	Intact	White	0.7	Negative		0
N26C	10	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0
N26C	11	Interior	Side D	Wall	Drywall	Intact	Grey	0.7	Negative		0
N26C	12	Interior	0	Floor	Tile	Intact	Grey	0.7	Negative		0
N26C	13	Interior	Side A	Wall	Drywall	Intact	Green	0.7	Negative		0
N26C	14	Interior	C	Door Frame	Metal	Intact	Grey	0.7	Negative		0
N26C	15	Exterior	Side D	Downspout	Plastic	Fair	White	0.7	Negative		0
N26C	16	Restroom	Side A	Wall	Drywall	Intact	White	0.7	Negative		0
Building N28											
N28	1	Exterior	Side D	Wall	Stucco	Fair	White	0.7	Negative		0
N28	2	Exterior	Side D	Window Casing	Wood	Fair	Blue	0.7	Negative		0.01
N28	3	Exterior	Side D	Wall	Stucco	Fair	White	0.7	Negative		0
N28	4	Exterior	Side D	Door Frame	Metal	Fair	Black	0.7	Negative		0
N28	5	Exterior	Side D	Eave	Wood	Fair	White	0.7	Negative		0
N28	6	Exterior	Side D	Wall	Wood	Fair	White	0.7	Negative		0
N28	7	Exterior	C	Door Casing	Wood	Fair	Blue	0.7	Negative		0.06
N28	**8**	**Exterior**	**C**	**Fire Pipe**	**Metal**	**Fair**	**Red**	**0.7**	**Positive**	**1 each**	**0.81**
N28	**9**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**1,350 sf**	**2.6**
N28	10	Exterior	B	Wall	Wood	Poor	White	0.7	Negative		0.04
N28	11	Exterior	B	Wall	Wood	Poor	White	0.7	Negative		0
N28	**12**	**Exterior**	**B**	**Wall**	**Wood**	**Poor**	**White**	**0.7**	**Positive**	**1,350 sf**	**2.68**
N28	13	Exterior	B	Door	Wood	Poor	Blue	0.7	Negative		0
N28	14	Exterior	B	Wall	Stucco	Poor	White	0.7	Negative		0
N28	15	Exterior	B	Fascia	Wood	Poor	Blue	0.7	Negative		0
N28	16	Exterior	B	Flashing	Metal	Poor	Blue	0.7	Negative		0
N28	**17**	**Exterior**	**B**	**Pipe**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**30 ft**	**3.1**
N28	**18**	**Exterior**	**B**	**Pipe**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**30 ft**	**3.21**
N28	**19**	**Exterior 1 Inch**	**B**	**Pipe**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**20 ft**	**1.07**

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N28	20	Exterior 3 Inch	Side D	Pipe	Metal	Fair	White	0.7	Negative		0
N28	21	Exterior	roof	Vent	Metal	Fair	White	0.7	Negative		0.35
N28	22	Exterior	roof	Vent	Metal	Fair	White	0.7	Negative		0
N28	23	Exterior	C	Hand Rail	Wood	Fair	Blue	0.7	Negative		0
N28	24	Exterior	B	Window Sill	Metal	Fair	White	0.7	Negative		0
N28	25	Interior - Hallway	C	Wall	Drywall	Intact	Mauve	0.7	Negative		0
N28	26	Interior - Hallway	C	Door Casing	Wood	Intact	White	0.7	Negative		0
N28	27	Interior - Hallway	C	Door	Wood	Intact	Varnish	0.7	Negative		0
N28	28	Interior - Stockroom	Side D	Wall	Drywall	Intact	White	0.7	Negative		0
N28	29	Interior - Hallway	B	Wall	Drywall	Intact	White	0.7	Negative		0
N28	30	Interior - Hallway	Side D	Wall	Drywall	Intact	Green	0.7	Negative		0
N28	31	Interior - Breakroom	Side D	Wall	Drywall	Intact	White	0.7	Negative		0
N28	32	Interior - Restroom	Side A	Chair Rail	Wood	Intact	White	0.7	Negative		0
N28	33	Interior - Restroom	0	Partition	Metal	Intact	Brown	0.7	Negative		0.03
Building N31											
N31	1	Exterior	Side A	Skirting	Metal	Fair	Blue	0.7	Negative		0.19
N31	2	Exterior	Side A	Skirting	Metal	Fair	Blue	0.7	Negative		0.24
N31	3	Exterior	Side A	Wall	Metal	Fair	White	0.7	Negative		0.01
N31	4	Exterior	Side A	Flashing	Metal	Fair	Blue	0.7	Negative		0
N31	5	Exterior	Side A	Eave	Metal	Fair	Blue	0.7	Negative		0.07
N31	6	Exterior	Side A	Eave	Metal	Fair	White	0.7	Negative		0.2
N31	7	Exterior	Side A	Electrical Box	Metal	Fair	White	0.7	Negative		0.06
N31	8	Exterior	Side A	Pipe	Metal	Fair	White	0.7	Negative		0.02
N31	9	Exterior	Side A	Hand Rail	Metal	Fair	Blue	0.7	Negative		0.02
N31	10	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
N31	11	Interior	0	Beam	Drywall	Intact	White	0.7	Negative		0
N31	12	Interior	0	Door	Wood	Intact	White	0.7	Negative		0
N31	13	Interior	Side A	Door Casing	Wood	Intact	White	0.7	Negative		0.04
N31	14	Interior	Side A	Door	Wood	Intact	Varnish	0.7	Negative		0
N31	15	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
N31	16	Interior	B	Door	Wood	Intact	White	0.7	Negative		0
N31	17	Interior	Side D	Chalk Board	Plaster	Intact	Green	0.7	Negative		0.3
N31	18	Exterior - 3 Inch	roof	Pipe	Metal	Fair	White	0.7	Negative		0.15
N31	19	Exterior	roof	Vent	Metal	Intact	White	0.7	Negative		0
N31	20	Exterior	roof	Vent	Metal	Intact	White	0.7	Negative		0
Building N32											
N32	1	Exterior	Side D	Hand Rail	Metal	Intact	Blue	0.7	Negative		0.02
N32	2	Exterior	Side D	Wall	Stucco	Intact	White	0.7	Negative		0
N32	3	Exterior	Side D	Wall	Metal	Intact	White	0.7	Negative		0
N32	4	Exterior	Side D	Door	Wood	Intact	Blue	0.7	Negative		0
N32	5	Exterior	Side D	Door Casing	Metal	Intact	Black	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
N32	6	Exterior	C	Downspout	Metal	Intact	White	0.7	Negative		0.02
N32	7	Exterior	C	Fire Pipe	Metal	Intact	Red	0.7	Negative		0
N32	8	Exterior	Side D	Fascia	Metal	Intact	Blue	0.7	Negative		0
N32	9	Exterior	Side D	Flashing	Wood	Intact	Blue	0.7	Negative		0
N32	10	Exterior	Side D	Door Canopy	Metal	Intact	White	0.7	Negative		0
N32	11	Interior - Restroom	Side D	Wall	Drywall	Intact	White	0.7	Negative		0
N32	12	Interior - Restroom	C	Door	Wood	Intact	Varnish	0.7	Negative		0.07
N32	13	Interior - Restroom	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0.01
N32	14	Interior - Restroom	C	Door Frame	Metal	Intact	Brown	0.7	Negative		0
N32	15	Exterior - Hazmat Sheds	Side D	Wall	Metal	Intact	Beige	0.7	Negative		0
N32	16	Exterior - Hazmat Sheds	Side D	Wall	Metal	Intact	White	0.7	Negative		0.01
N32	17	Exterior - Hazmat Sheds	Side D	Trim	Metal	Intact	Brown	0.7	Negative		0
N32	18	Exterior - Hazmat Sheds	Side D	Wall	Metal	Intact	Beige	0.7	Negative		0.05
N32	19	Exterior - Bin	Side D	Wall	Metal	Intact	Beige	0.7	Negative		0
N32	20	Exterior - Bin	Side A	Wall	Metal	Intact	White	0.7	Negative		0
N32	21	Exterior - Bin	B	Wall	Metal	Intact	Beige	0.7	Negative		0.01
Building N33											
N33	1	Exterior	C	Wall	Wood	Fair	White	0.7	Negative		0
N33	2	Exterior	Side D	Wall	Wood	Fair	White	0.7	Negative		0
N33	3	Exterior	Side D	Trim	Wood	Fair	Blue	0.7	Negative		0
N33	4	Exterior	Side D	Hand Rail	Metal	Fair	Blue	0.7	Negative		0
N33	5	Exterior	Side D	Downspout	Metal	Fair	Blue	0.7	Negative		0
N33	6	Interior	B	Wall	Drywall	Intact	White	0.7	Negative		0
N33	7	Interior	B	Door Frame	Metal	Intact	Brown	0.7	Negative		0.03
N33	8	Interior	B	Door	Wood	Intact	Blue	0.7	Negative		0
N33	9	Interior	B	Wall	Drywall	Intact	Pink	0.7	Negative		0
N33	10	Interior	C	Window Casing	Wood	Intact	White	0.7	Negative		0
N33	11	Daycare	Side A	Wall	Drywall	Intact	Blue	0.7	Negative		0
N33	12	Maintenance	0	Ceiling	Acoustic	Intact	White	0.7	Negative		0
N33	13	Interior	Side A	Door Casing	Metal	Intact	Grey	0.7	Negative		0
N33	14	Interior	Side A	Door	Wood	Intact	Varnish	0.7	Negative		0
Paint Shop											
Paint Shop	1	Exterior	B	Wall	Stucco	Fair	White	0.7	Negative		0
Paint Shop	2	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0
Paint Shop	3	Exterior	B	Door Casing	Wood	Fair	Blue	0.7	Negative		0
Paint Shop	4	Exterior	B	Door	Wood	Fair	Blue	0.7	Negative		0
Paint Shop	5	Exterior	B	Gutter	Metal	Fair	Blue	0.7	Negative		0
Paint Shop	6	Exterior	B	Door Canopy	Stucco	Fair	White	0.7	Negative		0
Paint Shop	7	Exterior	B	Door Frame	Metal	Fair	Blue	0.7	Negative		0
Paint Shop	8	Exterior	B	Fascia	Metal	Fair	White	0.7	Negative		0
Paint Shop	9	Exterior	B	Wall	Wood	Fair	White	0.7	Negative		0.45
Paint Shop	10	Exterior	C	Window Sill	Wood	Poor	Blue	0.7	Negative		0.14

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
Paint Shop	**11**	**Exterior**	**C**	**Window Sill**	**Wood**	**Poor**	**Blue**	**0.7**	**Positive**	**2 each**	**0.7**
Paint Shop	12	Exterior	C	Window Casing	Wood	Poor	Blue	0.7	Negative		0.02
Paint Shop	**13**	**Exterior**	**C**	**Window Canopy**	**Metal**	**Poor**	**White**	**0.7**	**Positive**	**2 each**	**0.7**
Paint Shop	14	Exterior	Side D	Window Sill	Wood	Poor	Blue	0.7	Negative		0.42
Paint Shop	15	Exterior	Side D	Security Bars	Metal	Fair	Black	0.7	Negative		0
Paint Shop	16	Exterior	Side D	Wall	Wood	Fair	White	0.7	Negative		0
Paint Shop	17	Exterior - 4 Inch	Side D	Pipe	Metal	Fair	White	0.7	Negative		0.01
Paint Shop	18	Exterior - 1 Inch	Roof	Pipe	Metal	Fair	White	0.7	Negative		0
Paint Shop	**19**	**Exterior**	**Roof**	**Shutters**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**6 each**	**0.82**
Paint Shop	20	Exterior	Rood	Fascia	Wood	Fair	White	0.7	Negative		0.22
Paint Shop	21	Interior	Side A	Wall	Wood	Fair	White	0.7	Negative		0
Paint Shop	22	Interior	Side A	Wall	Wood	Fair	Blue	0.7	Negative		0.01
Paint Shop	23	Interior	Side A	Wall	Wood	Fair	Grey	0.7	Negative		0.04
Paint Shop	24	Interior	C	Door	Wood	Fair	Varnish	0.7	Negative		0
Paint Shop	25	Interior	Side D	Door Frame	Wood	Fair	White	0.7	Negative		0
Paint Shop	26	Interior	Side A	Beam	Wood	Fair	White	0.7	Negative		0.62
Paint Shop	**27**	**Interior**	**Side D**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**150 sf**	**0.7**
Paint Shop	28	Interior	Side D	Beam	Wood	Fair	White	0.7	Negative		0.41
Paint Shop	29	Interior	C	Wall	Wood	Fair	White	0.7	Negative		0
Paint Shop	**30**	**Interior**	**C**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**5 each**	**0.86**
Paint Shop	31	Interior	C	Beam	Wood	Fair	White	0.7	Negative		0.62
Paint Shop	**32**	**Interior**	**Side D**	**Wall**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**150 sf**	**0.76**
Paint Shop	33	Interior	C	Wall	Wood	Fair	Beige	0.7	Negative		0
Paint Shop	34	Interior	0	Ceiling	Wood	Fair	White	0.7	Negative		0
Paint Shop	35	Interior	0	Beam	Wood	Fair	White	0.7	Negative		0
Paint Shop	**36**	**Interior**	**Side A**	**Beam**	**Wood**	**Fair**	**White**	**0.7**	**Positive**	**6 each**	**0.86**
Paint Shop	37	Interior	Side A	Wall	Wood	Fair	White	0.7	Negative		0.06
Paint Shop	38	Interior - 2 Inch	Side A	Pipe	Metal	Fair	White	0.7	Negative		0.05
Paint Shop Offices	39	Interior	Side A	Wall	Stucco	Intact	Blue	0.7	Negative		0
Paint Shop Offices	40	Interior	C	Wall	Stucco	Intact	White	0.7	Negative		0
Paint Shop Offices	41	Interior	C	Wall	Drywall	Intact	Tan	0.7	Negative		0
Paint Shop Offices	42	Interior	Side A	Wall	Drywall	Intact	Peach	0.7	Negative		0
Paint Shop Offices	43	Interior	Side A	Door Jamb	Wood	Intact	White	0.7	Negative		0
Paint Shop Offices	44	Interior	0	Ceiling	Drywall	Intact	White	0.7	Negative		0
Building T1											
T1	1	Exterior	A	Wall	Stucco	Intact	White	0.7	Negative		0
T1	2	Exterior	A	Wall	Wood	Intact	White	0.7	Negative		0
T1	3	Exterior	A	Security Bars	Metal	Intact	Black	0.7	Negative		0
T1	4	Exterior	A	Window Casing	Wood	Poor	Blue	0.7	Positive		1.77
T1	5	Exterior	D	Door Frame	Wood	Fair	Blue	0.7	Negative		0.3
T1	6	Exterior	D	Door	Wood	Fair	Blue	0.7	Negative		0
T1	7	Exterior	D	Fascia	Wood	Fair	Blue	0.7	Negative		0

TABLE 2 - XRF READINGS FOR LEAD CONTAINING SUBSTANCES

Building No.	Reading No.	Room	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
T1	8	Interior	C	Wall	Drywall	Intact	White	0.7	Negative		0
T1	9	Interior	C	Door Frame	Wood	Intact	White	0.7	Negative		0
Warehouse 1											
Warehouse 1	1	Exterior	B	Wall	Concrete	Fair	White	0.7	Negative		0
Warehouse 1	**2**	**Exterior**	**0**	**Pipe**	**Metal**	**Fair**	**White**	**0.7**	**Positive**	**25 each**	**5**
Warehouse 1	3	Exterior	0	Vent	Metal	Fair	White	0.7	Negative		0
Warehouse 1	4	Exterior	B	Wall	Stucco	Fair	White	0.7	Negative		0
Warehouse 1	5	Exterior	0	Pipe	Metal	Fair	White	0.7	Negative		0
Warehouse 1	6	Exterior	D	Wall	Concrete	Fair	White	0.7	Negative		0
Warehouse 1	7	Exterior	A	Wall	Metal	Fair	Grey	0.7	Negative		0.19
Warehouse 1	8	Exterior	A	Window Frame	Metal	Fair	White	0.7	Negative		0.1
Warehouse 1	9	Interior	A	Door	Wood	Fair	White	0.7	Negative		0.07
Warehouse 1	10	Interior	C	Wall	Stucco	Fair	White	0.7	Negative		0.16
Warehouse 1	11	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0.16
Warehouse 1	12	Interior	D	Wall	Drywall	Intact	White	0.7	Negative		0.29
Warehouse 1	13	Interior	C	Wall	Drywall	Intact	Blue	0.7	Negative		0
Warehouse 1	14	Interior	D	Pipe	Metal	Intact	White	0.7	Negative		0.06
Warehouse 1	15	Interior	B	Door Frame	Metal	Intact	Brown	0.7	Negative		0
Warehouse 1	16	Interior	B	Wall	Concrete	Intact	Beige	0.7	Negative		0
Warehouse 1	17	Interior	B	Wall	Drywall	Intact	Beige	0.7	Negative		0.1
Warehouse 1	**18**	**Interior**	**B**	**Wall Tile**	**Ceramic**	**Intact**	**Blue**	**0.7**	**Positive**	**795 sf**	**5**
Warehouse 1	19	Interior	B	Screen Door	Metal	Intact	Blue	0.7	Negative		0
Warehouse 1	20	Interior	B	Wall	Drywall	Intact	Purple	0.7	Negative		0.4
Warehouse 2											
Warehouse 2	1	Exterior	C	Wall	Metal	Fair	White	0.7	Negative		0
Warehouse 2	2	Exterior	C	Door Frame	Metal	Fair	White	0.7	Negative		0.01
Warehouse 2	3	Exterior	C	Door	Metal	Fair	White	0.7	Negative		0
Warehouse 2	4	Interior	C	Counter Top	Wood	Fair	Grey	0.7	Negative		0
Warehouse 2	5	Interior	D	Door Frame	Metal	Fair	Brown	0.7	Negative		0.06
Warehouse 2	6	Interior	C	Wall	Drywall	Fair	White	0.7	Negative		0
Warehouse 2	7	Interior	B	Wall	Drywall	Intact	Blue	0.7	Negative		0
Warehouse 2	8	Interior	A	Beam	Metal	Intact	Brown	0.7	Negative		0
Warehouse 2	9	Interior	A	Door Frame	Metal	Fair	Beige	0.7	Negative		0
Warehouse 2	10	Interior	A	Door	Metal	Fair	Beige	0.7	Negative		0

Notes:
ft - feet
mg/cm^2 - milligrams per square centimeter
No. - number

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
1 East		
Throughout building	Air conditioning units	8
	Fluorescent light bulbs	190
	PCB containing light ballasts	5
	Fluorescent light ballasts	49
	Compact fluorescent lamps	7
	Battery Exit Sign	3
	Mercury containing thermostats	0
1 South		
Throughout building	Air conditioning units	5
	Fluorescent light bulbs	440
	PCB containing light ballasts	0
	Fluorescent light ballasts	127
	Compact fluorescent lamps	11
	Mercury containing thermostats	0
2 East		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	94
	PCB containing light ballasts	0
	Compact fluorescent lamps	5
	Battery Exit Sign	13
	Mercury containing thermostats	0
2 South		
Throughout building	Air conditioning units	8
	Fluorescent light bulbs	228
	PCB containing light ballasts	0
	Compact fluorescent lamps	9
	Battery Exit Sign	2
	Mercury containing thermostats	4
3 South		
Throughout building	Air conditioning units	18
	Fluorescent light bulbs	865
	Fluorescent light ballasts	223
	Compact fluorescent lamps	10
	Battery Exit Sign	8
	Mercury containing thermostats	1
Building 14		
Throughout building	Air conditioning units	5
	Fluorescent light bulbs	28
	PCB containing light ballasts	7
	Compact fluorescent lamps	3
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building 16		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	40
	Fluorescent light ballasts	10
	Compact fluorescent lamps	2
	Mercury containing thermostats	0
Building 18		
Throughout building	Air conditioning units	5
	Fluorescent light bulbs	24
	Fluorescent light ballasts	6
	Compact fluorescent lamps	7
	Mercury containing thermostats	1
Building B1		
Throughout building	Air conditioning units	6
	Fluorescent light bulbs	285
	Fluorescent light ballasts	74
	Compact fluorescent lamps	4
	Mercury containing thermostats	1
Building B1 Room 9		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	0
	Fluorescent light ballasts	0
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building B2		
Throughout building	Air conditioning units	4
	Fluorescent light bulbs	159
	Fluorescent light ballasts	51
	Compact fluorescent lamps	10
	Mercury containing thermostats	0
Building B2 West		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	54
	Fluorescent light ballasts	17
	Compact fluorescent lamps	3
	Mercury containing thermostats	0
Building B3		
Throughout building	Air conditioning units	5
	Fluorescent light bulbs	159
	Fluorescent light ballasts	45
	Compact fluorescent lamps	5
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building B3 Annex		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	72
	Fluorescent light ballasts	18
	Compact fluorescent lamps	2
	Mercury containing thermostats	0
Building B4		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	104
	Fluorescent light ballasts	27
	Compact fluorescent lamps	4
	Mercury containing thermostats	0
Building B4 South		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	230
	Fluorescent light ballasts	59
	Compact fluorescent lamps	2
	Mercury containing thermostats	0
Building C1		
Throughout building	Air conditioning units	5
	Fluorescent light bulbs	170
	Fluorescent light ballasts	72
	Compact fluorescent lamps	1
	Mercury containing thermostats	2
Building C2		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	172
	Fluorescent light ballasts	43
	Compact fluorescent lamps	6
	Mercury containing thermostats	0
Building C3		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	204
	Fluorescent light ballasts	51
	Compact fluorescent lamps	3
	Black fluorescent lights	2
	Hot water heater	1
	Mercury containing thermostats	0
Central Plant		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	23
	Fluorescent light ballasts	0
	Compact fluorescent lamps	3
	Electric Exit Sign	3
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
D Hallway		
Throughout building	Air conditioning units	4
	Fluorescent light bulbs	128
	Fluorescent light ballasts	16
	Compact fluorescent lamps	13
	Mercury containing thermostats	0
Building D1		
Throughout building	Air conditioning units	6
	Fluorescent light bulbs	242
	Fluorescent light ballasts	64
	Compact fluorescent lamps	3
	Mercury containing thermostats	2
Building D2 Annex		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	98
	Fluorescent light ballasts	27
	Compact fluorescent lamps	5
	Mercury containing thermostats	1
Building D2.5		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	27
	Fluorescent light ballasts	6
	Compact fluorescent lamps	4
	Mercury containing thermostats	0
Building D3		
Throughout building	Air conditioning units	10
	Fluorescent light bulbs	182
	Fluorescent light ballasts	52
	Compact fluorescent lamps	2
	Tritium exit sign	1
	Mercury containing thermostats	0
Building D3.5		
Throughout building	Air conditioning units	11
	Fluorescent light bulbs	440
	Fluorescent light ballasts	125
	PCB containing light ballasts	31
	Compact fluorescent lamps	3
	Battery exit sign	3
	Mercury containing thermostats	5
Building D4.5		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	42
	Fluorescent light ballasts	13
	Compact fluorescent lamps	1
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building D5		
Throughout building	Air conditioning units	8
	Fluorescent light bulbs	39
	Fluorescent light ballasts	4
	Compact fluorescent lamps	4
	Mercury containing thermostats	0
Building D5 Annex		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	66
	Fluorescent light ballasts	19
	Compact fluorescent lamps	1
	Mercury containing thermostats	0
Building D5.5		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	52
	Fluorescent light ballasts	48
	Battery exit sign	5
	Mercury containing thermostats	0
Building D6		
Throughout building	Air conditioning units	7
	Fluorescent light bulbs	65
	Fluorescent light ballasts	22
	Compact fluorescent lamps	1
	Mercury containing thermostats	0
Building D9		
Throughout building	Air conditioning units	9
	Fluorescent light bulbs	375
	Fluorescent light ballasts	125
	Compact fluorescent lamps	13
	Mercury containing thermostats	0
Building E2 North		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	80
	Fluorescent light ballasts	20
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building E2 South		
Throughout building	Air conditioning units	NA
	Fluorescent light bulbs	NA
	Fluorescent light ballasts	NA
	Compact fluorescent lamps	3
	Mercury containing thermostats	NA

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building E2.5		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	66
	Fluorescent light ballasts	18
	Compact fluorescent lamps	5
	Mercury containing thermostats	0
Building E3		
Throughout building	Air conditioning units	14
	Fluorescent light bulbs	520
	Fluorescent light ballasts	156
	Compact fluorescent lamps	5
	Water Heater	1
	Mercury containing thermostats	1
Building E4		
Throughout building	Air conditioning units	12
	Fluorescent light bulbs	484
	Fluorescent light ballasts	135
	Compact fluorescent lamps	8
	Battery Exit Sign	4
	Mercury containing thermostats	2
Building E5		
Throughout building	Air conditioning units	4
	Fluorescent light bulbs	134
	Fluorescent light ballasts	38
	Compact fluorescent lamps	3
	Battery Exit Sign	2
	Mercury containing thermostats	0
Building E6		
Throughout building	Air conditioning units	6
	Fluorescent light bulbs	484
	Fluorescent light ballasts	145
	Compact fluorescent lamps	4
	Mercury containing thermostats	9
E6 Annex		
Throughout building	Air conditioning units	7
	Fluorescent light bulbs	NA
	Fluorescent light ballasts	NA
	Compact fluorescent lamps	7
	Mercury containing thermostats	NA
F Corridor		
Throughout building	Compact fluorescent lamps	21

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building F0		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	46
	Electronic Exit Sign	2
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building F1		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	150
	Fluorescent light ballasts	38
	Compact fluorescent lamps	0
	Mercury containing thermostats	2
Building F2		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	40
	Fluorescent light ballasts	12
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building F3		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	272
	Fluorescent light ballasts	178
	Smoke Detector	1
	Mercury containing thermostats	0
Building F4		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	180
	Fluorescent light ballasts	88
	Smoke Detector	1
	Mercury containing thermostats	0
Building F5		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	100
	Fluorescent light ballasts	40
	Compact fluorescent lamps	0
	Mercury containing thermostats	2
Building F6		
Throughout building	Air conditioning units	4
	Fluorescent light bulbs	150
	Fluorescent light ballasts	41
	Compact fluorescent lamps	2
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building F7		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	76
	Fluorescent light ballasts	148
	Compact fluorescent lamps	0
	Mercury containing thermostats	1
Building F8		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	150
	Fluorescent light ballasts	45
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building F9		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	172
	Fluorescent light ballasts	93
	Battery Exit Sign	1
	Mercury containing thermostats	1
Building F10		
Throughout building	Air conditioning units	7
	Fluorescent light bulbs	336
	Fluorescent light ballasts	84
	Compact fluorescent lamps	5
	Battery Exit Sign	1
	Mercury containing thermostats	0
Building H1		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	24
	Fluorescent light ballasts	8
	Compact fluorescent lamps	2
	Mercury containing thermostats	0
Harbor UCLA Professional Building		
Throughout building	Air conditioning units	16
	Fluorescent light bulbs	1,854
	Fluorescent light ballasts	219
	Compact fluorescent lamps	34
	Mercury containing thermostats	0
Imaging Center		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	373
	Fluorescent light ballasts	175
	Compact fluorescent lamps	11
	Battery Exit Sign	9
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Library		
Throughout building	Air conditioning units	6
	Fluorescent light bulbs	1,969
	PCB containing light ballasts	0
	Non-PCB containing light ballasts	391
	Compact fluorescent lamps	3
	Battery Exit Sign	3
	Electric Exit Sign	9
	Mercury containing thermostats	0
Building M1		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	208
	Fluorescent light ballasts	48
	Compact fluorescent lamps	22
	Mercury containing thermostats	0
Building N6		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	100
	Fluorescent light ballasts	25
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building N7		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	40
	Fluorescent light ballasts	20
	Compact fluorescent lamps	7
	Mercury containing thermostats	0
Building N8		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	208
	Fluorescent light ballasts	104
	Compact fluorescent lamps	12
	Mercury containing thermostats	0
Building N9		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	738
	Fluorescent light ballasts	364
	Compact fluorescent lamps	8
	Mercury containing thermostats	0
Building N11		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	96
	Fluorescent light ballasts	24
	Compact fluorescent lamps	5
	Mercury containing thermostats	0

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building N12		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	128
	Fluorescent light ballasts	32
	Compact fluorescent lamps	3
	Mercury containing thermostats	1
Building N14		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	416
	Fluorescent light ballasts	104
	Compact fluorescent lamps	3
	Mercury containing thermostats	0
Building N16		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	36
	Fluorescent light ballasts	18
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building N17		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	20
	Fluorescent light ballasts	10
	Compact fluorescent lamps	3
	Mercury containing thermostats	0
Building N18		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	96
	Fluorescent light ballasts	24
	Compact fluorescent lamps	6
	Mercury containing thermostats	0
Building N20		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	57
	Fluorescent light ballasts	19
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building N21		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	128
	Fluorescent light ballasts	56
	Compact fluorescent lamps	2
	Mercury containing thermostats	1

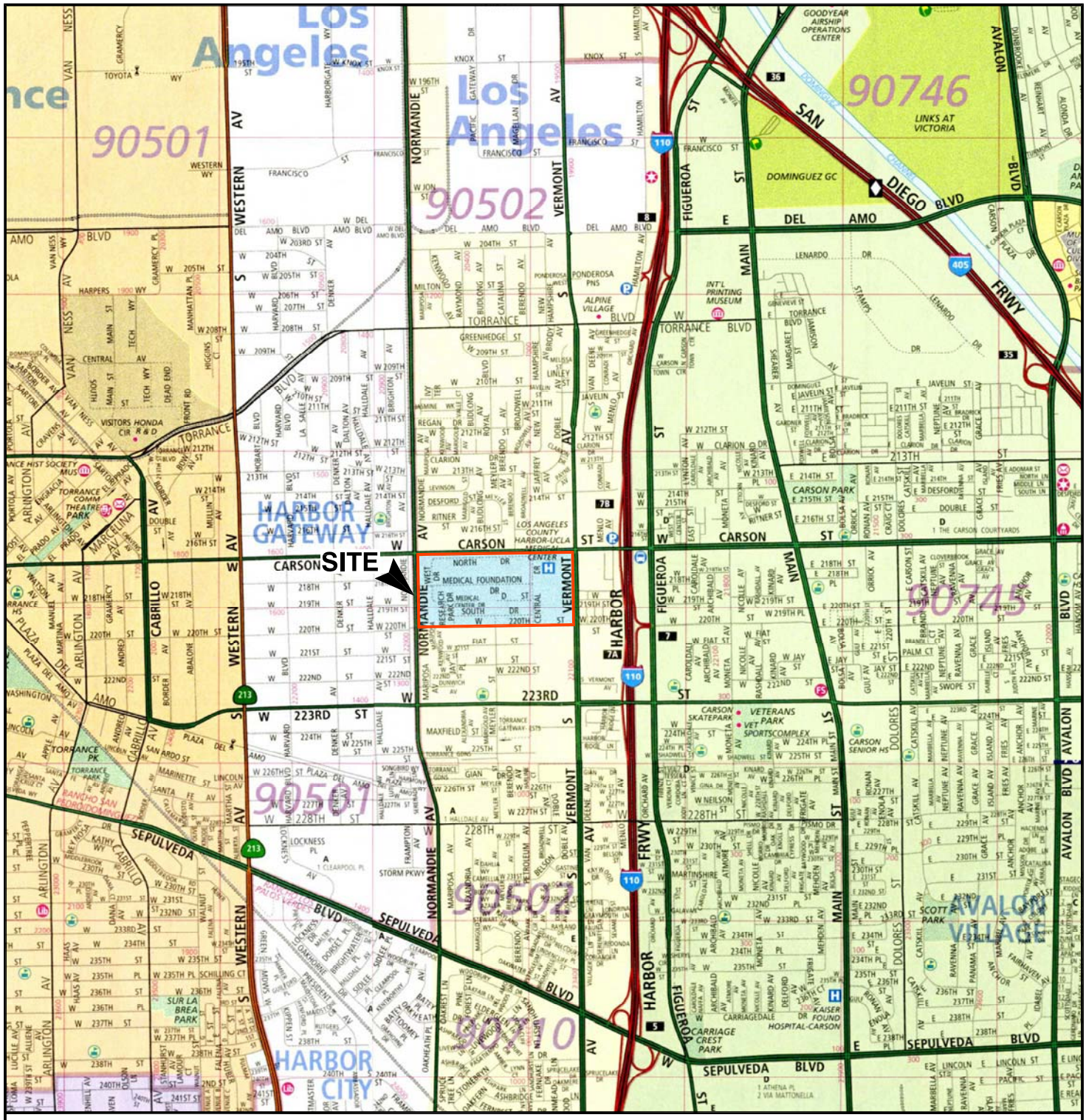
TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building N22		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	58
	Fluorescent light ballasts	16
	Compact fluorescent lamps	0
	Mercury containing thermostats	0
Building N24		
Throughout building	Air conditioning units	17
	Fluorescent light bulbs	388
	Fluorescent light ballasts	130
	Compact fluorescent lamps	8
	Mercury containing thermostats	0
N24 Canopy Cover		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	0
	Fluorescent light ballasts	0
	Compact fluorescent lamps	5
	Mercury containing thermostats	0
Building N25		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	477
	Fluorescent light ballasts	155
	Compact fluorescent lamps	6
Building N26		
Throughout building	Air conditioning units	3
	Fluorescent light bulbs	84
	Fluorescent light ballasts	21
Building N26A		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	14
	Fluorescent light ballasts	56
	Mercury containing thermostats	1
Building N26B		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	40
	Fluorescent light ballasts	10
	Compact fluorescent lamps	2
Building N26C		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	64
	Fluorescent light ballasts	16
	Compact fluorescent lamps	2

TABLE 3 – UNIVERSAL WASTE INVENTORY

Hazardous Material Location	Hazardous Material Description	Estimated Quantity
Building N28		
Throughout building	Air conditioning units	11
	Fluorescent light bulbs	194
	Fluorescent light ballasts	97
	Tritium exit signs	4
	Battery exit sign	4
Building N31		
Throughout building	Air conditioning units	5
	Fluorescent light bulbs	156
	Fluorescent light ballasts	78
	Mercury containing thermostats	1
Building N32		
Throughout building	Air conditioning units	0
	Fluorescent light bulbs	120
	Fluorescent light ballasts	30
Building N33		
Throughout building	Air conditioning units	7
	Fluorescent light bulbs	296
	Fluorescent light ballasts	74
Paint Shop		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	228
	Fluorescent light ballasts	57
	Compact fluorescent lamps	4
	Mercury containing thermostats	1
Building T1		
Throughout building	Air conditioning units	1
	Fluorescent light bulbs	48
	Fluorescent light ballasts	8
	Compact fluorescent lamps	2
	Mercury containing thermostats	1
Warehouse 1		
Throughout building	Air conditioning units	13
	Fluorescent light bulbs	407
	Fluorescent light ballasts	66
	Compact fluorescent lamps	7
	Battery Exit Sign	8
	Electric Exit Sign	7
Warehouse 2		
Throughout building	Air conditioning units	2
	Fluorescent light bulbs	44
	Fluorescent light ballasts	11
	Compact fluorescent lamps	25

Notes:
PCB – polychlorinated biphenyls
NA – no access



REFERENCE: 52ND EDITION, THOMAS GUIDE FOR LOS ANGELES/ORANGE COUNTIES, STREET GUIDE AND DIRECTORY.

N

SCALE IN FEET

0 2,400 4,800

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Map © Rand McNally, R.L.07-S-129

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Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. 209023002 / DATE 5/15	1000 WEST CARSON STREET TORRANCE, CALIFORNIA	1



LEGEND

SURVEY BOUNDARY

N

SCALE IN FEET

0 300 600

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

PROJECT NO.	DATE
209023002	5/15

SITE PLAN

1000 WEST CARSON STREET
TORRANCE, CALIFORNIA

FIGURE

2

209023002_SP.dwg 09:33:06 05/06/2015 GK

APPENDIX A

INSPECTOR CERTIFICATION DOCUMENTATION

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health
Asbestos Unit
2424 Arden Way, Suite 495
Sacramento, CA 95825-2417
(916) 574-2993 Office (916) 483-0572 Fax
http://www.dir.ca.gov/dirdatabases.html actu@dir.ca.gov

Edmund G. Brown, Jr. *Governor*

RECEIVED
JAN 0 1 2015
NINYO & MOORE
Oakland Office

401175173C 383

December 29, 2014

Ninyo & Moore
David B Bridges
1956 Wester St., #400
Oakland , CA 94612

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

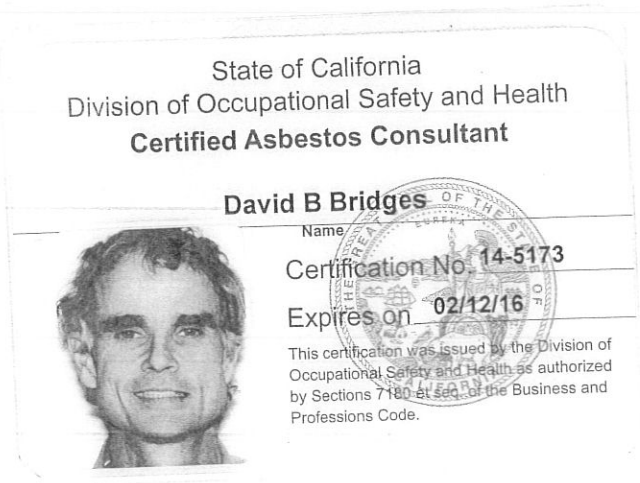
Please contact our office at the above address, fax number or email; of any changes in your contact/mailing information within 15 days of the change.

Sincerely,

Jeff Ferrell
Senior Safety Engineer

Attachment: Certification Card

cc: File



Renewal – Card Attached (Revised 10/24/2012)

State of California Department of Public Health

Lead-Related Construction Certificate

Certificate Type: Sampling Technician

Expiration Date: 02/04/2016



269065

Jonathan J. Johnson

ID #: 26456

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Michael S Cushner
Name



Certification No. 11-4711

Expires on 07/20/15

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

State of California Department of Public Health

Lead-Related Construction Certificate



Certificate Type	Expiration Date
Inspector/Assessor	09/26/2015
Project Monitor	09/26/2015

Michael S. Cushner ID #: **16953**

State of California Department of Public Health

Lead-Related Construction Certificate

Certificate Type: Sampling Technician

Expiration Date: 01/09/2016



Pedro Rodriguez

ID #: 23793

State of California
Division of Occupational Safety and Health

Certified Site Surveillance Technician

Pedro Rodriguez-Mendez

Name



Certification No. 13-5109

Expires on 01/15/16

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

APPENDIX B

ASBESTOS ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY RECORDS

EMLab P&K
A TestAmerica Company

Report for:

Mr. Mike Cushner
Ninyo & Moore - Irvine
475 Goddard
Suite 200
Irvine, CA 92618

Regarding: Project: 209023002; PCR/Harbor-UCLA
EML ID: 1327248

Approved by:



Approved Signatory
Graziella Ines

Dates of Analysis:
Asbestos PLM: 02-23-2015 to 02-27-2015

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
Date of Receipt: 02-18-2015
Date of Report: 02-27-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	279
Total Samples Analyzed:	279
Total Samples with Layer Asbestos Content > 1%:	26

Location: 1, Exterior stucco Lab ID-Version‡: 6064313-1

Sample Layers	Asbestos Content
Beige Stucco with White Coating	ND
Sample Composite Homogeneity:	Good

Location: 2, Exterior stucco Lab ID-Version‡: 6064314-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Sample Composite Homogeneity:	Good

Location: 3, Exterior stucco Lab ID-Version‡: 6064315-1

Sample Layers	Asbestos Content
Beige Stucco with White Coating	ND
Sample Composite Homogeneity:	Good

Location: 4, Roof core, asphalt sheeting Lab ID-Version‡: 6064316-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
Date of Receipt: 02-18-2015
Date of Report: 02-27-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 5, Gray caulking Lab ID-Version‡: 6064317-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 6, Gray caulking Lab ID-Version‡: 6064318-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 7, Black mastic Lab ID-Version‡: 6064319-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 8, Black mastic Lab ID-Version‡: 6064320-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
Date of Receipt: 02-18-2015
Date of Report: 02-27-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 9, Asphalt sheeting

Lab ID-Version‡: 6064321-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 10, Gray caulking + Glue

Lab ID-Version‡: 6064322-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Off-White Glue	ND
Sample Composite Homogeneity:	Good

Location: 11, Blue carpet + Tan glue+ Leveling compound

Lab ID-Version‡: 6064323-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Tan Glue	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 12, 4" covebase + tan glue

Lab ID-Version‡: 6064324-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
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Date of Report: 02-27-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 13, 2'x2' ceiling tile

Lab ID-Version‡: 6064325-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 14, Drywall + joint compound

Lab ID-Version‡: 6064326-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 15, Drywall + joint compound

Lab ID-Version‡: 6064327-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 16, Drywall + joint compound

Lab ID-Version‡: 6064328-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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Date of Sampling: 02-09-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 17, Roof core 2 foam insulation roofing Lab ID-Version‡: 6064329-1

Sample Layers	Asbestos Content
White Coating	ND
White Insulation	ND
Sample Composite Homogeneity:	Good

Location: 18, Roof core 1-Asphalt shingle Lab ID-Version‡: 6064330-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Black Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 19, Stucco Lab ID-Version‡: 6064331-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 20, Stucco Lab ID-Version‡: 6064332-1

Sample Layers	Asbestos Content
Gray Stucco with Beige Coating	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 21, Stucco Lab ID-Version‡: 6064333-1

Sample Layers	Asbestos Content
Gray Stucco with Beige Coating	ND
Sample Composite Homogeneity:	Good

Location: 22, 4" blue covebase + tan glue Lab ID-Version‡: 6064334-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 23, Blue carpet + Tan glue Lab ID-Version‡: 6064335-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 24, Interior stucco Lab ID-Version‡: 6064336-1

Sample Layers	Asbestos Content
Gray Stucco with Beige Coating	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 25, White 1'x1' VFT - gray glue Lab ID-Version‡: 6064337-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Gray Glue	ND
Sample Composite Homogeneity:	Good

Location: 26, Tan drywall + joint compound Lab ID-Version‡: 6064338-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
Off-White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 27, White drywall + joint compound Lab ID-Version‡: 6064339-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
Off-White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 28, Stucco Lab ID-Version‡: 6064340-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 29, Stucco Lab ID-Version‡: 6064341-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 30, Stucco Lab ID-Version‡: 6064342-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 31, White caulking Lab ID-Version‡: 6064343-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 32, Black mastic Lab ID-Version‡: 6064344-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 33, Black mastic

Lab ID-Version‡: 6064345-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 34, Asphalt shingle

Lab ID-Version‡: 6064346-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 35, Gray+ White caulking

Lab ID-Version‡: 6064347-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 36, Blue carpet + backing

Lab ID-Version‡: 6064348-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Multicolored Carpet Backing	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

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Date of Sampling: 02-09-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 37, 4" gray covebase + white glue Lab ID-Version‡: 6064349-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 38, Blue carpet + glue brown Lab ID-Version‡: 6064350-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 39, Fissured 1'x1' ceiling tile + brown mastic Lab ID-Version‡: 6064351-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose 2% Talc
Sample Composite Homogeneity:	Good

Location: 40, White VFT + tan glue Lab ID-Version‡: 6064352-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 41, Pink VFT + tan glue Lab ID-Version‡: 6064353-1

Sample Layers	Asbestos Content
Pink Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 42, 8" gray covebase, brown + glue Lab ID-Version‡: 6064354-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 43, Drywall + joint compound Lab ID-Version‡: 6064355-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 44, Drywall + joint compound Lab ID-Version‡: 6064356-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 45, Drywall + joint compound Lab ID-Version‡: 6064357-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 46, Black mastic + caulking Lab ID-Version‡: 6064358-1

Sample Layers	Asbestos Content
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 47, Texture coat (Plaster) + Mesh + insulation Lab ID-Version‡: 6064359-1

Sample Layers	Asbestos Content
White Texture with Gray Paint	ND
White Plaster with Yellow Mesh	ND
White Foam Insulation	ND
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 48, Texture coat (Plaster) + Mesh + insulation Lab ID-Version‡: 6064360-1

Sample Layers	Asbestos Content
White Texture with Gray Paint	ND
White Plaster with Yellow Mesh	ND
White Foam Insulation	ND
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 49, Texture coat (Plaster) + Mesh + insulation Lab ID-Version‡: 6064361-1

Sample Layers	Asbestos Content
White Texture with Gray Paint	ND
White Plaster with Yellow Mesh	ND
White Foam Insulation	ND
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 50, Roof core 1, asphalt sheeting Lab ID-Version‡: 6064362-1

Sample Layers	Asbestos Content
White Coating	ND
Black Asphalt with Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 51, Foam insulation roofing Lab ID-Version‡: 6064363-1

Sample Layers	Asbestos Content
White Coating	ND
White Foam Insulation	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 52, Drywall + joint compound

Lab ID-Version‡: 6064364-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 53, Drywall + joint compound

Lab ID-Version‡: 6064365-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 54, Drywall + joint compound

Lab ID-Version‡: 6064366-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 55, White VFT 1'x1'+ glue

Lab ID-Version‡: 6064367-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 56, Fissured ceiling tile

Lab ID-Version‡: 6064368-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	70% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 57, Blue carpet + green glue + leveling compound Lab ID-Version‡: 6064369-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Green Glue	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 58, 4" blue covebase + glue Lab ID-Version‡: 6064370-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 59, 6" gray covebase + glue Lab ID-Version‡: 6064371-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 60, 4" dark blue covebase + glue Lab ID-Version‡: 6064372-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 61, Blue carpet + green glue Lab ID-Version‡: 6064373-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Green Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 62, Foam insulation roofing core 1 Lab ID-Version‡: 6064374-1

Sample Layers	Asbestos Content
White Coating	ND
White Foam Insulation	ND
Sample Composite Homogeneity:	Good

Location: 63, Roof core 2, asphalt sheeting Lab ID-Version‡: 6064375-1

Sample Layers	Asbestos Content
White Coating	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 64, Window caulking Lab ID-Version‡: 6064376-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 65, 4" blue covebase + glue Lab ID-Version‡: 6064377-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 66, Blue carpet + glue Lab ID-Version‡: 6064378-1

Sample Layers	Asbestos Content
Blue Carpet	ND
White Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 67, Brown Drywall + joint compound Lab ID-Version‡: 6064379-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
Brown Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 68, Drywall + joint compound Lab ID-Version‡: 6064380-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 69, Blue VFT + glue Lab ID-Version‡: 6064381-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 70, Light blue VFT + glue Lab ID-Version‡: 6064382-1

Sample Layers	Asbestos Content
Blue Sheet Flooring with Fibrous Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 71, 4'x2' ceiling tile w/insulation Lab ID-Version‡: 6064383-1

Sample Layers	Asbestos Content
Yellow Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 72, 4'x2' ceiling tile (Acoustic) Lab ID-Version‡: 6064384-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	70% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 73, Insulation + tape Lab ID-Version‡: 6064385-1

Sample Layers	Asbestos Content
Pink Insulation	ND
Brown/Black Tape with Tar and Silver Foil	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 74, Roof core Foam insulation roofing Lab ID-Version‡: 6064386-1

Sample Layers	Asbestos Content
White Coating	ND
White Foam Insulation	ND
Sample Composite Homogeneity:	Good

Location: 75, Roof core Foam insulation roofing Lab ID-Version‡: 6064387-1

Sample Layers	Asbestos Content
White Coating	ND
White Foam Insulation	ND
Sample Composite Homogeneity:	Good

Location: 76, Drywall + joint compound Lab ID-Version‡: 6064388-1

Sample Layers	Asbestos Content
White Wallpaper	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 77, Drywall + joint compound

Lab ID-Version‡: 6064389-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 78, Drywall + joint compound

Lab ID-Version‡: 6064390-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 79, 4'x2' ceiling tile

Lab ID-Version‡: 6064391-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 80, 4" black covebase + brown glue

Lab ID-Version‡: 6064392-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Dark Brown Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 81, Tan VFT 1'x1' w/mastic Lab ID-Version‡: 6064393-1

Sample Layers	Asbestos Content
Tan Floor Tile	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 82, 6" blue covebase + glue Lab ID-Version‡: 6064394-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 83, 2" brown covebase + brown mastic Lab ID-Version‡: 6064395-1

Sample Layers	Asbestos Content
Dark Brown Baseboard	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	2% Talc
Sample Composite Homogeneity:	Good

Location: 84, 1'x1' pink VFT + white glue Lab ID-Version‡: 6064396-1

Sample Layers	Asbestos Content
Pink Floor Tile	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
Date of Receipt: 02-18-2015
Date of Report: 02-27-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 85, Light blue VFT 15'x15' + gray mastic Lab ID-Version‡: 6064397-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Gray Mastic	ND
Sample Composite Homogeneity:	Good

Location: 86, Roof core 2, asphalt sheeting Lab ID-Version‡: 6064398-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	20% Glass Fibers 20% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 87, Window caulking Lab ID-Version‡: 6064399-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 88, Black mastic Lab ID-Version‡: 6064400-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	7% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 89, Roof core 1, asphalt sheeting Lab ID-Version‡: 6064401-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 90, Gray caulking Lab ID-Version‡: 6064402-1

Sample Layers	Asbestos Content
Red Caulk with Silver Coating	ND
Sample Composite Homogeneity:	Good

Location: 91, 4" black covebase w/tan glue Lab ID-Version‡: 6064403-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 92, 6" gray covebase + glue Lab ID-Version‡: 6064404-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 93, 6" tan covebase + glue Lab ID-Version‡: 6064405-1

Sample Layers	Asbestos Content
Tan Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

Location: 94, Blue 1x1 VFT + glue Lab ID-Version‡: 6064406-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 95, Insulation ceiling tile 4x2 Lab ID-Version‡: 6064407-1

Sample Layers	Asbestos Content
Yellow Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 96, Vinyl floor sheeting tan + glue Lab ID-Version‡: 6064408-1

Sample Layers	Asbestos Content
Tan Sheet Flooring with Fibrous Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 97, White VFT 1x1 + glue Lab ID-Version‡: 6064409-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 98, Drywall + joint compound Lab ID-Version‡: 6064410-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 99, Drywall + joint compound Lab ID-Version‡: 6064411-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 100, Drywall + joint compound Lab ID-Version‡: 6064412-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 101, Acoustic 4x2 ceiling tile Lab ID-Version‡: 6064413-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	70% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 102, Blue carpet + glue + leveling compound Lab ID-Version‡: 6064414-1

Sample Layers	Asbestos Content
Blue Carpet	ND
White Glue	ND
White Leveling Compound (Trace)	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 103, 20"x20" blue VFT + glue Lab ID-Version‡: 6064415-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 104, Gray carpet + backing + tan glue Lab ID-Version‡: 6064416-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Multicolored Carpet Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 105, White VFT + black mastic Lab ID-Version‡: 6064417-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

Location: 106, Gray covebase 4" + tan glue Lab ID-Version‡: 6064418-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Dark Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 107, Pipe insulation + cloth/wrap Lab ID-Version‡: 6064419-1

Sample Layers	Asbestos Content
White Pipe Insulation	10% Amosite 5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 108, 2'x2' ceiling tile Lab ID-Version‡: 6064420-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	70% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 109, 1x1 random hole ceiling tile + brown mastic Lab ID-Version‡: 6064421-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose 2% Talc
Sample Composite Homogeneity:	Good

Location: 110, 4x2 ceiling tile (Acoustic) Lab ID-Version‡: 6064422-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 111, Button board + joint compound (Plaster + pink drywall) Lab ID-Version‡: 6064423-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Beige Plaster	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 112, Button board + joint compound (Plaster + pink drywall) Lab ID-Version‡: 6064424-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Beige Plaster	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 113, Button board + joint compound (Plaster + pink drywall) Lab ID-Version‡: 6064425-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Beige Plaster	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 114, Interior stucco Lab ID-Version‡: 6064426-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 115, Drywall + joint compound Lab ID-Version‡: 6064427-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 116, Drywall + joint compound Lab ID-Version‡: 6064428-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 117, Drywall + joint compound

Lab ID-Version‡: 6064429-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 118, 4" covebase black + glue

Lab ID-Version‡: 6064430-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 119, Roof core asphalt shingles (old)

Lab ID-Version‡: 6064431-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 120, Sleeper mastic

Lab ID-Version‡: 6064432-1

Sample Layers	Asbestos Content
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 121, Pitchpoche + blue mastic Lab ID-Version‡: 6064433-1

Sample Layers	Asbestos Content
Black Mastic with White Stones	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 122, Roof core asphalt sheeting Lab ID-Version‡: 6064434-1

Sample Layers	Asbestos Content
Black Asphalt with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 123, Cloth tape + black mastic Lab ID-Version‡: 6064435-1

Sample Layers	Asbestos Content
Silver Coating	ND
White Tape	ND
Gray/Black Mastic	10% Chrysotile
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 124, Caulking + black mastic Lab ID-Version‡: 6064436-1

Sample Layers	Asbestos Content
Silver Coating	ND
Gray Caulk	ND
Black Tar	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 125, Roof core, foam insulation roof Lab ID-Version‡: 6064437-1

Sample Layers	Asbestos Content
White Coating	ND
Yellow Foam Insulation	ND
Sample Composite Homogeneity:	Good

Location: 126, Asphalt sheeting + drywall Lab ID-Version‡: 6064438-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Gray Stones	ND
White Drywall	ND
Composite Non-Asbestos Content:	20% Synthetic Fibers 3% Cellulose
Sample Composite Homogeneity:	Good

Location: 127, Black mastic Lab ID-Version‡: 6064439-1

Sample Layers	Asbestos Content
Black Roofing Mastic with White Stones	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 128, Roof core: new asphalt sheeting Lab ID-Version‡: 6064440-1

Sample Layers	Asbestos Content
Black Asphalt with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 129, Exterior stucco Lab ID-Version‡: 6064441-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 130, Exterior stucco Lab ID-Version‡: 6064442-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 131, Exterior stucco Lab ID-Version‡: 6064443-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 132, Gray caulking Lab ID-Version‡: 6064444-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 133, White duct tape w/caulking Lab ID-Version‡: 6064445-1

Sample Layers	Asbestos Content
White Caulk	ND
White Caulk	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: 134, Window caulking Lab ID-Version‡: 6064446-1

Sample Layers	Asbestos Content
Brown Caulk with Paint	ND
Sample Composite Homogeneity:	Good

Location: 135, White tape w/caulking Lab ID-Version‡: 6064447-1

Sample Layers	Asbestos Content
Black Mastic	ND
White Tape	ND
Gray Non-Fibrous Material	ND
White Non-Fibrous Material	ND
Composite Non-Asbestos Content:	25% Cellulose
Sample Composite Homogeneity:	Good

Location: 136, White window caulking Lab ID-Version‡: 6064448-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

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Re: 209023002; PCR/Harbor-UCLA

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 137, Sleeper mastic

Lab ID-Version‡: 6064449-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 138, Tape + black mastic

Lab ID-Version‡: 6064450-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
White Tape	ND
Composite Non-Asbestos Content:	15% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 139, Gray caulking

Lab ID-Version‡: 6064451-1

Sample Layers	Asbestos Content
Silver Coating	2% Chrysotile
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 140, Duct tape

Lab ID-Version‡: 6064452-1

Sample Layers	Asbestos Content
White Tape with Coating	ND
Composite Non-Asbestos Content:	30% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 141, Stucco Lab ID-Version‡: 6064453-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 142, Stucco Lab ID-Version‡: 6064454-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 143, Stucco Lab ID-Version‡: 6064455-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 144, Roof core asphalt shingles Lab ID-Version‡: 6064456-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Shingle with Brown/Black Stones	ND
Black Roofing Felt	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 145, White VFT 1x1 + glue Lab ID-Version‡: 6064457-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 146, Blue carpet + glue Lab ID-Version‡: 6064458-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 147, Gray covebsase 4" + glue Lab ID-Version‡: 6064459-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 148, Random hole 4x2 acoustic ceiling tile Lab ID-Version‡: 6064460-1

Sample Layers	Asbestos Content
White Ceiling Tile with White Surface	3% Amosite
Composite Non-Asbestos Content:	80% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 149, Drywall + joint compound Lab ID-Version‡: 6064461-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 150, Drywall + joint compound Lab ID-Version‡: 6064462-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 151, Drywall + joint compound Lab ID-Version‡: 6064463-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 152, Stucco Lab ID-Version‡: 6064464-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 153, Stucco Lab ID-Version‡: 6064465-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 154, Stucco Lab ID-Version‡: 6064466-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 155, Roof core:built up asphalt Lab ID-Version‡: 6064467-1

Sample Layers	Asbestos Content
White Paint	ND
Black Asphalt with Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Asphalt with Stones	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 156, Black mastic Lab ID-Version‡: 6064468-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	7% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 157, Drywall + joint compound Lab ID-Version‡: 6064469-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 158, 6" covebase Lab ID-Version‡: 6064470-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 159, Gray carpet + glue and backing Lab ID-Version‡: 6064471-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Gray Carpet Backing	ND
Off-White Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 160, 4" black covebase + glue Lab ID-Version‡: 6064472-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Dark Brown Glue	ND
Composite Non-Asbestos Content:	< 1% Wollastonite
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 161, White VFT + glue Lab ID-Version‡: 6064473-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 162, Random hole 4'x2' ceiling tile Lab ID-Version‡: 6064474-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 163, Gray VFT 1x1 + tan glue Lab ID-Version‡: 6064475-1

Sample Layers	Asbestos Content
Gray Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 164, tape + mastic Lab ID-Version‡: 6064476-1

Sample Layers	Asbestos Content
Silver Tape	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 165, Tan caulking Lab ID-Version‡: 6064477-1

Sample Layers	Asbestos Content
Tan Caulk	ND
Black Tar	ND
Sample Composite Homogeneity:	Good

Location: 166, Roof core: asphalt shingles Lab ID-Version‡: 6064478-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Black Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 167, Stucco Lab ID-Version‡: 6064479-1

Sample Layers	Asbestos Content
White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 168, Stucco Lab ID-Version‡: 6064480-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 169, Stucco Lab ID-Version‡: 6064481-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 170, Gray carpet + backing + 9"x9" brown VFT + mastic Lab ID-Version‡: 6064482-1

Sample Layers	Asbestos Content
Gray Carpet	ND
White Glue	ND
Purple Carpet Backing	ND
Dark Brown Floor Tile	5% Chrysotile
Black Mastic	ND
Black Tar Felt	ND
Composite Non-Asbestos Content:	60% Synthetic Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

Location: 171, White VFT + tan glue Lab ID-Version‡: 6064483-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 172, Button board (Plaster + drywall + joint compound) Lab ID-Version‡: 6064484-1

Sample Layers	Asbestos Content
Pink Plaster with Paint	ND
Beige Plaster	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 173, Button board (Plaster + drywall + joint compound) Lab ID-Version‡: 6064485-1

Sample Layers	Asbestos Content
Pink Plaster with Paint	ND
Beige Plaster	ND
Pink Drywall	ND
White Compound with Paint	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 174, Button board (Plaster + drywall + joint compound + texture coating) Lab ID-Version‡: 6064486-1

Sample Layers	Asbestos Content
Pink Plaster with Paint	ND
Beige Plaster	ND
Pink Drywall	ND
White Compound with Paint	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 175, Tape w/gray caulking Lab ID-Version‡: 6064487-1

Sample Layers	Asbestos Content
Gray Caulk	ND
White Tape	ND
Sample Composite Homogeneity:	Good

Location: 176, Stucco Lab ID-Version‡: 6064488-1

Sample Layers	Asbestos Content
Green Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 177, Stucco Lab ID-Version‡: 6064489-1

Sample Layers	Asbestos Content
Green Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 178, Stucco Lab ID-Version‡: 6064490-1

Sample Layers	Asbestos Content
Green Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 179, Tape w/green caulking Lab ID-Version‡: 6064491-1

Sample Layers	Asbestos Content
Gray Caulk	ND
White Tape	ND
Sample Composite Homogeneity:	Good

Location: 180, Roof core asphalt shingles Lab ID-Version‡: 6064492-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Black Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 181, White VFT + glue + leveling compound Lab ID-Version‡: 6064493-1

Sample Layers	Asbestos Content
Off-White Sheet Flooring with Fibrous Backing	ND
White Glue	ND
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 182, 4" gray covebase + glue Lab ID-Version‡: 6064494-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 183, Button board Plaster + drywall + joint compound Lab ID-Version‡: 6064495-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
Pink Drywall	ND
White Plaster	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 184, Button board Plaster + drywall + joint compound Lab ID-Version‡: 6064496-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
Pink Drywall	ND
White Plaster	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 185, Button board Plaster + drywall + joint compound

Lab ID-Version‡: 6064497-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
Pink Drywall	ND
White Plaster	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 186, Gray carpet + green glue + gray leveling compound

Lab ID-Version‡: 6064498-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Green Glue	ND
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 187, Brown caulking

Lab ID-Version‡: 6064499-1

Sample Layers	Asbestos Content
Brown Caulk	ND
Black Tar	3% Chrysotile
Sample Composite Homogeneity:	Good

Location: 188, Black mastic

Lab ID-Version‡: 6064500-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 189, Black mastic Lab ID-Version‡: 6064501-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	3% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 190, Roof core asphalt sheeting Lab ID-Version‡: 6064502-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 191, Vinyl floor sheeting + glue Lab ID-Version‡: 6064503-1

Sample Layers	Asbestos Content
Off-White Sheet Flooring with Fibrous Backing	ND
Brown Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 192, Carpet + backing + carpet + backing + glue Lab ID-Version‡: 6064504-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Gray Carpet Backing	ND
Black Foam	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 193, Drywall + tape Lab ID-Version‡: 6064505-1

Sample Layers	Asbestos Content
Silver Tape	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 194, Drywall + tape Lab ID-Version‡: 6064506-1

Sample Layers	Asbestos Content
Silver Tape	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 195, Drywall + tape Lab ID-Version‡: 6064507-1

Sample Layers	Asbestos Content
Silver Tape	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 196, Gray caulking Lab ID-Version‡: 6064508-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 197, Roof core vinyl + mastic Lab ID-Version‡: 6064509-1

Sample Layers	Asbestos Content
White Paint	ND
Black Mastic	7% Chrysotile
Sample Composite Homogeneity:	Good

Location: 198, Drywall + joint compound Lab ID-Version‡: 6064510-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 199, Drywall + joint compound Lab ID-Version‡: 6064511-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 200, Drywall + joint compound Lab ID-Version‡: 6064512-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 201, Caulking tan Lab ID-Version‡: 6064513-1

Sample Layers	Asbestos Content
Tan Caulk	ND
Sample Composite Homogeneity:	Good

Location: 202, Blue carpet + glue + backing + 1x1 blue VFT + glue Lab ID-Version‡: 6064514-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Beige Carpet Backing	ND
White Glue	ND
Blue Floor Tile	ND
White Glue	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 203, Black covebase 6" + glue Lab ID-Version‡: 6064515-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 204, Ceiling pannels (Stappled) Lab ID-Version‡: 6064516-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 205, Light gray covebase 4" Lab ID-Version‡: 6064517-1

Sample Layers	Asbestos Content
Light Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 206, 1x1 blue VFT + glue Lab ID-Version‡: 6064518-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 207, White basecove 6" + glue Lab ID-Version‡: 6064519-1

Sample Layers	Asbestos Content
White Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 208, Blue carpet + backing+ white (speckled) VFT 1'x1' + tan glue Lab ID-Version‡: 6064520-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Multicolored Carpet Backing	ND
White Floor Tile	< 1% Chrysotile
Tan Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 209, White VFT 1'x1' + black mastic+ green VFT 1'x1'+ black mastic Lab ID-Version‡: 6064521-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Black Mastic	ND
Green Floor Tile	< 1% Chrysotile
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 210, Off White 1'x1' VFT + black mastic Lab ID-Version‡: 6064522-1

Sample Layers	Asbestos Content
Off-White Floor Tile	< 1% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 211, Blue speckled VFT 1'x1' + tan glue Lab ID-Version‡: 6064523-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 212, Fissured 1'x1' ceiling tile + black mastic (Hocky puck) Lab ID-Version‡: 6064524-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Glass Fibers 2% Talc
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 213, 4" tan covebase + tan glue Lab ID-Version‡: 6064525-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 214, 4" green covebase + brown glue Lab ID-Version‡: 6064526-1

Sample Layers	Asbestos Content
Green Baseboard	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 215, 6" brown covebase + tan glue + brown glue Lab ID-Version‡: 6064527-1

Sample Layers	Asbestos Content
Dark Brown Baseboard	ND
Tan Glue	ND
Dark Brown Glue	ND
Composite Non-Asbestos Content:	2% Wollastonite
Sample Composite Homogeneity:	Good

Location: 216, 4" brown covebase + glue Lab ID-Version‡: 6064528-1

Sample Layers	Asbestos Content
Purple Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 217, Drywall + joint compound Lab ID-Version‡: 6064529-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 218, Drywall + joint compound Lab ID-Version‡: 6064530-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 219, Drywall + joint compound Lab ID-Version‡: 6064531-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 220, Gray caulking Lab ID-Version‡: 6064532-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 221, Black mastic Lab ID-Version‡: 6064533-1

Sample Layers	Asbestos Content
Gray Coating	ND
Black Mastic	6% Chrysotile
Composite Non-Asbestos Content:	3% Vermiculite
Sample Composite Homogeneity:	Good

Location: 222, Stucco Lab ID-Version‡: 6064534-1

Sample Layers	Asbestos Content
Tan Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 223, Stucco Lab ID-Version‡: 6064535-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 224, Stucco Lab ID-Version‡: 6064536-1

Sample Layers	Asbestos Content
Tan Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 225, Roof core 1: asphalt shingles

Lab ID-Version‡: 6064537-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 226, Roof core 1: asphalt shingles

Lab ID-Version‡: 6064538-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 227, Roof core 2: asphalt sheeting

Lab ID-Version‡: 6064539-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Black Roofing Felt	ND
Brown Felt	ND
Composite Non-Asbestos Content:	50% Glass Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

Location: 228, Drywall + joint compound

Lab ID-Version‡: 6064540-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 229, Drywall + joint compound

Lab ID-Version‡: 6064541-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 230, Drywall + joint compound

Lab ID-Version‡: 6064542-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 231, 6" tan covebase + glue

Lab ID-Version‡: 6064543-1

Sample Layers	Asbestos Content
Tan Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 232, 6" gray covebase + glue

Lab ID-Version‡: 6064544-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Off-White Glue	ND
Sample Composite Homogeneity:	Good

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Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 233, White VFT (1'x1') + tan glue Lab ID-Version‡: 6064545-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 234, Roof core: asphalt shingle Lab ID-Version‡: 6064546-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Black Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 235, Window caulking Lab ID-Version‡: 6064547-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 236, White duct caulking Lab ID-Version‡: 6064548-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 237, White duct tape Lab ID-Version‡: 6064549-1

Sample Layers	Asbestos Content
Silver Coating	< 1% Chrysotile
White Tape	ND
Composite Non-Asbestos Content:	70% Cellulose
Sample Composite Homogeneity:	Good

Location: 238, Black mastic Lab ID-Version‡: 6064550-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 239, Stucco Lab ID-Version‡: 6064551-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 240, Stucco Lab ID-Version‡: 6064552-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 241, Stucco Lab ID-Version‡: 6064553-1

Sample Layers	Asbestos Content
White Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 242, Button board (Plaster + drywall + joint compound) Lab ID-Version‡: 6064554-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 243, Button board (Plaster + drywall + joint compound) Lab ID-Version‡: 6064555-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 244, Button board (Plaster + drywall + joint compound) Lab ID-Version‡: 6064556-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 245, Drywall + joint compound Lab ID-Version‡: 6064557-1

Sample Layers	Asbestos Content
White Skim Coat	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 246, Drywall + joint compound Lab ID-Version‡: 6064558-1

Sample Layers	Asbestos Content
White Skim Coat	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 247, Drywall + joint compound Lab ID-Version‡: 6064559-1

Sample Layers	Asbestos Content
White Skim Coat	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 248, 6" black covebase + tan glue

Lab ID-Version‡: 6064560-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 249, 4" glossy black covebase + glue Lab ID-Version‡: 6064561-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 250, 4" black covebase + glue Lab ID-Version‡: 6064562-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 251, 4" gray covebase + glue Lab ID-Version‡: 6064563-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 252, Gray carpet + backing+ 9x9 brown VFT + black mastic Lab ID-Version‡: 6064564-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Brown Carpet Backing	ND
Brown Floor Tile	5% Chrysotile
Black Mastic	5% Chrysotile
Black Flooring Backing	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers 5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 253, Blue carpet + tan glue + gray 1x1 VFT + black mastic Lab ID-Version‡: 6064565-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Tan Glue	ND
Gray Floor Tile	6% Chrysotile
Black Mastic	ND
Black Flooring Backing	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

Location: 254, Brown carpet Lab ID-Version‡: 6064566-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 255, Vinyl sheeting + glue+ mastic ? Lab ID-Version‡: 6064567-1

Sample Layers	Asbestos Content
White Sheet Flooring with Fibrous Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 256, Tan 1x1 VFT + black mastic + gray 1x1 VFT + glue Lab ID-Version‡: 6064568-1

Sample Layers	Asbestos Content
Tan Floor Tile	ND
Black Mastic	ND
Gray Floor Tile	2% Chrysotile
Black Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 257, Tan 1x1 VFT + black mastic + green 1x1 VFT + black mastic Lab ID-Version‡: 6064569-1

Sample Layers	Asbestos Content
Tan Floor Tile	ND
Black Mastic	ND
Green Floor Tile	3% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 258, Blue VFT 1'x1' + glue Lab ID-Version‡: 6064570-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 259, Blue-green carpet + backing+ black 9'x9' VFT + black mastic Lab ID-Version‡: 6064571-1

Sample Layers	Asbestos Content
Blue-Green Carpet	ND
Multicolored Carpet Backing	ND
Black Floor Tile	5% Chrysotile
Black Mastic	7% Chrysotile
Black Flooring Backing	ND
Composite Non-Asbestos Content:	60% Synthetic Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 260, Vinyl sheeting + glues (various layers) + leveling compound Lab ID-Version‡: 6064572-1

Sample Layers	Asbestos Content
Light Gray Sheet Flooring with Fibrous Backing	ND
Yellow Glue	ND
White Sheet Flooring with Fibrous Backing	ND
Tan Glue	ND
Tan Sheet Flooring with Fibrous Backing	20% Chrysotile
Beige Sheet Flooring with Fibrous Backing	20% Chrysotile
White Leveling Compound	ND
Composite Non-Asbestos Content:	40% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 261, Strait hole 1x1 ceiling tile + brown mastic (Hocky puck) Lab ID-Version‡: 6064573-1

Sample Layers	Asbestos Content
Yellow Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 262, Fissured 1'x1' ceiling tile (Nailed) Lab ID-Version‡: 6064574-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 263, 4'x2' ceiling tile acoustic Lab ID-Version‡: 6064575-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	60% Glass Fibers 30% Cellulose
Sample Composite Homogeneity:	Good

Location: 264, Roof core 2: asphalt sheeting Lab ID-Version‡: 6064576-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	50% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 265, Roof core 1: asphalt sheeting Lab ID-Version‡: 6064577-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White/Red Stones	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 266, Black mastic Lab ID-Version‡: 6064578-1

Sample Layers	Asbestos Content
Gray/Black Mastic with Tape	10% Chrysotile
Composite Non-Asbestos Content:	10% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 267, Black mastic Lab ID-Version‡: 6064579-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 268, Black mastic Lab ID-Version‡: 6064580-1

Sample Layers	Asbestos Content
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 269, Caulking + tape Lab ID-Version‡: 6064581-1

Sample Layers	Asbestos Content
White Caulk with Tape	ND
Black Tar	10% Chrysotile
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: 270, Window caulking Lab ID-Version‡: 6064582-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 271, Stucco Lab ID-Version‡: 6064583-1

Sample Layers	Asbestos Content
Gray Stucco with Coating	ND
Sample Composite Homogeneity:	Good

Location: 272, Stucco Lab ID-Version‡: 6064584-1

Sample Layers	Asbestos Content
Gray Stucco with Coating	ND
Sample Composite Homogeneity:	Good

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(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 02-09-2015
Date of Receipt: 02-18-2015
Date of Report: 02-27-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 273, Stucco Lab ID-Version‡: 6064585-1

Sample Layers	Asbestos Content
Gray Stucco with Coating	ND
Sample Composite Homogeneity:	Good

Location: 274, Duct caulking Lab ID-Version‡: 6064586-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 275, Exterior drywall Lab ID-Version‡: 6064587-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 276, Gray caulking Lab ID-Version‡: 6064588-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Composite Non-Asbestos Content:	5% Vermiculite
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 277, Tape + mastic + insulation Lab ID-Version‡: 6064589-1

Sample Layers	Asbestos Content
Silver Tape	ND
Gray Mastic	10% Chrysotile
Yellow Insulation	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 278, Duct tape Lab ID-Version‡: 6064590-1

Sample Layers	Asbestos Content
White Tape with Coating	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 279, Caulking + tan caulking + B. mastic Lab ID-Version‡: 6064591-1

Sample Layers	Asbestos Content
Tan Caulk	ND
Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled: 2/9/15 - 2/13/15
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EMLab P&K
17461 Derian Ave
#100 Irvine, CA
Tel: 800 651 4802
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (signature)	Company	Date	Time (24hr)	Received By: (signature)	
Pedro Rodriguez	Ninyo & Moore	2/18/15	1550	Stmer	02-18-15 1550

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1	N20	Exterior North Wall	1	Exterior Stucco	2000 SF	N	good
	2	↓	South	↓	↓	↓	↓	↓
	3	↓	East	↓	↓	↓	↓	↓
	4	N20	Roof Center	2	Roof Layer Asphalt sheeting	1,800 SF	N	good
	5		Roof East @ pitch pocket	3	Grey Caulking	10 SF	N	good
	6		Roof East @ Flashing seams	4	Grey Caulking	15 SF	N	good
	7		Roof North @ Vent	5	Black Mastic	10 SF	↓	↓
	8		East @ Pitchpocket	6	Black Mastic	10 SF		
	9		South @ Parapet Wall	7	Asphalt sheeting	4100 SF		
	10	↓	Exterior Main Entrance Floor Joint (North)	8	Grey Caulking + Glue	10 SF	↓	↓
	11	N20	Floor, Southwest Room	9	Blue Carpet + Tan Glue + Leveling Compound	500 SF	N	good
	12	↓	Janitors Closet	10	4" Cove Base + Tan glue	200 SF	N	good
	13	↓	Ceiling Near Janitors Closet	11	2x2' Ceiling Tile	800 SF	Y	good

* Asbestos PLM EPA Method 600/R-93/116
* Standard TAT
* First Positive stop per HA No. with Results 1% and greater

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(Optional)	Received By: (sign/print)	Laboratory
P. Rodriguez	Ninyo & Moore	2/19/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	14	N20	North Wall	12	Drywall + Joint Compound	2,000SF	N	Good
	15	↓	South wall	↓	↓ ↓	↓	↓	↓
	16	↓	Janitors Closet - Wall Northeast	↓	↓ ↓	↓	↓	↓
	17	Paint shop	Roof - Center	13	Roof Cover Foam insulation Roofing	150 SF	N	Good
	18	↓	↓ - Northeast	14	Roof Cover - Asphalt Shingles	500 SF	↓	↓
	19	↓	Exterior Wall - North	16	STUCCO	2,000SF	↓	↓
	20	↓	↓ ↓ - South	↓	↓	↓	↓	↓
	21	↓	↓ ↓ - West	↓	↓	↓	↓	↓
	22	↓	South office - West	17	4" Blue Cove Base + Tan Glue	100 SF	N	Good
	23	↓	South office - Center Floor	18	Blue Carpet + Tan glue	200SF	N	Good
	24	↓	South office - South wall	19	Interior Stucco	200 SF	N	Good
	25	↓	Lunch Area Center	20	white 12"x12" VFT + Grey Glue	200 SF	N	Good
	26	↓	Paint Storage East wall	21	Tan Drywall + Joint Compound	300 SF	N	Good

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475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory
Tel:
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By (Signature)	Company	Date	Time(24hr)	Received By (Signature)	Laboratory
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	27	Paint Shop	Paint Storage South Wall	22	White Drywall + Joint Compound	350 SF	N	good
	28	N17	Exterior East wall	23	Stucco	2,500 SF	N	good
	29	↓	↓ North ↓	↓	↓	↓	↓	↓
	30	↓	↓ South ↓	↓	↓	↓	↓	↓
	31		Roof @ Pipe South	24	White Caulking	2 SF	N	good
	32		Roof @ HVAC Duct Seams - South	25	Black Mastic	5 SF	↓	↓
	33		Roof @ Pipe Cap - South West	26	↓ ↓	5 SF		
	34		Roof - Center	27	Asphalt Shingles	2,000		
	35		Exterior @ HVAC Duct Seams - South Center	28	Grey + White Caulking	5 SF	↓	↓
	36		Floor @ office North	29	Blue Carpet + Backing	200 SF	N	Good
	37		@ East office area	30	4" grey Cove Base + White Glue	50 SF	N	good
	38		Floor, West office Area	31	Blue Carpet + Glue Brown	150 SF	N	good
	39	↓	East office Conference Room Ceiling	32	Fissured 1'x1' Ceiling Tile + Brown Mastic (Hatched)	250 SF	N	good

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Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: Fax: 001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (signature)	Company	Date	Time (24 hr)	Received By: (signature)	Laboratory
P. Rodriguez	Ninyo & Moore	2/18/15			

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	40	N17	East offices @ Restroom	33	White VFT + Tan Glue	50 SF	N	good
	41	↓	Snack Bar - South east corner	34	Pink ↓ ↓	100 SF	N	good
	42	↓	↓ ↓	35	6" Cove Base, Brown + Glue	80 SF	N	good
	43	↓	West offices - Wall - west	36	Drywall + Joint Comp.	1,200 SF	↓	↓
	44	↓	East offices - Restroom - wall	↓	↓ ↓	↓	↓	↓
	45	↓	East offices - East wall - wall	↓	↓ ↓	↓	↓	↓
	46	N25	Roof Trim/Flashing Seams	37	Black Mastic + Caulking	5 SF	N	good
	47	↓	Exterior Wall Northwest	38	Texture Coat (Plaster) + mesh + insulation	8,000 SF	↓	↓
	48	↓	↓ ↓ Sovik west	↓	↓	↓	↓	↓
	49	↓	↓ ↓ North east	↓	↓	↓	↓	↓
	50	↓	Roof @ North west Sections	39	Roof Core 1: Asphalt Sheeting	500 SF	N	good
	51	↓	Roof (main Roof) center	40	Foam Insulation Roofing	25,000 SF	↓	↓
	52	↓	North east offices	41	Drywall + Joint Compound	7,000 SF	↓	↓

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001327248

CHAIN OF CUSTODY INFORMATION:

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P. Rodriguez	Ninyo & Moore	2/18/15			

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	53	N25	west offices Room 101	41	Drywall + Joint Compound	7,000 SF	N	good
	54		Filing Room South West					
	55		Filing Room South west	42	white VFT 1'x1' + Glue	600 SF	N	good
	56		west Offices Room 101	43	Fissured Ceiling tile	3,000 SF	N	good
	57		west offices Room 101	44	Blue Carpet + Green Glue + Leveling Compound	5,000 SF		
	58		Main Hall - West	45	4" Blue Cove Base + Glue	1,500 SF		
	59		east offices	46	6" Grey Cove Base + Glue	1,000 SF	N	good
	60		east Hallway	47	4" Dark Blue Cove Base + Glue	30 SF	N	good
	61		East offices Room E127	48	Blue Carpet + Green glue	400 SF	N	good
	62	N33	Roof Main Center	49	Foam insulation Roofing Roof Core 1	1,000 SF		
	63		Roof of annex	50	Roof Core 2: Asphalt Sheeting	900 SF		
	64		Exterior window South	51	Window Caulking	25 SF		
	65		Restroom North/Main	52	4" Blue Cove Base + glue	100 SF		

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"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	66	N33	Floor main Hallway near Janitors Closet	53	Blue carpet + Cutback	400 SF	N	good
	67	"	Janitors Closet	54	Brown Drywall + Joint Compound	1,000 SF	"	"
	68	"	South Conference Room	55	Drywall + Joint Compound	1,000 SF	"	"
	69	"	Janitors Closet Floor	56	Blue VFT + Glue	1,000 SF	"	"
	70	"	Restrooms + Janitors closet	57	Light Blue VFT + glue	500 SF	"	"
	71	"	Restroom Ceiling	58	4'x2' ceiling tile w/ insulation	20 SF	N	good
	72	"	South offices ceiling	59	4'x2' Ceiling Tile (Acoustic)	50 SF	Y	good
	73	N31	Ceiling Plenum @ Duct	60	Insulation + Tape	100 SF	N	good
	74	"	Roof @ pipe	61	Foam Insulation for Roofing	1,000 SF	"	"
	75	"	Roof center	"	Roof Core	"	"	"
	76	"	Janitor closet wall	62	Drywall + joint Compound	2,000	N	good
	77	"	Ha Kitchen/Break Rm	"	"	"	"	"
	78	"	Wall @ men's Restroom	"	"	"	"	"

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P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	79	N31	Hallway North	63	4x2' Ceiling Tile	1,500 SF	Y	good
	80		North west Area	64	4" Black Cove Base + Brown glue	20 SF	N	good
	81		Floor West Main Area	65	Tan VFT 1x1' w/ Mastic	1,500 SF	N	good
	82		near Mens Restroom	66	6" Cove Base + glue	50 SF	N	good
	83		Mens Restroom	67	2" Brown Cove Base + Brown Mastic	30 SF		
	84		Center @ Janitor Closet Floor	68	1x1' Pink VFT + White glue	200 SF		
	85		Kitchen Area	69	Light Blue VFT 15x15' + Grey mastic	500 SF		
	86	N26	Roof Center	70	Roof Core 2 Asphalt Sheeting	300 SF		
	87		North trailer window	71	Window Caulking	10 SF		
	88		Roof South trailer @ PIC	72	Black Mastic	5 SF		
	89		Roof Center trailer	73	Roof Core 1; Asphalt Sheeting	600 SF		
	90		Roof South trailer @ PIC	74	Grey Caulking	2 SF		
	91		South trailer Floor	75	4" Black Cove Base w/ Tan glue	50 SF		

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P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	92	N26	North west Area	76	6" Grey Cove Base + Glue	80 SF	N	good
	93	↓	Restroom on Main trailer	77	6" Tan Cove Base + Glue	50 SF	N	good
	94	↓	South trailer Floor	78	Blue 1X1 VFT + glue	200 SF	N	good
	95	↓	Womens Restroom Ceiling	79	Insulation Ceiling Tile 4X2	400 SF	Y	good
	96	↓	Main Area Floor	80	Vinyl floor sheeting Tan + Glue	20 SF	N	good
	97	↓	Floor North east trailer	81	White VFT 1X1 + Glue	300 SF	N	good
	98	↓	Main trailer Wall	82	Drywall + Joint Compound	1,500 SF	↓	↓
	99	↓	North east trailer wall	↓	↓	↓	↓	↓
	100	↓	North west Trailer wall	↓	↓	↓	↓	↓
	101	↓	South trailer Ceiling	83	Acustic 4X2 Ceiling Tile	350 SF	N	good
	102	↓	Throught Trailers	84	Blue Carpet + glue + Level Compound	200 SF	N	good
	103	N24	North wing Breakroom NW	85	20" X 20" Blue VFT + Glue	1,000 SF	N	good
	104	↓	@ Southwest offices	86	Grey Carpet + Backing + Tan Glue	800 SF	↓	↓

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Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory

Tel:
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Signature)	Company	Date	Time (Hr)	Received By: (Signature)	Laboratory
P. Rodriguez	Ninyo & Moore	2/18/15			

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	105	N24	Southern offices (SW)	87	White VET + Black Mastic	2,000 SF	N	good
	106		East hallway	88	Grey Cove Base 4" + Tan Glue	4000 LF	N	good
	107		Ceiling Plenum @ N-S add on Construction	89	Pipe insulation + Cloth/wire	18 LF	Y	good
	108		North Wing Hallway -Ceiling	90	2X2' Ceiling tile	2,000 SF	Y	good
	109		Southwest offices -Ceiling	91	1X1 Random Hole Ceiling Tile + Brown Mastic	1,000 SF	Y	good
	110		Center Ceiling at office next to mail room	92	4X2 Ceiling Tile @ Corridor	200 SF	Y	good
	111		Ceiling Plenum @ Column.	93	Button Board (Plaster + Joint Comp. Thin Drywall)	2,500 SF	N	good
	112		Break Room Eastwall	↓	↓	↓	↓	↓
	113		Mail Room	↓	↓	↓	↓	↓
	114		Ceiling Plenum North and South wall add on/Junction	94	Interior Stucco	300 SF	N	good
	115		Southwest offices Ceiling Plenum Ceiling	95	Drywall + Joint Compound	4,000	↓	↓
	116		Southwest offices near Mail Room	↓	↓	↓	↓	↓
	117	↓	SW offices Wall/Entry	↓	↓	↓	↓	↓

Ninyo & Moore

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24hr)	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	118	N24	North east ottawa	96	Will Cove Base Black + Glue	100SF	N	good
	119		South Shed/old Roof/Heater Room	97	Roof Cove Asphalt Shingle Color	150SF		
	120		South Roof	98	Sleeper Mastic	105F		
	121		South Roof (SW)	99	Pitch Pocket Blk. Mastic	105F		
	122		South Roof	100	Roof Cove Asphalt Sheeting	2,000		
	123		S. ↓ - Center	101	Cloth Tape + Blk Mastic	12SF		
	124		North West Roof Facial Trim	102	Caulky + Blue Mastic	10 SF		
	125		NE Roof	103	Roof Cove; Foam Insulation Roof	1,300SF		
	126		Northwest Parapet Wall	104	Asphalt Sheeting + Dry wall	300SF		
	127		Pitch Pocket NW Roof	105	Black Mastic	15 SF		
	128		NW Section Roof	106	Roof Cove: New asphalt sheeting	1,200SF		
	129		Northwest Corner wall	107	Exterior Stucco	5,000SF		
	130	↓	NE ↓	↓	↓	↓	↓	↓

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Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Labor Tel: Fax: 001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (signature)	Company	Date	Time(24hr)	Received By: (signature)	Laboratory
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	131	N24	SE. Corner wall	107	Exterior Stucco	5,000 SF	N	good
	132		AC @ Northend of North wing	108	Grey Caulking	10 SF		
	133		Exterior SE HVAC	109	white duct tape w/ caulking	5 SF		
	134		South end windows	110	Brown Window Caulking	20 SF		
	135		@ Duct on South Roof	111	white Tape + mastic	20 SF		
	136		Windows on S. Roof	112	white window caulking	50 LF		
	137		Roof - Center	113	Sleeper Mastic	50 SF		
	138	↓	Exterior HVAC (SE)	114	tape + Black Mastic	50 SF	↓	↓
	139	N18	Exterior HVAC Unit (W)	115	Grey Caulking	10 SF	N	good
	140		↓ HVAC Duct Seams	116	Duct tape	15 SF		
	141		Exterior Wall West	117	Stucco	2,000 SF		
	142		↓ South	↓	↓	↓	↓	↓
	143	↓	↓ North	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
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001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24hr)	Received By: (sign/print)	Received by Laboratory
P Rodriguez	Ninyo & Moore	2/18/15			

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	144	N18	Roof SE	118	Roof Cone Asphalt Shingles	1,200 SF	N	good
	145		Floor @ Restroom	119	White VFT + Glue 1X1	250 SF		
	146		Floor @ East classroom	120	Blue Carpet + glue	350 SF		
	147		Floor @ Front office	121	Grey Cove Base 4" + Glue	500 LF		
	148		Ceiling Brake Rm	122	Random Hole 4X2 Acoustic Ceiling Tile	500 SF	Y	good
	149		Restroom near Entry	123	Drywall + Joint Compound	2,000 SF	N	good
	150		West attic					
	151		East attics					
	152	N32	Exterior North	124	Stucco	2,000 SF		
	153		South					
	154		West					
	155		Roof Center	125	Roof Cone: Built up Asphalt	1,000 SF		
	156		Center Roof @ vent	126	Black Mastic	15 SF		

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Sign/Print)	Company	Date	Time (AM/PM)	Received By: (Sign/Print)	
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	157	N32	Kitchen Area	127	Drywall + Joint Comp.	100 SF	N	good
	158		Mens Restroom	128	6" Cove Base	40 SF		
	159		East Office Floor	129	Grey Carpet + Glue and Backing	450 SF		
	160		Main area	130	4" Black Cove Base + Glue	250 LF		
	161		Mens Restroom	131	White VFT + glue	200 SF	↓	
	162		Mens Restroom	132	Ruben Hole 4'x2' Ceiling Tile	300 SF	Y	
	163	↓	Mens Restroom	133	Grey VFT 1x1 + Glue	300 SF	N	↓
	164	Cottage #18	Roof @ vent	134	Tape + Mastic	2 SF	N	good
	165		↓ ↓	135	Tan Caulking	15F	N	good
	166		Roof Center	136	Roof Cover: Asp shingles	1,000 SF		
	167		Exterior Wall - S	137	Stucco	1,000 SF		
	168		↓ ↓ - N	↓	↓	↓	↓	↓
	169		↓ ↓ - W	↓	↓	↓	↓	↓

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:
Laboratory: Tel: Fax:		

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time	Received By: (sign/print)	Laboratory
P Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	170	cottage #18	Near Kitchen Floor	138	Grey Carpet + Backing + 9"x9" Brown VFT + Mastic	700 SF	N	good
	171		@ Bathroom	139	White VFT + Tan Glue	50 SF		
	172		@ Closet wall	140	Button Board (Plaster + Drywall + Joint Comp)	1,500 SF		
	173		@ Living Room		+ Texture coating			
	174		@ Hall Closet wall					
	175	cottage #18	Roof @ Wisky Bird	141	Tape w/ Grey Coating	2 SF	N	good
	176	Cottage #16	Exterior Wall N	142	Stucco	1,000 SF	N	good
	177		- S					
	178		- W					
	179		Roof @ Vent Pipe	143	Tape w/ Grey Coating	2 SF		
	180		Roof - Center	1421	Roof Tone ASB: Shingles	1,000 SF		
	181		Kitchen Area	145	White VFT + glue + leveling comp.	300 SF		
	182		Near offices North	146	4" Grey Cove Base + glue	350 LF		

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475 Goddard, Suite 200
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Tel: (949) 753-7070
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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(circle)	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore	7/15/15			

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	183	Cottage #16	Ceiling Center	147	Button Board Plaster + Drywall + Joint Comp	2,100 SF	N	good
	184		@ Closet wall					
	185		@ Heter Room					
	186		@ Copy Room/Office	148	Grey Carpet + Green glue + Grey Leveling Comp.	300 SF	N	good
	187	N 18	Roof @ Pipe	149	Brown Caulking	10 SF	N	good
	188	N 16	@ asphalt Roof Seams	150	Black Mastic	5 SF		
	189		@ Roof vent Pipe	151	Black Mastic	2 SF		
	190		Roof Center	152	Roof Core + Sheeting	800 SF		
	191		@ Restroom	153	Vynil floor Sheeting + glue	80 SF		
	192		Hallway North	154	Carpet + Backing + carpet + Backing + Glue	600 SF		
	193		Restroom wall	155	Drywall + Tape	300 SF		
	194		NE Room Wall					
	195		W - Room Wall					

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Signature)	Company	Date	Time (24 hr)	Received By: (Signature)
P. Rodriguez	Ninyo & Moore	2/18/15		

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	196	N21	Roof @ Pipe	156	Grey Caulking	20 SF	N	Good
	197		Roof Center	157	Roof Comp Vynil + Mastic	2,000		
	198		Wall Behind Wood	158	Drywall + Joint Caulking	1,500 SF		
	199		West					
	200		Janitor Storage					
	201		@ Water Heater Pipe	159	Caulking Tan	1 SF		
	202		Hallway near RR	160	Blue Carpet + Blue Backing + 1X1 Blue VFT + Glue	1,500 SF		
	203		Near Break Room	161	Black Cove Base 6" + Glue	100 SF		
	204		Ceiling near Janitor closet	162	Ceiling Pannels (Stapled)	1,000 SF	Y	
	205		@ Restroom Wall	163	Light Grey Cove Base 4"	40 LF	N	
	206		@ Floor of Janitor closet / RR	164	1X1 Blue VFT + Glue	1,500 SF		
	207		@ Restroom	165	White Base Cove 6" + Glue	10 SF		
	208	N28	East Hall / Floor	166	Blue Carpet + Backing + White (Speckled) VFT 1X1 + Tan Glue	1,500 SF		

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Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Signature)	Company	Date	Time	Received By: (Signature)
P Rodriguez	Ninyo & Moore	7/16/15		

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	209	N28	West Hall Floor	167	Grey VFT 1'x1' + Black mastic + Green VFT 1'x1' + Black mastic	1,000 SF	N	good
	210		West Stock Room Floor	168	off white 1'x1' VFT + Black Mastic	100 SF		
	211		↓ ↓ ↓	169	Blue speckled VFT 1'x1' + Tan Glue	10 SF		
	212		East-West Hallway Ceiling	170	Fissured 1'x1' Ceiling Tile + Black Mastic (Hatty Pg 11)	1,000 SF	Y	
	213		West Stock Room	171	4" Tan Cove Base + Tan glue	100 LF	N	
	214		↓ ↓ ↓	172	↓ Green ↓ + Brown glue	10 LF		
	215		East Restroom	173	6" Brown Cove Base + Tan glue + Brown Glue	50 LF		
	216		South Offices / Conference Room	174	4" Burgundy Cove Base + glue	500 LF		
	217		East Janitors Closet wall	175	Drywall + Joint compound	2,500 SF		
	218		↓ ↓ ↓ ↓	↓	↓ ↓	↓		
	219		West Stock Room wall	↓	↓ ↓	↓		
	220		Roof @ Pipe Center	176	Grey Caulking	10 SF		
	221	↓	↓ @ Duct West	177	Black Mastic	10 SF	↓	↓

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ASBESTOS BULK SAMPLE DATA SHEET

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Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (signature)	Company	Date	Time (AM)	Received By: (signature)	
P. Rodriguez	Ninyo & Moore	2/13/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	222	N28	Exterior Wall -NE	178	Stucco	5,500 SF	N	good
	223		-SW					
	224		-SE					
	225		Roof @ North west	179	Roof Cover: Asphalt shingles	2,500 SF		
	226		Roof @ Northeast					
	227		Roof @ west	180	Roof cover 2: Asphalt Sheeting	200 SF		
	228	N22	East Exit/Corridor wall	181	Drywall + Joint Compound	1,500 SF	N	good
	229		-Ceiling					
	230		Restroom East wall					
	231		Main Entrance North	182	6" Tan Cove Base + Glue	35 SF	N	good
	232		East Exit/Corridor	183	6" Gray Cove Base + Glue	50 SF		
	233		Northeast Area	184	White VFT (1'x1') + Tan glue	350 SF		
	234		Roof Center	185	Roof Cover: Asphalt shingles	2000 SF		

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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
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001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	235	N22	Exterior South end	186	window Caulking	20 SF	N	good
	236		Exterior HVAC / East	187	white duct Caulking	5 SF		
	237		↓ ↓ ↓	188	↓ ↓ Tape	2 SF		
	238		Roof @ Pipe - Center	189	Black Mastic	10 SF		
	239		Exterior wall - East	190	Stucco	2000 SF		
	240		↓ ↓ - North	↓	↓	↓		
	241	↓	↓ ↓ - South	↓	↓	↓		
	242	N14	west offices / Hallway @ Ceiling Plenum wall	191	Button Board (Plaster + Drywall + Joint Comp)	2,000 SF		
	243		↓ @ South Hallway Ceiling Plenum wall	↓	↓	↓		
	244		↓ near Room 10c @ Ceiling plenum Ceiling	↓	↓	↓		
	245		Hallway - Northwest offices wall	192	Drywall + Joint compound	8,000 SF		
	246		North offices wall	↓	↓ ↓	↓		
	247	↓	Janitor closet wall	↓	↓ ↓	↓	↓	↓

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory:** Tel: Fax:

001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time (Hrs)	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	248	N14	@ Room 10c	193	6" Block Cove Base + Tan Glue	150 SF	N	good
	249		West Women's Restroom	194	4" Glossy Black Cove Base + Glue	50 SF		
	250		Rooms 10A - 10B	195	4" Black Cove Base + Glue	300 SF		
	251		East Hallway	196	4" Grey Cove Base + Glue	1,000 SF		
	252		Northeast Copy Room	197	Grey Carpet + Backing + 9x9 Brown VFT + Black Mastic	1500 SF		
	253		West Hallway Floor	198	Blue Carpet + Tan Glue + Grey 1X1 VFT + Black Mastic	2,000 SF		
	254		N. Room Shipping and Receiving	199	Brown Carpet	100 SF		
	255		Men's Restroom North	200	Vinyl Sheeting + Glue + Mastic ?	100 SF		
	256		Shipping and Receiving	201	Tan 1X1 VFT + Black Mastic + Grey 1X1 VFT + Glue	350 SF		
	257		North Shipping and Receiving	202	Tan 1X1 VFT + Black Mastic + Green 1X1 VFT + BLK Mastic	250 SF		
	258		Janitors Closet Area	203	Blue VFT 1'X1' + Glue	200 SF		
	259		Floor Room 26	204	Blue-Green Carpet + Backing + Black 9"x9" VFT + BK Mastic	500 SF		
	260	↓	Floor Women's Restroom	205	Vinyl Sheeting + Glue (Various layers) + Leveling compound	80 SF	↓	↓

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
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Tel: (949) 753-7070
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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
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001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time (24 hr.)	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore	8/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	261	N14	Ceiling Air Ceiling Plenum Hallway West	206	Strait Hole 1x1 Ceiling Tile + Brown Mastic (Hockey Rink)	1,500 SF	Y	good
	262		@ Vending Machine Ceiling	207	Fissured 1x1 Ceiling Tile (Nailed)	200 SF	Y	
	263		North Hallway	208	2'x2' Ceiling Tile acoustic	1,500 SF	Y	
	264		Roof Skipping / Southeast	209	Roof Zone 2 Asphalt sheeting	500 SF	N	
	265		Roof center	210	Roof Zone 1 Asphalt sheeting	3,000 SF	N	
	266		Roof @ Vent/Motor	211	Black Mastic	25 SF		
	267		@ Vent/SE	212	↓ ↓	25 SF		
	268		@ Pipe / NW	213	↓ ↓	25 SF		
	269		@ Vent / Center	214	Caulky + Tape	20 SF		
	270		South end Windows	215	Window Caulky	30 SF		
	271		Exterior Wall - East	216	Stucco	2,500 SF		
	272		- West					
	273	↓	↓ - North	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

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Project Manager:
Michael Cushner

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001327248

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24-hr)	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore	2/18/15		/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	274	N14	Exterior @ East HVAC unit	217	Duct Caulking	15 SF	N	good
	275		@ Shed wall	218	Exterior Drywall	300 SF		
	276		@ HVAC South/East	219	Grey Caulking	5 SF		
	277		@ Pipe Area center	220	tape + mastic + insulation	8 LF		
	278		@ HVAC Duct center area	221	Duct tape	20 SF		
	279		@ wall vent(s)	222	Caulking + Tan Coating + B. Mastic	20 SF		

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EMLab P&K
A TestAmerica Company

Report for:

Mr. Mike Cushner
Ninyo & Moore - Irvine
475 Goddard
Suite 200
Irvine, CA 92618

Regarding: Project: 209023002; PCR/Harbor- UCLA
EML ID: 1337117

Approved by:



Approved Signatory
Graziella Ines

Dates of Analysis:
Asbestos PLM: 03-17-2015 to 03-19-2015

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor- UCLA

Date of Receipt: 03-13-2015
Date of Report: 03-20-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	195
Total Samples Analyzed:	195
Total Samples with Layer Asbestos Content > 1%:	22

Location: 280, Drywall + Join Compound

Lab ID-Version‡: 6115237-1

Sample Layers	Asbestos Content
White Compound with Paint	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 281, Drywall + Join Compound

Lab ID-Version‡: 6115238-1

Sample Layers	Asbestos Content
White Compound with Paint	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 282, Drywall + Join Compound

Lab ID-Version‡: 6115239-1

Sample Layers	Asbestos Content
White Compound with Paint	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor- UCLA

Date of Receipt: 03-13-2015
Date of Report: 03-20-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 283, Fissured 1'x1' Ceiling Tile + Brown Mastic

Lab ID-Version‡: 6115240-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	40% Cellulose 40% Glass Fibers 2% Talc
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor- UCLA

Date of Receipt: 03-13-2015
Date of Report: 03-20-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 284, Random Hole 1'x1' Ceiling Tile, + Brown Mastic Lab ID-Version‡: 6115241-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 285, Acoustic Ceiling Panels Lab ID-Version‡: 6115242-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 286, Green Carpet + Backing Lab ID-Version‡: 6115243-1

Sample Layers	Asbestos Content
Green Carpet	ND
Gray Carpet Backing	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 287, Tan 1'x1' VFT + Black Mastic Lab ID-Version‡: 6115244-1

Sample Layers	Asbestos Content
Tan Floor Tile	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 288, White (Spec) 1'x1' VFT + Glue Lab ID-Version‡: 6115245-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 289, Black Cove Base, 2"+ Glue Lab ID-Version‡: 6115246-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Multicolored Glue	ND
Sample Composite Homogeneity:	Good

Location: 290, 4" Black Cove Base + Glue + Brown Mastic Lab ID-Version‡: 6115247-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Comments: Insufficient Brown Mastic material present for analysis.

Location: 291, 2" Brown Cove Base + Glue Lab ID-Version‡: 6115248-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 292, Stucco + Barrier Paper Lab ID-Version‡: 6115249-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Brown/Black Vapor Barrier Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 293, Pipe Insulation Lab ID-Version‡: 6115250-1

Sample Layers	Asbestos Content
Gray Pipe Insulation with Silve Foil	ND
Composite Non-Asbestos Content:	40% Cellulose 10% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 294, Roof Core 1, Asphalt Sheeting Lab ID-Version‡: 6115251-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 295, Roof Core 2, Asphalt Shingles Lab ID-Version‡: 6115252-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 296, Black Mastic Lab ID-Version‡: 6115253-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 297, Window Putty Lab ID-Version‡: 6115254-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 298, Caulky/Mud Lab ID-Version‡: 6115255-1

Sample Layers	Asbestos Content
Brown/Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 299, Fissured Ceiling Tile + Brown Mastic Lab ID-Version‡: 6115256-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers 2% Wollastonite
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 300, Older Drywall Lab ID-Version‡: 6115257-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 301, Older Drywall Lab ID-Version‡: 6115258-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 302, Older Drywall Lab ID-Version‡: 6115259-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 303, New Drywall + Joint Compound Lab ID-Version‡: 6115260-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 304, New Drywall + Joint Compound Lab ID-Version‡: 6115261-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 305, New Drywall + Joint Compound Lab ID-Version‡: 6115262-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 306, Black Mastic Lab ID-Version‡: 6115263-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 307, Stucco Lab ID-Version‡: 6115264-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 308, Black Mastic

Lab ID-Version‡: 6115265-1

Sample Layers	Asbestos Content
Black Mastic	7% Chrysotile
Sample Composite Homogeneity:	Good

Location: 309, Beige Caulking

Lab ID-Version‡: 6115266-1

Sample Layers	Asbestos Content
Beige Caulk	ND
Sample Composite Homogeneity:	Good

Location: 310, Roof Core 2, Asphalt Sheeting

Lab ID-Version‡: 6115267-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 311, Roof Core 1, Asphalt Shingles

Lab ID-Version‡: 6115268-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 312, Window Putty Lab ID-Version‡: 6115269-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 313, Tape + Glue Lab ID-Version‡: 6115270-1

Sample Layers	Asbestos Content
Silver Tape with Glue	ND
Sample Composite Homogeneity:	Good

Location: 314, Black Mastic Lab ID-Version‡: 6115271-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 315, Grey Carpet + Backing + Red 1x1 VFT + Black Mastic Lab ID-Version‡: 6115272-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Purple Carpet Backing	ND
Brown/White Sheet Flooring with Black Backing	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	60% Synthetic Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 316, Beige Vinyl Floor Sheeting + Glue

Lab ID-Version‡: 6115273-1

Sample Layers	Asbestos Content
Beige Sheet Flooring with Fibrous Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 317, Tan 1'x1' VFT + Glue

Lab ID-Version‡: 6115274-1

Sample Layers	Asbestos Content
Tan Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 318, White Caulking

Lab ID-Version‡: 6115275-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 319, Green Carpet + Backing + Tan Glue

Lab ID-Version‡: 6115276-1

Sample Layers	Asbestos Content
Green Carpet	ND
Off-White Carpet Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 320, Brown 2" Cove Base + Glue Lab ID-Version‡: 6115277-1

Sample Layers	Asbestos Content
Dark Brown Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 321, Black 4" Cove Base + Glue Lab ID-Version‡: 6115278-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 322, 4" tan Cove Base + Glue Lab ID-Version‡: 6115279-1

Sample Layers	Asbestos Content
Tan Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 323, 4'x2' Ceiling Tile Lab ID-Version‡: 6115280-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 324, Duct Tape Lab ID-Version‡: 6115281-1

Sample Layers	Asbestos Content
White Tape	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 325, Tape + Caulking + Black Mastic Lab ID-Version‡: 6115282-1

Sample Layers	Asbestos Content
Gray Tape	ND
Transparent Caulk	ND
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 326, Black Mastic Lab ID-Version‡: 6115283-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 327, Roof Core 2, Asphalt Sheeting Lab ID-Version‡: 6115284-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 328, Foam Insulation Coating Lab ID-Version‡: 6115285-1

Sample Layers	Asbestos Content
White Coating	ND
Yellow Foam Insulation	ND
Sample Composite Homogeneity:	Good

Location: 329, Drywall + Joint Comp Lab ID-Version‡: 6115286-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 330, Drywall + Joint Comp Lab ID-Version‡: 6115287-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 331, Drywall + Joint Comp Lab ID-Version‡: 6115288-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 332, Beige 1'x1' VFT + Glue (Blue Specs) Lab ID-Version‡: 6115289-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 333, White 1'x1' VFT + Brown Glue Lab ID-Version‡: 6115290-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 334, 6" Grey Cove Base + Brown Mastic Lab ID-Version‡: 6115291-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	2% Wollastonite
Sample Composite Homogeneity:	Good

Location: 335, 4" Blue Cove Base + Glue Lab ID-Version‡: 6115292-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 336, Grey Carpet + Glue

Lab ID-Version‡: 6115293-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 337, 4'x2' Ceiling Tile

Lab ID-Version‡: 6115294-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose 10% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 338, White Caulking

Lab ID-Version‡: 6115295-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 339, Drywall + Joint Compound

Lab ID-Version‡: 6115296-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 340, Drywall + Joint Compound Lab ID-Version‡: 6115297-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 341, Drywall + Joint Compound Lab ID-Version‡: 6115298-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 342, 6" Grey Cove Base + Glue + Mastic Lab ID-Version‡: 6115299-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 343, Roof Core, Vinyl Sheeting Lab ID-Version‡: 6115300-1

Sample Layers	Asbestos Content
White Semi-Fibrous Material	ND
Composite Non-Asbestos Content:	10% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 344, 4" Light Grey Cove Base + Glue Lab ID-Version‡: 6115301-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Brown/White Glue	ND
Sample Composite Homogeneity:	Good

Location: 345, Blue Striped Carpet + Glue + 1'x1' White VFT + Black Mastic Lab ID-Version‡: 6115302-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Transparent Glue	ND
White Floor Tile	ND
Black Mastic	8% Chrysotile
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 346, Vinyl Floor Sheeting + Glue Lab ID-Version‡: 6115303-1

Sample Layers	Asbestos Content
Beige Sheet Flooring with Fibrous Backing (Top)	ND
White Mastic	ND
Yellow Sheet Flooring with Fibrous Backing (Bottom)	20% Chrysotile
Composite Non-Asbestos Content:	20% Cellulose 3% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 347, 2x2 Ceiling Tile Lab ID-Version‡: 6115304-1

Sample Layers	Asbestos Content
White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 348, Blue Carpet + Backing + Brown 1x1 VFT + Black Mastic Lab ID-Version‡: 6115305-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Gray Carpet Backing	ND
Brown Floor Tile	< 1% Chrysotile
Black Mastic	7% Chrysotile
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 349, Black Cove Base 4' + Glue Lab ID-Version‡: 6115306-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 350, 4" Grey Cove Base + Glue Lab ID-Version‡: 6115307-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

Location: 351, 4" Brown Cove Base + Tan Glue Lab ID-Version‡: 6115308-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 352, White Spec, 1x1 VFT + Glue Lab ID-Version‡: 6115309-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 353, Drywall + Joint Compound Lab ID-Version‡: 6115310-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 354, Drywall + Joint Compound Lab ID-Version‡: 6115311-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 355, Drywall + Joint Compound Lab ID-Version‡: 6115312-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Poor

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 356, 4'x2' Ceiling Tile Lab ID-Version‡: 6115313-1

Sample Layers	Asbestos Content
White Ceiling Tile with White Surface	2% Amosite
Composite Non-Asbestos Content:	80% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 357, Roof Core, Asphalt Shingles Lab ID-Version‡: 6115314-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Black Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 358, Black Caulking Lab ID-Version‡: 6115315-1

Sample Layers	Asbestos Content
Black Caulk	6% Chrysotile
Sample Composite Homogeneity:	Good

Location: 359, White Caulking Lab ID-Version‡: 6115316-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 360, Duct Tape Lab ID-Version‡: 6115317-1

Sample Layers	Asbestos Content
Silver Coating (Trace)	2% Chrysotile
White Semi-Fibrous Material	ND
Composite Non-Asbestos Content:	60% Cellulose
Sample Composite Homogeneity:	Good

Location: 361, Stucco Lab ID-Version‡: 6115318-1

Sample Layers	Asbestos Content
Gray/White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 362, Stucco Lab ID-Version‡: 6115319-1

Sample Layers	Asbestos Content
Gray/White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 363, Stucco Lab ID-Version‡: 6115320-1

Sample Layers	Asbestos Content
Gray/White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 364, Stucco Lab ID-Version‡: 6115321-1

Sample Layers	Asbestos Content
Gray/White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 365, Stucco Lab ID-Version‡: 6115322-1

Sample Layers	Asbestos Content
Gray/White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 366, Stucco Lab ID-Version‡: 6115323-1

Sample Layers	Asbestos Content
Gray/White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 367, Grey Carpet + Glue + White VFT 1'x1' + Glue Lab ID-Version‡: 6115324-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
White Floor Tile	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 368, 6" Grey Cove Base + Glue Lab ID-Version‡: 6115325-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 369, Drywall + Joint Compound Lab ID-Version‡: 6115326-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 370, Drywall + Joint Compound Lab ID-Version‡: 6115327-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 371, Drywall + Joint Compound Lab ID-Version‡: 6115328-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 372, Duct Tape + Caulking Lab ID-Version‡: 6115329-1

Sample Layers	Asbestos Content
Transparent Caulk	ND
Gray Tape	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 373, Foam Insulation Roofing (Roof Core) Lab ID-Version‡: 6115330-1

Sample Layers	Asbestos Content
White Coating	ND
Yellow Foam Insulation	ND
Sample Composite Homogeneity:	Good

Location: 374, Asphalt Sheeting, Roof Core 2 Lab ID-Version‡: 6115331-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Black Roofing Felt	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 375, 4'x2' Ceiling Tile Lab ID-Version‡: 6115332-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose 10% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 376, Insulation Lab ID-Version‡: 6115333-1

Sample Layers	Asbestos Content
Beige Insulation	ND
Composite Non-Asbestos Content:	95% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 377, 1'x1' Fissured Ceiling Tile (No Mastic) Lab ID-Version‡: 6115334-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 378, 1x1 Ceiling/Wall Tile + Glue Lab ID-Version‡: 6115335-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Tan Glue	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 379, Drywall + Joint Compound Lab ID-Version‡: 6115336-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 380, Drywall + Joint Compound

Lab ID-Version‡: 6115337-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 381, Drywall + Joint Compound

Lab ID-Version‡: 6115338-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 382, Grey Carpet + Glue + 1x1 White VFT + Black Mastic

Lab ID-Version‡: 6115339-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
White Floor Tile	8% Chrysotile
Black Mastic	8% Chrysotile
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 383, Vent Tape

Lab ID-Version‡: 6115340-1

Sample Layers	Asbestos Content
Gray/Black Tape	10% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 384, Tape Lab ID-Version‡: 6115341-1

Sample Layers	Asbestos Content
Gray/Black Tape	10% Chrysotile
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 385, Black Mastic Lab ID-Version‡: 6115342-1

Sample Layers	Asbestos Content
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 386, Tape + Caulking Lab ID-Version‡: 6115343-1

Sample Layers	Asbestos Content
White Tape	ND
Gray Caulk	ND
Composite Non-Asbestos Content:	30% Cellulose 3% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 387, Window Putty Lab ID-Version‡: 6115344-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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Re: 209023002; PCR/Harbor- UCLA

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 388, Roof Core,Asphalt Shingles Lab ID-Version‡: 6115345-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 389, Sprayed on Acoustic Ceiling "Popcorn Ceiling" Lab ID-Version‡: 6115346-1

Sample Layers	Asbestos Content
White Popcorn Ceiling	ND
Sample Composite Homogeneity:	Good

Location: 390, Button Board Plaster, Drywall, Joint Compound Lab ID-Version‡: 6115347-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 391, Button Board Plaster, Drywall, Joint Compound Lab ID-Version‡: 6115348-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 392, Button Board Plaster, Drywall, Joint Compound Lab ID-Version‡: 6115349-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 393, Drywall + Joint Compound Lab ID-Version‡: 6115350-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 394, Drywall + Joint Compound Lab ID-Version‡: 6115351-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 395, Drywall + Joint Compound Lab ID-Version‡: 6115352-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 396, 6" Cove Base, Brown + Mastid Lab ID-Version‡: 6115353-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 397, Red/Brown 12"x12" VFT + Black Mastic Lab ID-Version‡: 6115354-1

Sample Layers	Asbestos Content
Red Sheet Flooring with Black Backing	ND
Black Mastic	6% Chrysotile
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 398, Dark Red/Brown 9"x9" VFT + Black Mastic Lab ID-Version‡: 6115355-1

Sample Layers	Asbestos Content
Brown Floor Tile	5% Chrysotile
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 399, Random Hole Ceiling Tile + Brown Mastic Lab ID-Version‡: 6115356-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 400, Brown Carpet + Glue + White 1x1 VFT + Black Mastic Lab ID-Version‡: 6115357-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Yellow Glue	ND
White Floor Tile	< 1% Chrysotile
Black Mastic	5% Chrysotile
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 401, Beige Spec 9"x9" VFT + Black Mastic Lab ID-Version‡: 6115358-1

Sample Layers	Asbestos Content
Beige Floor Tile	8% Chrysotile
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 402, Brown 4" Cove Base + Brown Mastic Lab ID-Version‡: 6115359-1

Sample Layers	Asbestos Content
Light Brown Baseboard	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	2% Talc
Sample Composite Homogeneity:	Good

Location: 403, Window Putty Lab ID-Version‡: 6115360-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 404, Stucco Lab ID-Version‡: 6115361-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 405, Stucco Lab ID-Version‡: 6115362-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 406, Stucco Lab ID-Version‡: 6115363-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 407, Black Mastic Lab ID-Version‡: 6115364-1

Sample Layers	Asbestos Content
Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 408, Black Mastic Lab ID-Version‡: 6115365-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 409, Duct Tape + Mastic Lab ID-Version‡: 6115366-1

Sample Layers	Asbestos Content
White Tape with Paint	ND
Gray Mastic	10% Chrysotile
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: 410, Black Mastic Lab ID-Version‡: 6115367-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 411, Window Putty Lab ID-Version‡: 6115368-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 412, Roof Core 1, Asphalt Shingles

Lab ID-Version‡: 6115369-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Brown Stones	ND
Black Roofing Shingle with Red Stones	ND
Composite Non-Asbestos Content:	60% Cellulose
Sample Composite Homogeneity:	Good

Location: 413, Roof Core 2, Asphalt Sheeting

Lab ID-Version‡: 6115370-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 414, TSI

Lab ID-Version‡: 6115371-1

Sample Layers	Asbestos Content
White Tape with Coating	ND
Yellow Insulation	ND
Composite Non-Asbestos Content:	30% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 415, Blue Carpet + Green Glue

Lab ID-Version‡: 6115372-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Green Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 416, Beige Speckled 1'x1' VFT + Glue Lab ID-Version‡: 6115373-1

Sample Layers	Asbestos Content
Beige Floor Tile	2% Chrysotile
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 417, Grey Cove Base + Glue Lab ID-Version‡: 6115374-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 418, Nailed Ceiling Panels Lab ID-Version‡: 6115375-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 419, Tan Glue Lab ID-Version‡: 6115376-1

Sample Layers	Asbestos Content
Tan Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 420, Roof Core, Asphalt Sheeting Lab ID-Version‡: 6115377-1

Sample Layers	Asbestos Content
Black Asphalt with Paint	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 421, Various Layers Lab ID-Version‡: 6115378-1

Sample Layers	Asbestos Content
Black Non-Fibrous Material	ND
Brown/Black Paper	ND
Off-White Cementitious Material	ND
Composite Non-Asbestos Content:	30% Cellulose
Sample Composite Homogeneity:	Good

Location: 422, White Caulking Lab ID-Version‡: 6115379-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 423, Grey Cove Base + Glue Lab ID-Version‡: 6115380-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Beige Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 424, Gray Carpet + Glue + Leveling Comp

Lab ID-Version‡: 6115381-1

Sample Layers	Asbestos Content
Gray Carpet	ND
White Glue	ND
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 425, Blue Spec 1'x1' VFT + Glue + Leveling Compound

Lab ID-Version‡: 6115382-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Yellow Glue	ND
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 426, 4x2 Ceiling Tile

Lab ID-Version‡: 6115383-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose 10% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 427, Drywall + Joint Compound

Lab ID-Version‡: 6115384-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 428, Drywall + Joint Compound Lab ID-Version‡: 6115385-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 429, Drywall + Joint Compound Lab ID-Version‡: 6115386-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 430, Drywall + Joint Compound Lab ID-Version‡: 6115387-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 431, Drywall + Joint Compound Lab ID-Version‡: 6115388-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 432, Drywall + Joint Compound Lab ID-Version‡: 6115389-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 433, Gray Carpet + Glue Lab ID-Version‡: 6115390-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 434, 1'x1' Ceiling Tile (Fissure) + Brown Mastic Lab ID-Version‡: 6115391-1

Sample Layers	Asbestos Content
Gray Ceiling Tile	ND
Composite Non-Asbestos Content:	80% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: 435, White 1'x1' Vinyl Floor Tile + Glue Lab ID-Version‡: 6115392-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Gray Glue	ND
Sample Composite Homogeneity:	Good

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(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor- UCLA

Date of Receipt: 03-13-2015
Date of Report: 03-20-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 436, Grey Cove Base + Glue Lab ID-Version‡: 6115393-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 437, Window Putty Lab ID-Version‡: 6115394-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 438, "Popcorn" Ceiling Lab ID-Version‡: 6115395-1

Sample Layers	Asbestos Content
White Popcorn Ceiling	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 439, Caulky Lab ID-Version‡: 6115396-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 440, Caulky Off White Lab ID-Version‡: 6115397-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 441, Duct Tape Lab ID-Version‡: 6115398-1

Sample Layers	Asbestos Content
White Tape	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 442, Roof Core, Asphalt Shingles Lab ID-Version‡: 6115399-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 443, Tape Lab ID-Version‡: 6115400-1

Sample Layers	Asbestos Content
Off-White Tape	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 444, Old Asphalt Shingles, Roof Core 2

Lab ID-Version‡: 6115401-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Gray Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	50% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 445, Window Putty

Lab ID-Version‡: 6115402-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 446, Drywall + Joint Compound

Lab ID-Version‡: 6115403-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 447, Drywall + Joint Compound

Lab ID-Version‡: 6115404-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 448, Drywall + Joint Compound Lab ID-Version‡: 6115405-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 449, 4x2 Ceiling Tile Lab ID-Version‡: 6115406-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 450, Grey 1x1 VFT + Glue Lab ID-Version‡: 6115407-1

Sample Layers	Asbestos Content
Light Gray Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 451, Blue Carpet + Glue Lab ID-Version‡: 6115408-1

Sample Layers	Asbestos Content
Blue Carpet with Rubber Backing	ND
Transparent Glue	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 452, Grey Cove Base + Glue Lab ID-Version‡: 6115409-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

Location: 453, Duct Tape Lab ID-Version‡: 6115410-1

Sample Layers	Asbestos Content
Dark Gray Tape with Silver Foil	ND
Sample Composite Homogeneity:	Good

Location: 454, Roof Core, Asphalt Shingles Lab ID-Version‡: 6115411-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Black Stones	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 455, Grey Caulking Lab ID-Version‡: 6115412-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Composite Non-Asbestos Content:	3% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 456, Duct Tape Lab ID-Version‡: 6115413-1

Sample Layers	Asbestos Content
Black/White Tape	ND
Sample Composite Homogeneity:	Good

Location: 457, Black Mastic Lab ID-Version‡: 6115414-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 458, Plaster/Drywal/Joint Comp, Button Board Lab ID-Version‡: 6115415-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Off-White Plaster	ND
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 459, Plaster/Drywal/Joint Comp, Button Board Lab ID-Version‡: 6115416-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
White Compound with Paint	ND
Beige Plaster	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 460, Plaster/Drywal/Joint Comp, Button Board Lab ID-Version‡: 6115417-1

Sample Layers	Asbestos Content
White Compound	ND
Yellow Joint Compound	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 461, 4" Cove Base, Black Lab ID-Version‡: 6115418-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Tan Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Moderate

Location: 462, White 1x1 VFT + Glue + Leveling Comp Lab ID-Version‡: 6115419-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 463, White 1x1 VFT + Glue Lab ID-Version‡: 6115420-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Black Mastic	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 464, Drywall + Joint Compound Lab ID-Version‡: 6115421-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 465, Drywall + Joint Compound Lab ID-Version‡: 6115422-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 466, Drywall + Joint Compound Lab ID-Version‡: 6115423-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 467, Ceiling Tile 4'x2' Lab ID-Version‡: 6115424-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	70% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

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Date of Receipt: 03-13-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 468, Straight Hole 2'x2' Lab ID-Version‡: 6115425-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 469, Window Putty, 2 Lab ID-Version‡: 6115426-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 470, Stucco Lab ID-Version‡: 6115427-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 471, Stucco Lab ID-Version‡: 6115428-1

Sample Layers	Asbestos Content
Off-White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 472, Stucco Lab ID-Version‡: 6115429-1

Sample Layers	Asbestos Content
Off-White Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 473, Fissured Ceiling Tile + Brown Mastic Lab ID-Version‡: 6115430-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	70% Cellulose 3% Talc
Sample Composite Homogeneity:	Good

Location: 474, 1x1 Green VFT + Glue/Mastic Lab ID-Version‡: 6115431-1

Sample Layers	Asbestos Content
Green Floor Tile	8% Chrysotile
Black Mastic	6% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 2/19/15 – 2/20/15 and 2/24 – 2/25 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:
Laboratory: EMLab P&K Tel: 800.651.4802 Fax:		

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)
Jesus Villanueva	Ninyo & Moore	3/12/15	1715	03/12/15 5:15
/				/

001337117

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	280	C3	Ceiling Center	223	Drywall + Joint compound	3,000 SF	N	good
	281		Wall West					
	282		East					
	283		Ceiling @ Restroom	224	Fissured 1'x1' Ceiling Tile + Brown Mastic	50 SF	Y	
	284		Ceiling - Center North end	225	Random Holes 1'x1' Ceiling tile + Brown Mastic	2,000 SF	Y	
	285		Ceiling @ Ceiling Plenum east	226	Acoustic Ceiling Panels	2,000 SF	Y	
	286		Floor Northwest bottom	227	Green Carpet + Backing	300 SF	N	
	287		Floor @ C3 to C2 Hallway	228	Tan 1'x1' VFT + Black mastic	4,000 SF	N	
	288		Floor @ Center Hallway within C3	229	White (Speck) 1'x1' VFT + glue	1,200 SF		
	289		Center Hallway within C3	230	Black Cove Base 2" + glue	200 SF		
	290		@ Restroom	231	4" Black Cove Base + Glue + Brown Mastic?	300 SF		
	291		Hallway from C3 to C2	232	2" Brown Cove Base + glue	500 SF		
	292		Exterior South Wall	233	Stucco + Barrier Paper	400 SF		

X Asbestos PLM EPA 600/R-93/116

X Standard TAT X First Positive Stop Per Ninyo & Moore HA No. with Results 1% and Greater

EMLab P&K
A TestAmerica Company

Report for:

Mr. Mike Cushner
Ninyo & Moore - Irvine
475 Goddard
Suite 200
Irvine, CA 92618

Regarding: Project: 209023002
EML ID: 1344173

Approved by:



Approved Signatory
Graziella Ines

Dates of Analysis:
Asbestos PLM: 04-02-2015 and 04-03-2015

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

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Re: 209023002

Date of Receipt: 03-27-2015
Date of Report: 04-03-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	170
Total Samples Analyzed:	170
Total Samples with Layer Asbestos Content > 1%:	23

Location: 475, Barrier paper

Lab ID-Version‡: 6151051-1

Sample Layers	Asbestos Content
Black Vapor Barrier Paper with Coating	ND
Composite Non-Asbestos Content:	60% Cellulose
Sample Composite Homogeneity:	Good

Location: 476, Black mastic

Lab ID-Version‡: 6151052-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 477, Black mastic

Lab ID-Version‡: 6151053-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 478, Black mastic

Lab ID-Version‡: 6151054-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: 209023002

Date of Receipt: 03-27-2015
Date of Report: 04-03-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 479, Black mastic

Lab ID-Version‡: 6151055-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 480, Roof core (3) asphalt sheating, old

Lab ID-Version‡: 6151056-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 481, Roof core (1). asp. shingles

Lab ID-Version‡: 6151057-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 482, Roof core (2). asp. sheeting, new

Lab ID-Version‡: 6151058-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	20% Glass Fibers 20% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 483, Parapit wall core Lab ID-Version‡: 6151059-1

Sample Layers	Asbestos Content
Gray Roofing Mastic	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 484, Black mastic and tape Lab ID-Version‡: 6151060-1

Sample Layers	Asbestos Content
Gray Roofing Material with Felt	9% Chrysotile
Black Roofing Material with Stones	ND
Composite Non-Asbestos Content:	30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 485, Tape Lab ID-Version‡: 6151061-1

Sample Layers	Asbestos Content
White Tape	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 486, White faulk Lab ID-Version‡: 6151062-1

Sample Layers	Asbestos Content
White Caulk	ND
Composite Non-Asbestos Content:	3% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 487, Window putty Lab ID-Version‡: 6151063-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 488, Grey carpet and glier, layers? Lab ID-Version‡: 6151064-1

Sample Layers	Asbestos Content
Gray Carpet	ND
White Glue	ND
Gray Carpet Pad	ND
White Glue	ND
Gray Carpet	ND
White Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 489, Beigh 1x1 VFT and black mastic Lab ID-Version‡: 6151065-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 490, Brown cove base and brown mastic Lab ID-Version‡: 6151066-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	2% Wollastonite
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 491, Green carpet and backing and green VFT (1x1) and black mastic Lab ID-Version‡: 6151067-1

Sample Layers	Asbestos Content
Green Carpet	ND
Purple Carpet Backing	ND
Green Floor Tile	5% Chrysotile
Black Mastic	5% Chrysotile
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 492, 2" brown cove base and glue Lab ID-Version‡: 6151068-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Black/White Glue	ND
Sample Composite Homogeneity:	Good

Location: 493, 2" grey cove base and glue Lab ID-Version‡: 6151069-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 494, 1" grey cove base and brown mastic Lab ID-Version‡: 6151070-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 495, Vibration dauper

Lab ID-Version‡: 6151071-1

Sample Layers	Asbestos Content
Off-White Fibrous Material	90% Chrysotile
Sample Composite Homogeneity:	Good

Location: 496, Asp. shingles roof core 1

Lab ID-Version‡: 6151072-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White/Red Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	50% Cellulose 10% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 497, Asp. sheeting roof core 2

Lab ID-Version‡: 6151073-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 498, Tape and black mastic

Lab ID-Version‡: 6151074-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	ND
White Tape	ND
Composite Non-Asbestos Content:	10% Glass Fibers 3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 499, Black mastic Lab ID-Version‡: 6151075-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 500, Grey vent caulking Lab ID-Version‡: 6151076-1

Sample Layers	Asbestos Content
Gray/White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 501, Window putty Lab ID-Version‡: 6151077-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 502, Black mastic Lab ID-Version‡: 6151078-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 503, Black mastic Lab ID-Version‡: 6151079-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 504, Black mastic Lab ID-Version‡: 6151080-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 505, Stucco Lab ID-Version‡: 6151081-1

Sample Layers	Asbestos Content
Green Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 506, Stucco Lab ID-Version‡: 6151082-1

Sample Layers	Asbestos Content
Green Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 507, Stucco Lab ID-Version‡: 6151083-1

Sample Layers	Asbestos Content
Green Stucco with Paint	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 508, Drywall and joint comp. Lab ID-Version‡: 6151084-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 509, Drywall and joint comp. Lab ID-Version‡: 6151085-1

Sample Layers	Asbestos Content
White Compound with Paint	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 510, Drywall and joint comp. Lab ID-Version‡: 6151086-1

Sample Layers	Asbestos Content
White Compound with Paint	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 511, Button board plaster, drywall, joint comp Lab ID-Version‡: 6151087-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 512, Button board plaster, drywall, joint comp Lab ID-Version‡: 6151088-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 513, Button board plaster, drywall, joint comp Lab ID-Version‡: 6151089-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 514, Thin, new drywall and joint comp

Lab ID-Version‡: 6151090-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 515, Thin, new drywall and joint comp

Lab ID-Version‡: 6151091-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 516, Thin, new drywall and joint comp

Lab ID-Version‡: 6151092-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 517, Grey carpet and backing and glue

Lab ID-Version‡: 6151093-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Multicolored Carpet Backing	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 518, 4" white core base and glue

Lab ID-Version‡: 6151094-1

Sample Layers	Asbestos Content
White Baseboard	ND
Transparent Glue	ND
White Compound	< 1% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 519, 4" black core base and glue Lab ID-Version‡: 6151095-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

Location: 520, Leun compound Lab ID-Version‡: 6151096-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 521, 1x1 white VFT and mastic and flooring and paper Lab ID-Version‡: 6151097-1

Sample Layers	Asbestos Content
White Floor Tile	< 1% Chrysotile
Black Mastic	8% Chrysotile
Black Tar Paper	30% Chrysotile
Black Non-Fibrous Material	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 522, Drywall and joint comp Lab ID-Version‡: 6151098-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: 209023002

Date of Receipt: 03-27-2015
Date of Report: 04-03-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 523, Drywall and joint comp Lab ID-Version‡: 6151099-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 524, Drywall and joint comp Lab ID-Version‡: 6151100-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 525, 4" brown core base and glue Lab ID-Version‡: 6151101-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 526, 4" blk core base and glue Lab ID-Version‡: 6151102-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Off-White Glue	ND
Cream Compound	< 1% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 527, Butten board plaster, DW and JC Lab ID-Version‡: 6151103-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 528, Butten board plaster, DW and JC Lab ID-Version‡: 6151104-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 529, Butten board plaster, DW and JC Lab ID-Version‡: 6151105-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 530, Grey vinyl floor sheating and layers Lab ID-Version‡: 6151106-1

Sample Layers	Asbestos Content
Gray Sheet Flooring with Fibrous Backing	ND
Yellow Mastic	ND
White Leveling Compound	ND
Black Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 531, Beige VFT 1x1 and level comp. and glue and B. mastic Lab ID-Version‡: 6151107-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Yellow Glue	ND
Gray Leveling Compound	ND
Black Mastic	3% Chrysotile
Sample Composite Homogeneity:	Good

Location: 532, White vinyl floor sheeting and glue Lab ID-Version‡: 6151108-1

Sample Layers	Asbestos Content
Off-White Sheet Flooring with Fibrous Backing	ND
Gray/White Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 3% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 533, Beige 9x9 VFT and blue mastic Lab ID-Version‡: 6151109-1

Sample Layers	Asbestos Content
Beige Floor Tile	< 1% Chrysotile
Black Mastic	ND
Composite Non-Asbestos Content:	5% Talc
Sample Composite Homogeneity:	Good

Location: 534, Brown core base and mastic Lab ID-Version‡: 6151110-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	2% Talc
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 535, White vinyl sheeting and VFT (9x9) and mastic Lab ID-Version‡: 6151111-1

Sample Layers	Asbestos Content
White Sheet Flooring with Fibrous Backing	ND
Beige Floor Tile	5% Chrysotile
Black Mastic	ND
Composite Non-Asbestos Content:	30% Cellulose
Sample Composite Homogeneity:	Good

Location: 536, Ceiling tile and brown mastic Lab ID-Version‡: 6151112-1

Sample Layers	Asbestos Content
Brown Fibrous Material	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 537, Black mastic Lab ID-Version‡: 6151113-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 538, Window putty Lab ID-Version‡: 6151114-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 539, Caulking Lab ID-Version‡: 6151115-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 540, Black mastic Lab ID-Version‡: 6151116-1

Sample Layers	Asbestos Content
Black Mastic	12% Chrysotile
Sample Composite Homogeneity:	Good

Location: 541, Caulking Lab ID-Version‡: 6151117-1

Sample Layers	Asbestos Content
Off-White Caulk	ND
Composite Non-Asbestos Content:	5% Vermiculite
Sample Composite Homogeneity:	Good

Location: 542, Roof core (1) asp. shingles Lab ID-Version‡: 6151118-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 543, Parapit wall core, asphalt sheeting

Lab ID-Version‡: 6151119-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 544, Caulking

Lab ID-Version‡: 6151120-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 545, Roof core (2) asp. shingles

Lab ID-Version‡: 6151121-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 546, Barrier paper

Lab ID-Version‡: 6151122-1

Sample Layers	Asbestos Content
Black Vapor Barrier	ND
Composite Non-Asbestos Content:	80% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 547, Stucco Lab ID-Version‡: 6151123-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 548, Stucco Lab ID-Version‡: 6151124-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 549, Stucco Lab ID-Version‡: 6151125-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 550, Drywall and joint compound Lab ID-Version‡: 6151126-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 551, Drywall and joint compound Lab ID-Version‡: 6151127-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 552, Drywall and joint compound Lab ID-Version‡: 6151128-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 553, Button board and popcorn ceiling (pluster, drywall) and joint comp Lab ID-Version‡: 6151129-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 554, VF sheeting and glue and VFT and glue and blue VFT Lab ID-Version‡: 6151130-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Yellow Glue	ND
White Floor Tile	ND
Yellow Glue	ND
White Sheet Flooring with Fibrous Backing	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 555, Ceiling tile 4'x2' Lab ID-Version‡: 6151131-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 556, Blue carpet and bailing and levely comp Lab ID-Version‡: 6151132-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Gray Carpet Backing	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 557, Light blue core base and glue Lab ID-Version‡: 6151133-1

Sample Layers	Asbestos Content
Green Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 558, Green vinyl floor sheeting and glue Lab ID-Version‡: 6151134-1

Sample Layers	Asbestos Content
Green Sheet Flooring with Fibrous Backing	20% Chrysotile
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 559, Fissmel ceiling tile 1'x1' Lab ID-Version‡: 6151135-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 560, White 1x1 VFT and glue Lab ID-Version‡: 6151136-1

Sample Layers	Asbestos Content
Light Green Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 561, Black core base and glue Lab ID-Version‡: 6151137-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 562, 4" grey core base and glue Lab ID-Version‡: 6151138-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 563, Drywall and J.C. Lab ID-Version‡: 6151139-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 564, Drywall and J.C. Lab ID-Version‡: 6151140-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 565, Drywall and J.C. Lab ID-Version‡: 6151141-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 566, 4'x2' ceiling tile Lab ID-Version‡: 6151142-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 567, 1x1 VFT various layers Lab ID-Version‡: 6151143-1

Sample Layers	Asbestos Content
Red Floor Tile	2% Chrysotile
Black Mastic	5% Chrysotile
Dark Gray Sheet Flooring with Fibrous Backing	20% Chrysotile
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 568, 1x1 VFT and black mastic Lab ID-Version‡: 6151144-1

Sample Layers	Asbestos Content
Brown Floor Tile	8% Chrysotile
Black Mastic	9% Chrysotile
Sample Composite Homogeneity:	Good

Location: 569, 4" brown core base and glue Lab ID-Version‡: 6151145-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 570, White speckld VFT 1x1 and glue Lab ID-Version‡: 6151146-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 571, White speckld VFT 1x1 and glue and level comp Lab ID-Version‡: 6151147-1

Sample Layers	Asbestos Content
White Floor Tile	ND
White Glue	ND
Off-White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 572, Light grey 4" core base and glue Lab ID-Version‡: 6151148-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
White Compound	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 573, Dark grey carpet and glue Lab ID-Version‡: 6151149-1

Sample Layers	Asbestos Content
Gray/Black Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 574, Brown carpet and bachy Lab ID-Version‡: 6151150-1

Sample Layers	Asbestos Content
Dark Brown Carpet	ND
Off-White Carpet Backing	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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Re: 209023002

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 575, White 1x1 VFT and glue and red 1x1 VFT and black mastic Lab ID-Version‡: 6151151-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Red Floor Tile	8% Chrysotile
Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

Location: 576, 1x1 fiss. ceiling tile and brown mastic Lab ID-Version‡: 6151152-1

Sample Layers	Asbestos Content
Brown Ceiling Tile	ND
Brown Mastic	ND
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 577, Drywall and S. comp Lab ID-Version‡: 6151153-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 578, Mud and tape Lab ID-Version‡: 6151154-1

Sample Layers	Asbestos Content
White Tape	ND
Gray Mud	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 578A, 4" grey core base and glue Lab ID-Version‡: 6151155-1

Sample Layers	Asbestos Content
Dark Gray Baseboard	ND
Beige Glue	ND
White Compound with Paint	ND
Sample Composite Homogeneity:	Good

Location: 579, Black mastic Lab ID-Version‡: 6151156-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 580, Roof core asp. sheeting Lab ID-Version‡: 6151157-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Gray/Black Roofing Mastic	10% Chrysotile
Composite Non-Asbestos Content:	30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 581, Window putty Lab ID-Version‡: 6151158-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 582, Stucco Lab ID-Version‡: 6151159-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 583, Stucco Lab ID-Version‡: 6151160-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 584, Stucco Lab ID-Version‡: 6151161-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 585, Roof core asp. sheeting Lab ID-Version‡: 6151162-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 586, Roof core asp. shingles Lab ID-Version‡: 6151163-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 587, Tape and mastic Lab ID-Version‡: 6151164-1

Sample Layers	Asbestos Content
Gray/Black Mastic	6% Chrysotile
White Tape	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 588, Black mastic Lab ID-Version‡: 6151165-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 589, Black mastic Lab ID-Version‡: 6151166-1

Sample Layers	Asbestos Content
Black/White Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 590, 4x2 ceiling tile Lab ID-Version‡: 6151167-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 591, Drywall and joint comp Lab ID-Version‡: 6151168-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 592, Drywall and joint comp Lab ID-Version‡: 6151169-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 593, Drywall and joint comp Lab ID-Version‡: 6151170-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 594, 4" blk core base and glue Lab ID-Version‡: 6151171-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

Location: 595, 6" brown core base and glue Lab ID-Version‡: 6151172-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 596, 4" core base beige and glue Lab ID-Version‡: 6151173-1

Sample Layers	Asbestos Content
Beige Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 597, 1x1 brown VFT and glue Lab ID-Version‡: 6151174-1

Sample Layers	Asbestos Content
Off-White Sheet Flooring with Fibrous Backing	ND
Cream Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 598, Brown spec. 1x1 VFT and glue and 1x1 VFT and glue Lab ID-Version‡: 6151175-1

Sample Layers	Asbestos Content
Off-White Sheet Flooring with Fibrous Backing	ND
Beige Floor Tile	ND
Transparent Glue	ND
Composite Non-Asbestos Content:	20% Cellulose 3% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 599, White spec 1x1 VFT and glue Lab ID-Version‡: 6151176-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 600, 1x1 VFS and glue Lab ID-Version‡: 6151177-1

Sample Layers	Asbestos Content
White Sheet Flooring with Fibrous Backing	ND
Yellow Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 601, Green comp and blue comp and glue Lab ID-Version‡: 6151178-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Green Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 604, White sealant Lab ID-Version‡: 6151181-1

Sample Layers	Asbestos Content
White Sealant	ND
Sample Composite Homogeneity:	Good

Location: 605, Grey 4" corebase with white mastic Lab ID-Version‡: 6151182-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Mastic	ND
Sample Composite Homogeneity:	Good

Location: 606, Beige 12"x12" VFT with black mastic Lab ID-Version‡: 6151183-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 607, 2'x4' acoustic ceiling tile with pinholes, lay in fissares Lab ID-Version‡: 6151184-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	60% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 608, Grey carpet with brown mastic Lab ID-Version‡: 6151185-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Tan Mastic	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 609, Translucent sealant Lab ID-Version‡: 6151186-1

Sample Layers	Asbestos Content
Transparent Sealant	ND
Sample Composite Homogeneity:	Good

Location: 610, Drywall, joint compound Lab ID-Version‡: 6151187-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 611, Drywall, joint compound Lab ID-Version‡: 6151188-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 612, Drywall, joint compound Lab ID-Version‡: 6151189-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 613, Roof assembly, vinyl over white powder Lab ID-Version‡: 6151190-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 614, Black penetration mastic Lab ID-Version‡: 6151191-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 615, White sealant Lab ID-Version‡: 6151192-1

Sample Layers	Asbestos Content
White Sealant	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 616, Black sealant Lab ID-Version‡: 6151193-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 617, White sealant, grey beneath Lab ID-Version‡: 6151194-1

Sample Layers	Asbestos Content
Gray/White Sealant	ND
Sample Composite Homogeneity:	Good

Location: 618, Roof assembly Lab ID-Version‡: 6151195-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 619, Roof assembly Lab ID-Version‡: 6151196-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 620, Grey penetration mastic, white beneath Lab ID-Version‡: 6151197-1

Sample Layers	Asbestos Content
Light Gray Mastic	ND
Sample Composite Homogeneity:	Good

Location: 621, White painted gauze Lab ID-Version‡: 6151198-1

Sample Layers	Asbestos Content
White Paint with Gauze	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 622, Translucent sealant Lab ID-Version‡: 6151199-1

Sample Layers	Asbestos Content
Transparent Sealant	ND
Sample Composite Homogeneity:	Good

Location: 623, Grey sealant Lab ID-Version‡: 6151200-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Composite Non-Asbestos Content:	2% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 624, Stucco Lab ID-Version‡: 6151201-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 625, Stucco Lab ID-Version‡: 6151202-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 626, Stucco Lab ID-Version‡: 6151203-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 627, Window putty Lab ID-Version‡: 6151204-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002

Date of Receipt: 03-27-2015
Date of Report: 04-03-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 628, Brown pebble, paltered VFS with levelling compound Lab ID-Version‡: 6151205-1

Sample Layers	Asbestos Content
Brown Sheet Flooring with Fibrous Backing	ND
Yellow Mastic	ND
Green Floor Tile	2% Chrysotile
Yellow Mastic	ND
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: 629, Cream 2" corebase with brown mastic Lab ID-Version‡: 6151206-1

Sample Layers	Asbestos Content
Cream Baseboard	ND
Tan Mastic	ND
Sample Composite Homogeneity:	Good

Location: 630, Wallboard, joint compound Lab ID-Version‡: 6151207-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 631, Wallboard, joint compound Lab ID-Version‡: 6151208-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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Re: 209023002

Date of Receipt: 03-27-2015
Date of Report: 04-03-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 632, Wallboard, joint compound Lab ID-Version‡: 6151209-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 633, Plaster with scratchcoat Lab ID-Version‡: 6151210-1

Sample Layers	Asbestos Content
White Plaster with Skim Coat	ND
Sample Composite Homogeneity:	Good

Location: 634, Plaster with scratchcoat Lab ID-Version‡: 6151211-1

Sample Layers	Asbestos Content
Gray Plaster with Skim Coat	ND
Sample Composite Homogeneity:	Moderate

Location: 635, Plaster with scratchcoat Lab ID-Version‡: 6151212-1

Sample Layers	Asbestos Content
Gray Plaster with Skim Coat	ND
Sample Composite Homogeneity:	Good

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Date of Receipt: 03-27-2015
Date of Report: 04-03-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 636, Brown 6" corebase with mastic Lab ID-Version‡: 6151213-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 637, White 1'x1' ACT with uniform holes, dark brown mastic Lab ID-Version‡: 6151214-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose 2% Talc
Sample Composite Homogeneity:	Good

Location: 638, White 1'x1' ACT with random fissares and tiny pinholes Lab ID-Version‡: 6151215-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	2% Talc
Sample Composite Homogeneity:	Good

Location: 639, Dark brown mastic, grey carpet, newer with green mastic Lab ID-Version‡: 6151216-1

Sample Layers	Asbestos Content
Multicolored Carpet	ND
Green Glue	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

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Date of Receipt: 03-27-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 640, Older grey carpet with grey levelling compound beneath Lab ID-Version‡: 6151217-1

Sample Layers	Asbestos Content
Gray Carpet with Vinyl Backing	ND
Yellow Glue	ND
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 2% Cellulose
Sample Composite Homogeneity:	Good

Location: 641, Brown, gold square, pattern carpet with green mastic and grey levelling compund Lab ID-Version‡: 6151218-1

Sample Layers	Asbestos Content
Multicolored Carpet with Vinyl Backing	ND
Yellow Glue	ND
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 2% Cellulose
Sample Composite Homogeneity:	Good

Location: 642, Beige 12" VFT with brown and white streans and brown mastic Lab ID-Version‡: 6151219-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 643, Grey levelling compound above red flooring with black mastic Lab ID-Version‡: 6151220-1

Sample Layers	Asbestos Content
Red Sheet Flooring with Black Backing	ND
Green Glue	ND
Beige Floor Tile	< 1% Chrysotile
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Comments: No Leveling Compound and Black Mastic.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 644, Grey 4" corebase with white mastic Lab ID-Version‡: 6151221-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Cream Mastic	ND
Sample Composite Homogeneity:	Good

Location: 645, White 12" VFT with blue and red streaks and brown mastic Lab ID-Version‡: 6151222-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled: 3/3 – 3/26
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EM Lab
Tel:
Fax:

001344173

CHAIN OF CUSTODY INFORMATION:

Relinquished By/sign/print	Company	Date	Time	Received By/sign/print	Laboratory
Pedro Rodriguez	Ninyo & Moore	3/27/15			3-27-15 2:25pm

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	475	C1	East Hall Ceiling Plenum	379	Barrier Paper	1,000 SF	N	good
	476		Roof @ SW Capped Vent Duct	380	Black Mastic	25 SF		
	477		Roof @ Wishy Bird	381		30 SF		
	478		Roof @ Vent Pipe	382		25 SF		
	479		Roof @ Vent	383		35 SF		
	480		Roof @ South	384	Roof Core (3); Asphalt Sheeting (old)	1,600 SF		
	481		@ Center	385	Roof Core (4); Asp. shingle	3,000 SF		
	482		@ Center_West	386	(2) Asp. Sheeting (new)	1,000 SF		
	483		Roof @ Parapet wall / wooden roof vent	387	Parapit wall Core.	50 SF		
	484		Roof @ North add on Joint	388	Black Mastic + Tape	25 SF		
	485		Exterior HVAC @ Seams	389	Tape	10 SF		
	486		Exterior @ HVAC Seams	390	white Caulk	10 SF		
	487		Exterior windows (SW)	391	Window Putty	30 SF	Y	

* Asbestos: PLM EPA 600/R-93/116
* Standard TAT
* First Positive stop Per HA No. with Results 1% and Greater

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EM Lab P&K
Tel:
Fax:

001344173

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Signature)	Company	Date	Time (24hr)	Received By: (Signature)
/	Ninyo & Moore			/
/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	488	Cl annex	Confirm Room Floor	392	Grey Carpet + Glue (layers?)	500 SF	N	good
	489	Cl	Room 20 Floor	393	Beigh 1X1 VFT + Black Mastic	100 SF		
	490		@ 2nd Hall	394	Brown Cove Base + Brown Mastic	200 SF		
	491		Room 14 Floor	395	Grey Carpet + Backing + Grey VFT (1X1) + Black Mastic	120 SF		
	492		Hallway near Room 26	396	2" Brown Cove Base + Glue	1,000 LF		
	493		Hallway near Restroom	397	2" Grey Cove Base + Glue	200 LF		
	494	↓	@ Room 14	398	4" Grey Cove Base + Brown mastic	100 LF	↓	↓
	495	B1	@ old HVAC Roof - North	399	Vibration Damper	20 SF	N	Fair
	496		Roof Center	400	Asp. shingles Roof Layer 1	4,000 SF		Fair
	497		Roof Northwest	401	Asp. Sheeting Roof Layer 2	1,500 SF		good
	498		Roof @ vent Pipe	402	Tape + Black mastic	10 SF		
	499		@ Vent duct Roof	403	Black Mastic	10 SF		
	500	↓	Roof @ vent/Duct	404	Grey Vent Caulking	10 SF	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/3 - 3/27 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EMLA Tel: Fax:

001344173

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (signature)	Company	Date	Time (24 hr)	Received By: (signature)	
/	Ninyo & Moore			/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	501	B1	Ext. Windows - West	405	Window Putty	20 SF	N	good
	502		old HVAC @ Roof	406	Blue Mastic	10 SF		
	503		@ Roof vent + S.	407	Black Mastic	40 SF		
	504		Roof @ Pipe	408	↓	35 SF		
	505		Exterior Wall - N	409	Stucco	3,000 SF		
	506		↓ ↓ - W	↓	↓	↓		
	507		↓ ↓ - SW	↓	↓	↓		
	508		Wall - North	410	Drywall + Joint Compound	2,500		
	509		↓ - West	↓	↓	↓		
	510		↓ - South	↓	↓	↓	↓	↓
	511		Restroom wall	411	Button Board Plaster / Drywall / Joint Compound	800 SF	N	good
	512		↓ ↓	↓	↓	↓	↓	↓
	513	↓	Wall / West	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

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Irvine, CA 92618
Tel: (949) 753-7070
Fax (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled: 3/3 - 3/27 /15
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EM Lab
Tel:
Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time	Received By: (sign/print)	
/	Ninyo & Moore			/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	514	B1	Wall/Hall (South)	412	(thin / New) Drywall + Joint comp.	2,000 SF	N	Good
	515	↓	↓ - N	↓	↓ ↓	↓	↓	↓
	516	↓	Wall - South	↓	↓ ↓	↓	↓	↓
	517		North Room/Floor	413	Grey Carpet + Backing + Glue	300 SF		
	518		@ South Rooms	414	White Cove base 4" + Glue	100 LF		
	519		Hall/Main area	415	4" Blk Cove Base + Glue	1,000 LF		
	520		Hall Floor	416	Level Compound	50 SF		
	521		S. West area	417	1x1 White VFT + Mastic + Floors + Paper	1,000 SF		
	522	Room North	North wall	418	Drywall + Joint Comp	3,800 SF		
	523	↓	North west wall	↓	↓	↓		
	524	↓	Northwest Column	↓	↓	↓		
	525		Center area near 14's	419	4" Brown Cove Base + Glue	200 LF		
	526	↓	North Labs	420	6" Blk Cove Base + Glue	300 LF	↓	↓

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Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/3 to 3/27 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EM Lab P&K Tel: Fax:

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Relinquished By (signature)	Company	Date	Time	Received By (signature)	
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LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	527	B1 N	@ Wall in Restroom	421	Button Board Plaster/ Dry +	1,000 SF	N	good
	528		@ East Wall					
	529		@ NE Wall					
	530		west Room Floor	422	Grey Vinyl Floor Sheeting + Layers	500 SF	N	good
	531		N. East Room Floor	423	Beige VFT 9x1 + Level comp. + Glue + Bk Mastic	200 SF	N	good
	532		@ Restroom Floor	424	White Vinyl Floor Sheeting + Glue	100 SF		
	533		Floor @ West Room	425	Beige 9"x9" VFT + Blk mastic	1,500 SF		
	534		@ West room	426	Brown Cove Base + mastic	100 LF		
	535		@ Northwest	427	White Vinyl Sheeting + VFT (9x9") + Mastic	100 SF		
	536		North offices	428	Ceiling Tile + Brown mastic	300 SF	Y	
	537	B4	Roof @ Capped Pipe - Center	429	Black Mastic	1 SF	N	good
	538		Exterior @ West	430	Window Putty	20 SF	N	Fair
	539		Roof @ East HVAC Duct seams	431	Caulking	10 SF		good

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ASBESTOS BULK SAMPLE DATA SHEET

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Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled: 3/3 — 3/23
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EMLab
Tel:
Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Signature)	Company	Date	Time	Received By: (Signature)	Comments
/	Ninyo & Moore			/	
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LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	540	B4	Roof @ Vent Pipe - Center	432	Black Mastic	20 SF	N	good
	541		Roof @ Vent Duct - South	433	Caulking	10 SF		
	542		Roof North end	434	Roof Core (1) Asp. Shingles	3,000 SF		
	543		Roof @ Parapet wall	435	Parapet wall Core - Asphalt sheeting	250 SF		
	544		Roof @ HVAC Duct -SE	436	Caulking	20 SF		
	545		Roof South end	437	Roof Core (2) Asp. Sheeting	1,200 SF		
	546		Interior Wall	438	Barrier Paper	2,100 SF		
	547		Exterior Stucco - SW	439	Stucco	1,800 SF		
	548		" -SE	"	"	"		
	549		" - South	"	"	"		
	550		Wall @ South Area	440	Drywall + Joint Comp	2,500 SF		
	551		Wall @ Hall	"	"	"		
	552		Wall @ North Area	"	"	"		

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/3 - 3/27 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EMLab Tel: Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Signature)	Company	Date	Time	Received By: (Signature)	
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/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	553	B4	Ceiling @ Run 17B	441	Button Board + Popcorn Ceiling (Plaster/Drywall) + Joint Comp	1,000 SF	Y	good
	554		Hall North.	442	VF Sheeting + Glue + 9" VFT + Glue + Blue VFT	1,200 SF	N	good
	555		Main Area South	443	Ceiling Tile 4x2'	1,000 SF	Y	good
	556		↓ ↓ ↓	444	Blue Carpet + Backing + Leveling Comp.	1,200 SF	N	
	557		Main Area-SE	2445	Light Blue Cove Base + Glue	300 LF	N	
	558		North end Floor	446	Green Vinyl floor Sheeting + Glue	100 SF		
	559		Southwest Ceiling	447	Fissured Ceiling Tile 1x1	1500 SF	Y	
	560		Southeast Floor	448	White 1x1 VFT + Glue	1,000 SF	N	good
	561		South end	449	Black Cove Base + Glue	350 SF		
	562	↓	South Mens Restroom	450	4" Grey Cove Base + Glue	100 LF	↓	↓
	563	E4	Wall NE	451	Drywall + J.C.	4,000 SF	N	
	564		Wall North @ Hallway Exit	↓	↓	↓	↓	
	565	↓	Ceiling @ Run 15	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/3 – 5/27 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EM Lab P&K Tel: Fax:

001344173

CHAIN OF CUSTODY INFORMATION

Relinquished By (Sign/Print)	Company	Date	Time	Received By (Sign/Print)
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/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	566	E4	Mail Hallway	452	4'x2' Ceiling Tile	2,500 SF	Y	good
	567		Room 9 Floor	453	1X1 VFT Various Layers	1,000 SF	N	good
	568		Men's Restroom Floor	454	1X1 VFT + Black mastic	200 SF		
	569		Room 29 Wall	455	4" Brown Cove Base + Glue	200 SF		
	570		Rm 21 Floor	456	White speckled VFT 1X1 + Glue	600 SF		
	571		Rm 16 Floor	457	White speckled 1X1 + Glue + Level Comp	800 SF		
	572		Rm 14 Wall	458	Light Grey 4" Cove Base + Glue	300 SF		
	573		Rm 35	459	Dark grey carpet + Glue	500 SF		
	574		Rm 37	460	Brown Carpet + Backing	1,200 SF		
	575		East area Floor	461	White 1X1 VFT + glue + Red 1X1 VFT + Black Mastic	1,800 SF		
	576		Main Area Ceiling	462	1X1 Fiss. Ceiling Tile + Brown Mastic	1,800 SF	Y	
	577	E1 annex	Laundry Room	463	Drywall + S. Comp	300 SF	N	good
	578		@HVAC Duct	464	Mud and tape	20 SF		

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/3 – 3/27 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EM Lab P&K Tel: Fax:

001344173

CHAIN OF CUSTODY INFORMATION:

Relinquished By (Signature)	Company	Date	Time (AM/PM)	Received By (Signature)
/	Ninyo & Moore			/
/				/



LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	578A	E1 annex	Laundry Room	465	4" Gray Core Base + Glue	20 LF	N	good
	579	↓	Roof @ Pipe	466	Black mastic	2 SF	↓	↓
	580	↓	Roof Center	467	Roof Core Asp. Sheeting	1000 SF	↓	↓
	581	E5	Hallway Btw E5/E6 Exterior windows	468	Window Putty	80 LF	N	Fair
	582	↓	Wall - NW	469	Stucco	2,000 SF	N	good
	583	↓	- E	↓	↓	↓	↓	↓
	584	↓	- W	↓	↓	↓	↓	↓
	585	↓	Roof West	470	Roof Core Asp. sheeting	500 SF	↓	↓
	586	↓	Roof East	471	Roof Core Asp. shingles	2,000 SF	↓	↓
	587	↓	@ HVAC Duct Sens - Roof	472	Tape + Mastic	25 SF	↓	↓
	588	↓	@ HVAC Duct Base	473	Black Mastic	30 SF	↓	↓
	589	↓	@ Roof Vent Pipe - NE	474	↓ ↓	25 SF	↓	↓
	590	↓	West offices Ceiling	475	4X2 Ceiling tile	1,000 SF	Y	↓

Sheet 16 of 16

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/3 - 3/27 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EM Lab P&K Tel: Fax:

CHAIN OF CUSTODY INFORMATION

Relinquished By (Signature)	Company	Date	Time	Received By (Signature)
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LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	591	E5	@ Restroom Wall	476	Drywall + Joint Comp	2,000 SF	N	Good
	592		@ South offices	~~477~~				
	593		@ Storage East	↓	↓	↓		
	594		@ File Room	478	4" Blk Cove Base + Glue	1,000 LF		
	595		@ Restroom	479	6" Brown Cove Base + Glue	10 SF		
	596		Main Area	480	4" Cove Base Beige + glue	50 SF		
	597		@ Restroom	481	1X1 Brown VFT + Glue	100 SF		
	598		@ Break Room	482	Brown Spec. 1X1 VFT + Glue + 1X1 VFT + Glue	200 SF		
	599		@ Storage	483	White Spec. 1X1 VFT + glue	1,000 SF		
	600		@ Printer Room	484	1X1 VFS + Glue	100 SF		
	601	↓	@ Hall Floor	485	Green Carp + Blue carp + Glue	1,500 SF	↓	↓
	~~602~~							
	~~603~~							

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled: 3/3 - 3/27
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Labs(Y/N)
"	Ninyo & Moore			"	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	604	D4-5	Exterior - on blue strip on lower wall	486	white Sealant	30SF	N	Good
	605		Southwest Office	487	Gray 4" Cove base w/ white mastic	600LF		
	606		NW Storage Closet	488	Beige 12"x12" VFT w/ Black Mastic	50SF		
	607		Hallway	489	2'x4' Acoustic Ceiling Tile w/ patches (Lay In) - fissured	1350 SF	Y	
	608		SW office	490	Carpet w/ Brown mastic	1350 SF	N	
	609		Exterior - NE Electrical Box	491	Translucent Sealant	5 SF	N	
	610		Above Ceiling - SW office	492	Drywall / Joint Compound	4500SF	Y	
	611		" " - NW "	492	"	"	Y	
	612		North Central/West "	492	"	"	Y	
	613		Roof - Center	493	Roof Assembly (vinyl over white powder	1350 SF	N	
	614		" - West Parapet wall	494	Black Penetration mastic	16 SF		
	615		" - Inside Gutter (NE)	495	White Sealant	5SF		
	616		" - Center Line	496	Black Sealant	40SF		

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/	Ninyo & Moore			/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	617	DG	Roof - SE HVAC	497	White Sealant (gray beneath)	25 SF	N	Good
	618		" - Center	498	Roof Assembly	4,100 SF		
	619		" - SW Awning	499	" "	300 SF		
	620		" - Central West Area	500	Gray Penetration Mastic (white beneath)	5 SF		
	621		" - NE HVAC	501	White Painted Gauze	50 SF		
	622		" - " "	502	Translucent Sealant	3 SF		
	623		" - SE "	503	Gray Sealant	50 SF		
	624		Exterior - SE corner Add On Room	504	Stucco	400 SF	Y	
	625					See # 624		
	626					See 624		
	627		Exterior - Window Pane	505	Window Putty	1600 LF	N	Poor
	628		South Hallway	506	Brown Pebble-Patterned VFS w/Levelling Compound	250 SF	Y	Good
	629		" "	507	Cream 2" Cove base w/ Brown Mastic	6 LF	N	

VFS = Vinyl Floor Sheeting

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"	Ninyo & Moore			"	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	630	D6	South Hallway by Ext	508	wallboard/joint compound	800SF	Y	Good
	631		Room 9			See 630		
	632		Bridging Hallway (to 5-9)			"		
	633		Firehose Cupboard in Central west Hallway	509	Plaster w/ Scratchcoat	131000 SF		
	634		Central-West Bathroom Wall			See 633		
	635		Room 26 Wall			"		
	636		NE office	510	Brown 6" cove base w/ mastic	120 LF	N	
	637		Bridging Hallway	511	white 1'x1' ACT w/ uniform holes & dark brown mastic		Y	
	638		North office	512	white 1'x1' ACT w/ random fissures & tiny pinholes & mastic	120 SF	Y	
	639		Hallway - North	513	Dark Brown mastic Gray carpet (newer) w/ Green mastic	3200 SF	N	
	640		" - South	514	older Gray carpet w/ Gray Leveling Compound Beneath	200 SF		
	641		" - South	515	Brown/Gold square pattern carpet w/ Green mastic ~~Gray Leveling Cmpd~~	130SF		
	642		Room 9	516	Beige 12" VFT w/ Brown & White streaks & Brown mastic	40SF		

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

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/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	643	D6	Room 9-beneath (newer) Gray carpet	517	Gray Levelling Compound above Red Flooring w/ Black mastic		N	Good
	644	↓	Observation Room	518	Gray 4" Cove base w/ white mastic	1000LF	↓	↓
	645	↓	Room 21	519	White 12" VFTW/Blue & Red streaks & Brown mastic	205F	↓	↓

EMLab P&K
A TestAmerica Company

Report for:

Mr. Mike Cushner
Ninyo & Moore - Irvine
475 Goddard
Suite 200
Irvine, CA 92618

Regarding: Project: 209023002; PCR/Harbor-UCLA
EML ID: 1347215

Approved by:



Approved Signatory
Graziella Ines

Dates of Analysis:
Asbestos PLM: 04-07-2015 to 04-09-2015

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	230
Total Samples Analyzed:	230
Total Samples with Layer Asbestos Content > 1%:	29

Location: 646, TSI

Lab ID-Version‡: 6169827-1

Sample Layers	Asbestos Content
White Insulation	10% Amosite 10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 647, Gray carpet w/blue mastic over gray flooring

Lab ID-Version‡: 6169828-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Green Mastic	ND
Brown/Gray Floor Tile	< 1% Chrysotile
Yellow Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 648, Wallboard/joint compound

Lab ID-Version‡: 6169829-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 649, Wallboard/joint compound

Lab ID-Version‡: 6169830-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 650, Wallboard/joint compound

Lab ID-Version‡: 6169831-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 651, Reddish-brown flooring

Lab ID-Version‡: 6169832-1

Sample Layers	Asbestos Content
Dark Brown Sheet Flooring with Black Backing	ND
Black Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 652, 1'x1' ACT w/small random pinholes & brown mastic

Lab ID-Version‡: 6169833-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	40% Cellulose 40% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 653, White 12"x12" VFT w/red-blue streaks & brown mastic

Lab ID-Version‡: 6169834-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

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Date of Sampling: 03-24-2015
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Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 654, White 12"x12" VFT w/ light-brown streaks & brown mastic Lab ID-Version‡: 6169835-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 655, Light gray 12"x12" VFT w/blue+white streaks+mastic Lab ID-Version‡: 6169836-1

Sample Layers	Asbestos Content
Light Gray Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 656, 12"x12" VFT (Green) w/white streaks+mastic Lab ID-Version‡: 6169837-1

Sample Layers	Asbestos Content
Green Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 657, Gray 4" covebase w/mastic Lab ID-Version‡: 6169838-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Mastic	ND
Sample Composite Homogeneity:	Good

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Date of Sampling: 03-24-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 658, Gray 6" covebase w/mastic Lab ID-Version‡: 6169839-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Off-White Mastic	ND
Sample Composite Homogeneity:	Good

Location: 659, Stucco Lab ID-Version‡: 6169840-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 660, Stucco Lab ID-Version‡: 6169841-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 661, Stucco Lab ID-Version‡: 6169842-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 662, Vapor barrier

Lab ID-Version‡: 6169843-1

Sample Layers	Asbestos Content
Gray Vapor Barrier	ND
Composite Non-Asbestos Content:	95% Cellulose
Sample Composite Homogeneity:	Good

Location: 663, Gray brittle window sealant

Lab ID-Version‡: 6169844-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 664, White flooring beneath carpet w/ green carpet mastic

Lab ID-Version‡: 6169845-1

Sample Layers	Asbestos Content
Green Mastic	ND
White Flooring Material	ND
Dark Brown Sheet Flooring with Black Backing	ND
Black Mastic	ND
Composite Non-Asbestos Content:	15% Cellulose 3% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 665, 1'x1' ACT w/random pinholes fissures

Lab ID-Version‡: 6169846-1

Sample Layers	Asbestos Content
Green Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	80% Glass Fibers 2% Wollastonite
Sample Composite Homogeneity:	Good

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Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 666, Putty Lab ID-Version‡: 6169847-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 667, Roof assembly Lab ID-Version‡: 6169848-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 668, Green soft sealant ((Blach on inside) Lab ID-Version‡: 6169849-1

Sample Layers	Asbestos Content
Green Sealant	ND
Sample Composite Homogeneity:	Good

Location: 669, Gray sealant w/silver tape Lab ID-Version‡: 6169850-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Silver Tape	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 670, Roof assembly

Lab ID-Version‡: 6169851-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Paint	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 671, Silver paint

Lab ID-Version‡: 6169852-1

Sample Layers	Asbestos Content
Silver Paint	3% Chrysotile
Sample Composite Homogeneity:	Good

Location: 672, Gray patch/sealant

Lab ID-Version‡: 6169853-1

Sample Layers	Asbestos Content
Gray Sealant with Silver Paint	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 673, Blank penetration mastic

Lab ID-Version‡: 6169854-1

Sample Layers	Asbestos Content
Black Mastic with White Stones	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 674, Blank penetration mastic

Lab ID-Version‡: 6169855-1

Sample Layers	Asbestos Content
Black Mastic with Paint	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 675, White patch sealant

Lab ID-Version‡: 6169856-1

Sample Layers	Asbestos Content
Gray/White Sealant	ND
Sample Composite Homogeneity:	Good

Location: 676, Drywall/joint compound

Lab ID-Version‡: 6169857-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 677, Drywall/joint compound

Lab ID-Version‡: 6169858-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 678, 2'x4' "cok twice' ACT w/pinholes + fissures Lab ID-Version‡: 6169859-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 679, Black sealant (hard) Lab ID-Version‡: 6169860-1

Sample Layers	Asbestos Content
Black Sealant	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 680, Black sealant (soft) Lab ID-Version‡: 6169861-1

Sample Layers	Asbestos Content
Off-White Sealant	ND
Sample Composite Homogeneity:	Good

Location: 681, Black sealant Lab ID-Version‡: 6169862-1

Sample Layers	Asbestos Content
Yellow Foam with Paint	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 682, White sealant (Black underneath) Lab ID-Version‡: 6169863-1

Sample Layers	Asbestos Content
White Sealant	ND
Black Tar	6% Chrysotile
Sample Composite Homogeneity:	Good

Location: 683, Black sealant Lab ID-Version‡: 6169864-1

Sample Layers	Asbestos Content
Black Sealant	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 684, Gray sealant Lab ID-Version‡: 6169865-1

Sample Layers	Asbestos Content
Gray Sealant	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 685, Roof assembly Lab ID-Version‡: 6169866-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 686, Black penetration mastic Lab ID-Version‡: 6169867-1

Sample Layers	Asbestos Content
Black Mastic with White Stones	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 687, Gray 6" covebase w/mastic Lab ID-Version‡: 6169868-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Mastic	ND
Dark Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 688, White 12"x12" VFT w/red + blue streaks + mastic Lab ID-Version‡: 6169869-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 689, Drywall/joint compound Lab ID-Version‡: 6169870-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 690, Drywall/joint compound Lab ID-Version‡: 6169871-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 691, Gray carpet w/blue mastic Lab ID-Version‡: 6169872-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Blue Mastic	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 692, Drywall/joint compound Lab ID-Version‡: 6169873-1

Sample Layers	Asbestos Content
White Compound	ND
White Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 693, 6" black covebase w/mastic Lab ID-Version‡: 6169874-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 694, 2'x2' grayish carpet + squares w/ green mastic Lab ID-Version‡: 6169875-1

Sample Layers	Asbestos Content
Gray Carpet with Vinyl Backing	ND
Green Mastic	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 695, Gray 4" covebase w/white mastic Lab ID-Version‡: 6169876-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Mastic	ND
Sample Composite Homogeneity:	Good

Location: 696, Red flooring w/black base (mastic?) + ceiling compound above Lab ID-Version‡: 6169877-1

Sample Layers	Asbestos Content
Red Sheet Flooring with Black Backing	ND
White Leveling Compound	ND
Yellow Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 697, Light green 12" VFT w/green + white sealant + mastic Lab ID-Version‡: 6169878-1

Sample Layers	Asbestos Content
Light Green Floor Tile	ND
Off-White Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 698, Leveling compound Lab ID-Version‡: 6169879-1

Sample Layers	Asbestos Content
Gray Leveling Compound	ND
Composite Non-Asbestos Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: 699, White 12"x12" VFT w/gray streaks + mastic Lab ID-Version‡: 6169880-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 700, Older Gray carpet w/mastic Lab ID-Version‡: 6169881-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Mastic	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 701, 1'x1' ACT w/brown mastic Lab ID-Version‡: 6169882-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Brown Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	40% Cellulose 40% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 702, Roof assembly

Lab ID-Version‡: 6169883-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Paint	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 703, Black sealant

Lab ID-Version‡: 6169884-1

Sample Layers	Asbestos Content
Black Sealant	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 704, White 2'x4' ACT w/ random fissures/pinholes

Lab ID-Version‡: 6169885-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	50% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 705, Drywall/joint compound

Lab ID-Version‡: 6169886-1

Sample Layers	Asbestos Content
White Drywall with Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: No Joint Compound.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 706, Drywall/joint compound Lab ID-Version‡: 6169887-1

Sample Layers	Asbestos Content
White Drywall with Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: No Joint Compound.

Location: 707, Drywall/joint compound Lab ID-Version‡: 6169888-1

Sample Layers	Asbestos Content
White Drywall with Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: No Joint Compound.

Location: 708, 2'x2' squares of brown + gold carpet + green mastic Lab ID-Version‡: 6169889-1

Sample Layers	Asbestos Content
Brown Carpet with Vinyl Backing	ND
Green Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 709, Red/blue carpet w/ brown mastic Lab ID-Version‡: 6169890-1

Sample Layers	Asbestos Content
Multicolored Carpet	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 710, Brown carpet mastic Lab ID-Version‡: 6169891-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 711, Gray sealant Lab ID-Version‡: 6169892-1

Sample Layers	Asbestos Content
Gray/Black Sealant	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 712, cream 12"x12" VFT w/ brown streaks + black mastic Lab ID-Version‡: 6169893-1

Sample Layers	Asbestos Content
White Floor Tile	5% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 713, White VFT 12"x17" w/blue swirls + black mastic Lab ID-Version‡: 6169894-1

Sample Layers	Asbestos Content
White Floor Tile	< 1% Chrysotile
Black Mastic	6% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 714, White 12"x12" w/ brown + blue streaks + black mastic Lab ID-Version‡: 6169895-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Black Mastic	3% Chrysotile
Sample Composite Homogeneity:	Good

Location: 715, Blue carpet w/brown mastic over dark red flooring w/black mastic Lab ID-Version‡: 6169896-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Yellow Mastic	ND
Dark Brown Sheet Flooring with Black Backing	ND
Black Mastic	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 716, 1'x1' ACT w/uniform holes + brown mastic Lab ID-Version‡: 6169897-1

Sample Layers	Asbestos Content
Brown Ceiling Tile	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	70% Cellulose
Sample Composite Homogeneity:	Good

Location: 717, Gray carpet w/green mastic Lab ID-Version‡: 6169898-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Green Mastic	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 718, Gray 4" covebase w/white mastic Lab ID-Version‡: 6169899-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Mastic	ND
Sample Composite Homogeneity:	Good

Location: 719, Drywall/joint compound Lab ID-Version‡: 6169900-1

Sample Layers	Asbestos Content
White Drywall with Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: No Joint Compound.

Location: 720, Drywall/joint compound Lab ID-Version‡: 6169901-1

Sample Layers	Asbestos Content
White Drywall with Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: No Joint Compound.

Location: 721, Drywall/joint compound Lab ID-Version‡: 6169902-1

Sample Layers	Asbestos Content
White Compound	< 1% Chrysotile
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 722, Stucco/vapor barrier assembly Lab ID-Version‡: 6169903-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Brown/Black Vapor Barrier	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

Location: 723, 1'x1' ACT w/random fissures Lab ID-Version‡: 6169904-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	40% Cellulose 40% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 724, Black 4" covebase w/mastic Lab ID-Version‡: 6169905-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Mastic	ND
Sample Composite Homogeneity:	Good

Location: 725, Gray 4" covebase w/white mastic Lab ID-Version‡: 6169906-1

Sample Layers	Asbestos Content
Gray Carpet with Vinyl Backing	ND
Green Mastic	ND
Composite Non-Asbestos Content:	60% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 726, Gray 2'x2' carpet squares w/green mastic Lab ID-Version‡: 6169907-1

Sample Layers	Asbestos Content
Light Green Floor Tile	< 1% Chrysotile
Black Mastic	6% Chrysotile
Sample Composite Homogeneity:	Good

Location: 727, Stucco Lab ID-Version‡: 6169908-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 728, Stucco Lab ID-Version‡: 6169909-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 729, Stucco Lab ID-Version‡: 6169910-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 730, TSI Lab ID-Version‡: 6169911-1

Sample Layers	Asbestos Content
White Insulation	15% Amosite
Sample Composite Homogeneity:	Good

Location: 731, Window putty Lab ID-Version‡: 6169912-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 732, Roof assembly Lab ID-Version‡: 6169913-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 733, Roof assembly Lab ID-Version‡: 6169914-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 734, Grayish-white sealant w/translucent sealant beneath Lab ID-Version‡: 6169915-1

Sample Layers	Asbestos Content
Transparent Sealant	ND
Gray/White Sealant	ND
Sample Composite Homogeneity:	Good

Location: 735, White penetration mastic Lab ID-Version‡: 6169916-1

Sample Layers	Asbestos Content
White Sealant	ND
Transparent Sealant	ND
Sample Composite Homogeneity:	Good

Location: 736, Stucco Lab ID-Version‡: 6169917-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 737, Stucco Lab ID-Version‡: 6169918-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 738, Stucco Lab ID-Version‡: 6169919-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 739, Window putty Lab ID-Version‡: 6169920-1

Sample Layers	Asbestos Content
Off-White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 740, Brown felt insulation Lab ID-Version‡: 6169921-1

Sample Layers	Asbestos Content
Brown Felt Insulation	ND
Composite Non-Asbestos Content:	98% Cellulose
Sample Composite Homogeneity:	Good

Location: 741, Black sealant (Gray on surface) Lab ID-Version‡: 6169922-1

Sample Layers	Asbestos Content
Black Sealant with Silver Coating	10% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 742, Black penetration mastic

Lab ID-Version‡: 6169923-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 743, Roll-out roof assembly

Lab ID-Version‡: 6169924-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 744, Asphalt tile roof assembly

Lab ID-Version‡: 6169925-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 745, Gray HVAC sealant w/yellowish sealant beneath

Lab ID-Version‡: 6169926-1

Sample Layers	Asbestos Content
Silver Coating	< 1% Chrysotile
Yellow Sealant	ND
Gray/Black Sealant	10% Chrysotile
Composite Non-Asbestos Content:	2% Vermiculite
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 746, Wall assembly Lab ID-Version‡: 6169927-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Brown/Black Fibrous Material	ND
Composite Non-Asbestos Content:	70% Cellulose
Sample Composite Homogeneity:	Good

Location: 747, Gray sealant (Black beneath) Lab ID-Version‡: 6169928-1

Sample Layers	Asbestos Content
Gray/Black Sealant	7% Chrysotile
Sample Composite Homogeneity:	Good

Location: 748, Black old dry sealant Lab ID-Version‡: 6169929-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 749, Roof assembly Lab ID-Version‡: 6169930-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	60% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 750, White 12"x12" VFT w/brown streaks + black mastic Lab ID-Version‡: 6169931-1

Sample Layers	Asbestos Content
White Floor Tile	2% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 751, 2'x4' white ACT w/random fissures/pinholes Lab ID-Version‡: 6169932-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

Location: 752, Roof assembly Lab ID-Version‡: 6169933-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 753, Black penetration mastic Lab ID-Version‡: 6169934-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 754, Gray sandy sealant Lab ID-Version‡: 6169935-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 755, Black sealant Lab ID-Version‡: 6169936-1

Sample Layers	Asbestos Content
Brown/Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 756, Plaster Lab ID-Version‡: 6169937-1

Sample Layers	Asbestos Content
White Compound with Paint	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 757, Flooring + leveling compound Lab ID-Version‡: 6169938-1

Sample Layers	Asbestos Content
Beige Floor Tile	< 1% Chrysotile
Black Mastic	2% Chrysotile
Brown Fibrous Material	ND
Off-White Leveling Compound	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 758, Vinyl floor sheeting

Lab ID-Version‡: 6169939-1

Sample Layers	Asbestos Content
Gray Sheet Flooring with Fibrous Backing	ND
Composite Non-Asbestos Content:	30% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 759, Various layers of VFT (Flooring)

Lab ID-Version‡: 6169940-1

Sample Layers	Asbestos Content
Brown Sheet Flooring with Black Backing	ND
Black Mastic	5% Chrysotile
White Floor Tile	ND
Tan Mastic	ND
Gray Floor Tile	5% Chrysotile
Black Mastic	ND
Composite Non-Asbestos Content:	15% Cellulose 3% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 760, Caulking

Lab ID-Version‡: 6169941-1

Sample Layers	Asbestos Content
Tan Caulk	ND
Sample Composite Homogeneity:	Good

Location: 761, 1"x1" fissures ACT+glue

Lab ID-Version‡: 6169942-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
White Glue	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 762, Drywall+joint compound Lab ID-Version‡: 6169943-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 763, Blue carpet + backing + leveling compound Lab ID-Version‡: 6169944-1

Sample Layers	Asbestos Content
Blue Carpet	ND
White Carpet Backing	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 764, Gray/blue carpet + backing Lab ID-Version‡: 6169945-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Brown Carpet Backing	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 765, 4'x2' ACT Lab ID-Version‡: 6169946-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	40% Cellulose 40% Glass Fibers
Sample Composite Homogeneity:	Good

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 766, 4" gray covebase + glue (various) Lab ID-Version‡: 6169947-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 767, Window putty Lab ID-Version‡: 6169948-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 768, Stucco Lab ID-Version‡: 6169949-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 769, Stucco Lab ID-Version‡: 6169950-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 770, Stucco Lab ID-Version‡: 6169951-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 771, Black mastic Lab ID-Version‡: 6169952-1

Sample Layers	Asbestos Content
Black Mastic	6% Chrysotile
Sample Composite Homogeneity:	Good

Location: 772, Mastic+tape Lab ID-Version‡: 6169953-1

Sample Layers	Asbestos Content
Black Roofing Tar and Felt with Paint	6% Chrysotile
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 773, Roof core/ Asp. shingle Lab ID-Version‡: 6169954-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Green Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Felt	ND
Gray Mastic (Trace)	8% Chrysotile
Composite Non-Asbestos Content:	40% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 774, Sealant Lab ID-Version‡: 6169955-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Composite Non-Asbestos Content:	3% Vermiculite
Sample Composite Homogeneity:	Good

Location: 775, Mastic + 2nd layer Lab ID-Version‡: 6169956-1

Sample Layers	Asbestos Content
Black Mastic (Top)	ND
Black Mastic (Bottom)	10% Chrysotile
White Felt	ND
Composite Non-Asbestos Content:	10% Glass Fibers 5% Cellulose
Sample Composite Homogeneity:	Good

Location: 776, Duct tape Lab ID-Version‡: 6169957-1

Sample Layers	Asbestos Content
White Tape	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 777, Roof core / new asp. shingles Lab ID-Version‡: 6169958-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 778, Stucco Lab ID-Version‡: 6169959-1

Sample Layers	Asbestos Content
Gray Stucco with Paint	ND
Sample Composite Homogeneity:	Good

Location: 779, Blue covebase + glue Lab ID-Version‡: 6169960-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 780, 4" black covebase + brown mastic Lab ID-Version‡: 6169961-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 781, Roof core 3/asphalt sheeting Lab ID-Version‡: 6169962-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Black Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	20% Cellulose 20% Glass Fibers 10% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 782, Mastic

Lab ID-Version‡: 6169963-1

Sample Layers	Asbestos Content
Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

Location: 783, Asphalt sheeting

Lab ID-Version‡: 6169964-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	20% Glass Fibers 20% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 784, Tape+mastic

Lab ID-Version‡: 6169965-1

Sample Layers	Asbestos Content
Black Mastic	ND
Black Tape	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 785, Brown carpet + backing+glue

Lab ID-Version‡: 6169966-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Multicolored Carpet Backing	ND
Off-White Mastic	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 786, Stucco Lab ID-Version‡: 6169967-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 787, Stucco Lab ID-Version‡: 6169968-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 788, Stucco Lab ID-Version‡: 6169969-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 789, Drywall+joint compound Lab ID-Version‡: 6169970-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 790, Drywall+joint compound Lab ID-Version‡: 6169971-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 791, Drywall+joint compound Lab ID-Version‡: 6169972-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 792, Button board+joint compound Lab ID-Version‡: 6169973-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 793, Button board+joint compound Lab ID-Version‡: 6169974-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 794, Button board+joint compound

Lab ID-Version‡: 6169975-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Off-White Plaster	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 795, 4'x2' ACT

Lab ID-Version‡: 6169976-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 796, 4" covebase black + brown mastic

Lab ID-Version‡: 6169977-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	3% Wollastonite
Sample Composite Homogeneity:	Good

Location: 797, 1x1 VFT+glue green

Lab ID-Version‡: 6169978-1

Sample Layers	Asbestos Content
Green Floor Tile	< 1% Chrysotile
Gray Glue	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 798, 4" brown covebase + glue Lab ID-Version‡: 6169979-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 799, 1x1 VF (beige)+glue Lab ID-Version‡: 6169980-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 800, Brown carpet + glue Lab ID-Version‡: 6169981-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 801, 2 layers of 1x1 VFT orange/red Lab ID-Version‡: 6169982-1

Sample Layers	Asbestos Content
Red Floor Tile	< 1% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 802, 1x1 fiss ACT + brown mastic Lab ID-Version‡: 6169984-1

Sample Layers	Asbestos Content
Off-White Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	40% Cellulose 40% Glass Fibers 2% Wollastonite
Sample Composite Homogeneity:	Good

Location: 803, 1x1 white VFT + leveling compound+glue Lab ID-Version‡: 6169985-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 804, 1x1 blue VFT Lab ID-Version‡: 6169986-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Yellow Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 805, 1x1 VFT offwhite+glue Lab ID-Version‡: 6169987-1

Sample Layers	Asbestos Content
Off-White Floor Tile	ND
Black Mastic	ND
Green Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 806, Mastic Lab ID-Version‡: 6169988-1

Sample Layers	Asbestos Content
Black Mastic	9% Chrysotile
Sample Composite Homogeneity:	Good

Location: 807, Mastic Lab ID-Version‡: 6169989-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 808, Mastic Lab ID-Version‡: 6169990-1

Sample Layers	Asbestos Content
Black Mastic	ND
Gray Mastic	8% Chrysotile
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 809, Roof core asp. sheet Lab ID-Version‡: 6169991-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	30% Glass Fibers 30% Synthetic Fibers
Sample Composite Homogeneity:	Good

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Location: 810, Roof core asp. shingle Lab ID-Version‡: 6169992-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Red Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 811, Caulking Lab ID-Version‡: 6169993-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 812, Caulking Lab ID-Version‡: 6169994-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 813, Tape/Caulking Lab ID-Version‡: 6169995-1

Sample Layers	Asbestos Content
White Tape	ND
White Caulk	ND
Composite Non-Asbestos Content:	50% Cellulose
Sample Composite Homogeneity:	Good

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Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 814, Asp. sheeting Lab ID-Version‡: 6169996-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Composite Non-Asbestos Content:	30% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 815, Mastic Lab ID-Version‡: 6169997-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 816, Stucco Lab ID-Version‡: 6169998-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 817, 4'x2' ACT Lab ID-Version‡: 6169999-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	60% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 818, Black covebase + glue Lab ID-Version‡: 6170000-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 819, Beige 1x1 VFT + glue Lab ID-Version‡: 6170001-1

Sample Layers	Asbestos Content
Beige Floor Tile	2% Chrysotile
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 820, Blue 1x1 VFT + glue Lab ID-Version‡: 6170002-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 821, Gray carpet+leveling compound Lab ID-Version‡: 6170003-1

Sample Layers	Asbestos Content
Gray Carpet	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 822, Drywall+joint compound Lab ID-Version‡: 6170004-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 823, Drywall+joint compound Lab ID-Version‡: 6170005-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 824, Drywall+joint compound Lab ID-Version‡: 6170006-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 825, Drywall(2)+J.C. Lab ID-Version‡: 6170007-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 826, Drywall(2)+J.C. Lab ID-Version‡: 6170008-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 827, Drywall(2)+J.C. Lab ID-Version‡: 6170009-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 828, Blue covebase w/mastic Lab ID-Version‡: 6170010-1

Sample Layers	Asbestos Content
Blue Baseboard	ND
Dark Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 829, Blue carpet + backing Lab ID-Version‡: 6170011-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Purple Carpet Backing	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 830, Roof core asp. shingles Lab ID-Version‡: 6170012-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with White Stones	ND
Brown/Black Roofing Material	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 831, Caulking Lab ID-Version‡: 6170013-1

Sample Layers	Asbestos Content
White Caulk	ND
Black Tar	ND
Sample Composite Homogeneity:	Good

Location: 832, Tape (duct) Lab ID-Version‡: 6170014-1

Sample Layers	Asbestos Content
Silver Tape	ND
Sample Composite Homogeneity:	Good

Location: 833, Caulking Lab ID-Version‡: 6170015-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 834, Caulking Lab ID-Version‡: 6170016-1

Sample Layers	Asbestos Content
Silver Caulk	ND
Sample Composite Homogeneity:	Good

Location: 835, 4" black covebase + glue Lab ID-Version‡: 6170017-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Dark Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 836, Black mastic Lab ID-Version‡: 6170018-1

Sample Layers	Asbestos Content
Gray/Black Mastic	ND
Composite Non-Asbestos Content:	8% Cellulose
Sample Composite Homogeneity:	Good

Location: 837, Drywall @ wall plemm(Exterior) Lab ID-Version‡: 6170019-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 838, Window putty Lab ID-Version‡: 6170020-1

Sample Layers	Asbestos Content
Gray Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 839, Stucco Lab ID-Version‡: 6170021-1

Sample Layers	Asbestos Content
Gray/White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 840, Mortar Lab ID-Version‡: 6170022-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 841, Drywall Lab ID-Version‡: 6170023-1

Sample Layers	Asbestos Content
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 842, Stucco Lab ID-Version‡: 6170024-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 843, Stucco Lab ID-Version‡: 6170025-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 844, Stucco Lab ID-Version‡: 6170026-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 845, Roof core & asp. shingles Lab ID-Version‡: 6170027-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Shingle with Gray Stones	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	40% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 846, Mastic Lab ID-Version‡: 6170028-1

Sample Layers	Asbestos Content
Gray Mastic	10% Chrysotile
Black Mastic	ND
Composite Non-Asbestos Content:	6% Cellulose
Sample Composite Homogeneity:	Good

Location: 847, Mastic Lab ID-Version‡: 6170029-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 848, 6" Gray covebase + glue Lab ID-Version‡: 6170030-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 849, 4" Gray covebase + glue Lab ID-Version‡: 6170031-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 850, 1x1 VFT + glue Lab ID-Version‡: 6170032-1

Sample Layers	Asbestos Content
Gray Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 851, 1x1 VFT + glue (2 layers) Lab ID-Version‡: 6170033-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Transparent Glue	ND
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 852, 1x1 fiss ACT + brown mastic Lab ID-Version‡: 6170034-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Dark Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose 2% Talc
Sample Composite Homogeneity:	Good

Location: 853, Drywall + joint compound Lab ID-Version‡: 6170035-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 854, Drywall + joint compound

Lab ID-Version‡: 6170036-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 855, Drywall + joint compound

Lab ID-Version‡: 6170037-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 856, Drywall (1) + joint compound

Lab ID-Version‡: 6170038-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 857, Drywall (1) + joint compound

Lab ID-Version‡: 6170039-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 858, Drywall (1) + joint compound Lab ID-Version‡: 6170040-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 859, Drywall (2) + joint compound Lab ID-Version‡: 6170041-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 860, Drywall (2) + joint compound Lab ID-Version‡: 6170042-1

Sample Layers	Asbestos Content
White Tape	ND
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 861, Drywall (2) + joint compound Lab ID-Version‡: 6170043-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 862, 4x2 ACT Lab ID-Version‡: 6170044-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	60% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 863, Red carpet + glue Lab ID-Version‡: 6170045-1

Sample Layers	Asbestos Content
Red Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 864, Green carpet + glue + level comp. Lab ID-Version‡: 6170046-1

Sample Layers	Asbestos Content
Green Carpet	ND
Green Glue	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 865, 4" gray covebase w/mastic Lab ID-Version‡: 6170047-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: 209023002; PCR/Harbor-UCLA

Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 866, 1x1 VFT white + glue Lab ID-Version‡: 6170048-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 867, Duct wrap Lab ID-Version‡: 6170049-1

Sample Layers	Asbestos Content
White Wrap	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 868, Various flooring layers Lab ID-Version‡: 6170050-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Black Tar Felt	ND
White Leveling Compound	ND
Yellow Glue	ND
Brown Fibrous Material	ND
Dark Gray Floor Tile	ND
Composite Non-Asbestos Content:	30% Cellulose 30% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 869, Brown window putty Lab ID-Version‡: 6170051-1

Sample Layers	Asbestos Content
Gray Window Putty	ND
Sample Composite Homogeneity:	Good

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Date of Sampling: 03-24-2015
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Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 870, Gray window putty Lab ID-Version‡: 6170052-1

Sample Layers	Asbestos Content
Gray Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 871, Foam insul roof core Lab ID-Version‡: 6170053-1

Sample Layers	Asbestos Content
Yellow Foam Insulation with Coating	ND
Sample Composite Homogeneity:	Good

Location: 872, Caulking Lab ID-Version‡: 6170054-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 873, Roof core asp. sheet. Lab ID-Version‡: 6170055-1

Sample Layers	Asbestos Content
Black Roofing Shingle with White Stones	ND
Black Roofing Tar and Felt	ND
Black Roofing Tar and Felt	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

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Date of Sampling: 03-24-2015
Date of Receipt: 04-03-2015
Date of Report: 04-10-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 874, Mastic

Lab ID-Version‡: 6170056-1

Sample Layers	Asbestos Content
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 875, Mastic

Lab ID-Version‡: 6170057-1

Sample Layers	Asbestos Content
Gray/Black Roofing Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: 3/24 - 3/26 Sampled By: Pedro Rodriguez Sampled By: Blair Bridges Date Sampled:	Laboratory: EMLAB P&K Tel: 800.651.4802 Fax:

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Date	Laboratory
[signature] Pedro Rodriguez	Ninyo & Moore	4/3/15		[signature]	4-3-15	12:10

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condi
	646	F 3/3.5	West Crawlspace on 4" Outer Diameter Pipe (F3)	520	TSI		Y	Poor
	647		NW Outer Office (F3)	521	Gray Carpet w/Blue mastic over gray flooring	500SF	N	Good
	648		NW Inner Office (F3)	522	wallboard/Joint compound		Y	
	649		NW Entrance Hallway (F3)	522		See 648		
	650		SW Bathroom (F3)	522		See 648		
	651		NW Inner Office beneath Gray Carpet (F3)	523	Reddish-Brown Flooring	250SF	N	
	652		NW Outer Office Ceiling (F3)	524	1'x1' ACT w/small random pinholes & brown mastic	800SF	Y	
	653		NW Entrance Hallway (F3)	525	white 12"x12" VFT w/ red & Blue streaks & brown mastic	1150SF	N	
	654		Central Hallway (F3)	526	white 12"x12" VFT w/ light-brown streaks & brown mastic	80 SF		
	655		Breakroom (F3)	527	Light Gray 12"x12" VFT w/ blue & white streaks & mastic	220SF		
	656		South Bathroom (F3)	528	12"x12" VFT (Green) w/ white streaks & mastic	300SF		
	657		South Bathroom (F3)	529	Gray 4" cove base w/ mastic	350LF		
	658		NW Entrance Hallway (F3)	530	Gray 6" cove base w/ mastic	100LF		

* Asbestos PLM EPA Method 600/R-93/116

* Standard TAT * First Positive Stop per HA NO. with Results 1% and greater.

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023602 Project Manager: Michael Cushner	Date Sampled: 3/24/15 — 3/26/15 Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	
P. Rodriguez	Ninyo & Moore			/	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	659	F 3/3.5	Exterior Wall - NE (F3)	531	Stucco		Y	Good
	660		" " - West Central (F3)					
	661		" " - SW (F3)					
	662		" " - beneath stucco (F3)	532	Vapor Barrier paper			Poor
	663		" - Window Pane (F3)	533	Gray Brittle Window Sealant	100LF	N	Good
	664		Northeast Office/Stge Area (F3)	534	white flooring beneath carpet w/ Green carpet mastic	150LF		
	665		Northwest Storage Area (F3)	535	land black flooring mastic 1'x1' ACT w/ Random pinholes & fissures	200SF	Y	
	666		NE office/Stge Door Window (F3)	536	Putty	400 LF	N	Poor
	667		Roof - Main Roof (F3)	537	Roof Assembly	2800SF		Good
	668		" - HVAC (F3)	538	Green Soft Sealant (black on inside)	10SF		
	669		" - HVAC (F3)	539	Gray Sealant w/ silver tape	100SF		
	670		" - West side strip (F3)	540	Roof Assembly	900SF		
	671		" - Corrugated Roof (South) (F3)	541	Silver Paint	700SF		Poor

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Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Title(Year)	Received By: (sign/print)
/	Ninyo & Moore			/
/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	672	F3/3.5	Roof - Corrugated Roof (south) (F3)	542	Gray Patch/Sealant	40 SF	N	Good
	673	F3/3.5	" - Main Roof (F3)	543	Black Penetration Mastic	5 SF		
	674		" - " " on vent (F3)	544	" " "	4 SF		
	675		" - " " " " (F3)	545	white Patch Sealant	10 SF		
	676	F3/3.5	Break Room/Hallway (F3.5)	546	Drywall/Joint Compound	See 648	Y	
	677		Tool/Key Room (VE) (F3.5)		Drywall/Joint Compound	See 648		
	678		- above (F3.5) drop down ceiling	547	2'x4' 'Look Twice' ACT w/pinholes + fissures	1200 SF		
	679		Exterior - East Central Base on Flashing (F3.5)	548	Black Sealant (Hard)	30 SF	N	
	680		Exterior (F3.5) East Central on wall Base	549	white " (Soft)	40 SF		
	681		Roof (F3.5)	550	Roof Assembly	10,000 SF		
	682		" - on HVAC Unit (F3.5)	551	white Sealant (black underneath)	25 SF		
	683	F4/4.5	Roof - on HVAC " (F4)	552	Black Sealant	50 SF		
	684	F4/4.5	" - " " " (F4)	553	Gray Sealant	300 SF		

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Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: [redacted] Fax: 001347215

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time/Sig	Received By: (sign/print)	Laboratory
"	Ninyo & Moore			"	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	685	F4/F5	Roof of F4	554	Roof Assembly	4500SF	N	Good
	686		" - on vent (F4)	555	Black Penetration mastic	10SF		
	687		South Room - Bathroom (F4)	556	Gray 6" Cove Base w/ mastic	320LF		
	688		" " - " (F4)	557	White (2"x12" VFT w/ Red Glue Stream) & mastic	250SF		
	689		" " - " (F4)	558	Drywall/Joint Compound	10,500	Y	
	690		South West Room (SW corner F4)	↓		see 689	Y	
	691		South Room of F4	559	Gray Carpet w/ Blue Mastic	3200SF	N	
	692		North Room (SW Corner) of F4	558	Drywall/Joint Compound	see 558	Y	
	693		" " of F4	559	6" Black Cove Base w/ mastic	200LF	N	
	694		" " of F4	560	2'x2' Grayish Carpet Squares w/ Green mastic	600SF		
	695		Room 4 " "	561	Gray 4" Cove Base w/ white mastic	60LF		
	696		Room 10 " "	562	Red Flooring w/ Black Base (mastic) & Leveling Compound above	180SF		
	697	↓	Mens SW Bathroom of F4	563	Light Green 12"x12" VFT w/ Green & white streaks & mastic	40SF	↓	↓

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
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"	Ninyo & Moore			"		
"				"		

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	698	F4/4.5	NE Copy Room Area beneath newer grey carpet of F4	564	Leveling Compound		Y	Good
	699		Central Hallway of F4	565	white 12"x12" VFT w/ Gray streaks + mastic	355F	N	
	700		South-Central Storage (F4) Area	566	Older Gray Carpet w/ mastic	300SF	N	
	701		Reception Area of F4	567	1'x1' ACT w/ Brown mastic	500SF	Y	
	702		Roof of F4.5	568	Roof Assembly	15000SF	N	
	703		West Roof Side of F4.5	569	Black Sealant	40SF	N	
	704		Central Area of F4.5	570	White 2'x4' ACT w/ random fissures/pinholes	15000SF	Y	
	705		South Room of F4.5	571	Drywall/Joint compound	2600SF		
	706		NE office of F4.5			See 705		
	707		Central Area of F4.5			See 705		
	708		NW office of F4.5	572	2'x2' Squares of Brown + Gold carpet + green mastic	200SF	N	
	709		South Room	573	Red/Blue Carpet w/ Brown mastic	250SF		
	710		Beneath old Gray Carpet	574	Brown Carpet Mastic	700SF		

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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

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Relinquished by: (sign/print)	Company	Date	Time	Received by: (sign/print)
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LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	711	F4/4.5	Roof Office NW Side	575	Gray Sealant Chalky on Sheet	75F	N	Good
	712	F7	NE Room	576	Cream 12"x12" VFT w/ Brown Streaks & Black Mastic	600SF		
	713		Central-West Office	577	white VFT 12"x12" w/Blue Swirls & Black Mastic	1300SF		
	714		" - " "	578	white 12"x12" VFT w/Brown & Blue streaks & Black Mastic	200SF		
	715		Central Office	579	Blue Carpet w/Brown Mastic over dark red flooring w/black mastic	1505F		
	716		NW Office Ceiling	580	1'x1' AC T w/Uniform holes & brown mastic	250SF	Y	
	717		" "	581	Gray Carpet w/ Green mastic	250SF	N	
	718		" "	582	Gray 4" Cove base w/white mastic	120LF	N	
	719		NE Bathroom	583	wallboard/Joint Compound	12,000 SF	Y	
	720		Central Large Storage Room	[redacted]		See 719		
	721		Central (Largest) Room	[redacted]		See 719		
	722		Central West Wall Interior above ceiling	584	Stucco/Vapor Barrier Assembly	3600 SF		
	723		Central-West Office Ceiling	585	1'x1' ACT w/Random Fissures	350SF		

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Laboratory:

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Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time	Received By: (sign/print)	Company	Date	Time
	Ninyo & Moore						

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	724	F7	West-Central office	586	Black 6" Cove base w/white mastic	130 LF	N	Good
	725		" " "	587	Gray 2'x2' Carpet Square w/Green mastic	450SF		
	726		" " Storage Room	588	Light Green VF Tile Green streaks - Black Mastic	70SF		
	727		Exterior - SW	589	Stucco	3600SF		
	728		" - NW			see 727		
	729		" - South Central	↓	↓	see 727	↓	↓
	730		Crawlspace beneath East Central Side of Building in 6" OD run	590	TSI		Y	Poor
	731		Exterior - SW Window	591	Window Putty	600LF	N	Good
	732		Roof - NW Flat Area	592	Roof Assembly	6500SF		
	733		" - Sloped Roof	593	" "	4400SF		
	734		" - Roof Base Wall	594	Grayish-white Sealant w/transluscent sealant Beneath	25SF		
	735	↓	" - South Center	595	white Penetrafree mastic	125F	↓	
	736	F9/F9T	Exterior F9 - NW	596	Stucco	1200SF	Y	↓

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ASBESTOS BULK SAMPLE DATA SHEET

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Tel: (949) 753-7079
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Project Name: PCR/Harbor-UCLA
Project No.: 209823002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (Sign/Print)	Company	Date	Time	Received By: (Sign/Print)		
"	Ninyo & Moore			"		
"				"		

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	737	F9/F9T	F9 Exterior - NW	596	Stucco	see 736	Y	Good
	738		" " - SW	~~596~~	"	see 736	↓	
	739		F9 Exterior Window	597	Window Put Hy	1000LF	N	
	740		F9 Roof beneath damaged metal	598	Brown Felt Insulation	2,600SF	Y	Poor
	741		F9 Roof Apex - South	599	Black Sealant (Gray on surface)	200SF	N	Good
	742		F9 " Vent - SE Area	600	Black Penetration mastic	15SF		
	743		F9 " NE Area	601	Roll-out Roof Assembly	900SF		
	744		" " NW Area	602	Asphalt Tile Roof Assembly	900SF		
	745		" " on tiled Roof HVAC Base	603	Gray HVAC Sealant w/yellowish sealant beneath	10SF		
	746		" " NW Area on HVAC Base	604	Wall Assembly	50SF		
	747		" " " " Flashing	605	Gray Sealant (Black Beneath)	10SF		↓
	748		" " " " "	606	Black Oil Dry Sealant	15SF		Poor
	749	↓	" West Side Shed Roof	607	Roof Assembly	90SF	↓	Poor

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
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Relinquished By: (sign/print)	Company	Date	Time (AM/PM)	Received By: (sign/print)		
/	Ninyo & Moore			/		
/				/		

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	750	F9/F9T	FAT - Main Room	608	white 12"+12" VFT w/Brown streaks + black	1100SF	N	Poor
	751		" - " "	609	2'x2' white ACT (non-friable) w/random fissures/pinholes	1100SF	Y	Poor
	752		" - Roof	610	Roof Assembly	1200SF	N	Good
	753		" - " vent	611	Black Penetration mastic	6SF		↓
	754		" - " on old HVAC unit	612	Gray Sandy Sealant	12SF		Poor
	755	↓	" - " on old HVAC unit	613	Black Sealant	5SF	↓	↓
	756	E6	East Hall	614	Plaster	1,000SF	N	Fair
	757		Hall near Rm 145	615	Flooring + Leveling Compound	30SF		good
	758		SE Restrooms	616	Vinyl flooring sheeting	80SF		↓
	759		Main Hall Floor	617	Various layers of VFT Flooring	1,800SF		fair
	760		Ceiling Plenum @ pipe - main hall near Rm 153	618	Caulking	1SF		good
	761		SE offices Hall	619	1x1 Fissured ACT + glue	1800SF		
	762	↓	West office	620	Drywall + joint compound	1,000SE	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

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Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EM Lab P&K
Tel:
Fax:

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CHAIN OF CUSTODY INFORMATION

Relinquished By (signature)	Company	Date	Time	Received By (signature)
/	Ninyo & Moore			/
/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	763	E6	SE office Floor	621	Blue Carpet + Backing + Levels Comp.	200 SF	N	Good
	764		Rm 182	622	Grey/Blue Carpet + Backing	200 SF	↓	
	765		Main area Ceiling	623	4x2' ACT	1,000	Y	
	766		Main Hallway	624	Yell Grey Cove Base + Glue (various)	500 SF	N	↓
	767		South exterior window	625	window Putty	2K LF	Y	Poor/Fair
	768		West exterior wall	626	Stucco	2,000 SF	N	good
	769		East ↓		↓	↓	↓	↓
	770		North ↓	↓	↓	↓	↓	↓
	771		Roof/Center	627	Black Mastic	20 SF	N	good
	772		@ NE Parapit wall/Roof	628	Mastic + Tape	20 SF		
	773		Roof (old)	629	Roof Coat Asp. shingles	1,800 SF		
	774		@ Vent Pipe/ N-NW	630	Sealant	30 SF		
	775	↓	@ Facia Seams	631	Mastic 2nd Layer	25 SF	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EM Lab P&K Tel: Fax:

001347215

CHAIN OF CUSTODY INFORMATION:

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/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	776	E6	@ Roof Vent Duct	632	Duct Tape	10 SF	N	good
	777	↓	Roof West (New)	633	Roof Core / New Asp. Shingles	2,000 SF	↓	↓
	778	↓	Roof Outter Parapit wall N.E	634	Stucco	300 SF	↓	↓
	779	↓	Interior Arame N	635	Blk Core Base + Glue	20 LF	↓	↓
	780	↓	Rm 177	636	2" Blk Core Base + Brown Mastic	25 SF	↓	↓
	781	↓	Roof / Hallway / Canopy	637	Roof Core 3 / Asphalt Sheeting	500 SF	↓	↓
	782	↓	Roof Motor	638	Mastic	50 SF	↓	↓
	783	↓	Roof / Parapit wall (new)	639	~~Rep~~ Asphalt Sheeting	300 SF	↓	↓
	784	↓	@ Roof / Capped Pipe E	640	Tape + Mastic	10 SF	↓	↓
	785	↓	NW Floor	641	Brown Carpet + Backing + Glue	400 SF	↓	↓
	786	E3	Exterior NW Wall	642	Stucco	1,200 SF	N	good
	787	↓	SW	↓	↓	↓	↓	↓
	788	↓	N	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

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CHAIN OF CUSTODY INFORMATION:

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/				/

001347215

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	789	E3	South trailer	643	Drywall + Joint Comp	3000 SF	N	good
	790		Main Hall					
	791		North of Hall					
	792		Mens Restroom	644	+ J. Compound Brown Base	1,000 SF		
	793		Womens Restroom					
	794		S/E walls					
	795		Ceiling Main Area	645	4'x2' ACT	1,000 SF		
	796		Main Area	646	4" Core Blk Brown + Glue	100 LF		
	797		East office	647	1x1 VFT + Glue Green	100 SF		
	798		East additions/Rms	648	4" Brown Core Base + Glue	100 LF		
	799		South end Floor	649	1x1 VFT (Beige) + Glue	1,500 SF		
	800		South end floor	650	Brown Carpet + Glue	150 SF		
	801		Rm 16	651	2 Layers of 1x1 VFT Green/Red	1,000 SF		

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CHAIN OF CUSTODY INFORMATION:

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/				/

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LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	802	E3	Rm 16	652	1X1 Fiss ACT + Gambrel	800 SF	Y	good
	803		Hall	653	1X1 White VFT + Level Comp + Glue	1,000 SF	N	good
	804		West Floor	654	1X1 Blue VFT	300 SF	N	good
	805		Rm 7	655	1X1 VFT off white + green	1,000 SF	N	good
	806		Sout @ pipe	656	Mastic	30 SF	N	good
	807		@ vent Pipe NE	657	↓	20 SF		
	808		Roof @ South addon	658	↓	50 SF		
	809		West Roof	659	Roof Core Asp. Sheet.	2,000 SF		
	810		East ↓	660	↓ Asp. Shingles	2,000 SF		
	811		Roof @ HVAC Seams	661	Caulky	10 SF		
	812		↓ Facia Seams	662	↓	10 SF		
	813		West Exterior HVAC	663	Tape/Caulky	10 SF		
	814		Roof @ Parapet wall West	664	Asp. Sheeting	800 SF	↓	↓

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475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
EM Lab P&K
Tel:
Fax:

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/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	815	E3	@ HVAC Roof	665	Mastic	20 SF	N	Good
	816	↓	Roof Parapet wall	666	Stucco	800 SF	↓	
	817	E2	Restroom	667	4'x2' ACT	100 SF	Y	
	818		North Rm 5	668	Blk Cove Base + Glue	50 LF	N	
	819		North end	669	Beige 12x12 VFT + Glue	350 SF		
	820		Kitchen Floor	670	Blue ↓ ↓ ↓	300 SF		
	821		Main Entrance	671	Grey Carpet + Lauan Comp.	1,000 S		
	822		Hall	672	Drywall + Joint Comp	1800 SF		
	823		Restroom	↓	↓ ↓	↓		
	824		South	↓	↓ ↓	↓		
	825		Restroom	673	Drywall (2) + J.C.	600 SF		
	826		South Room	↓	↓ ↓	↓		
	827	↓	↓ ↓	↓	↓ ↓	↓	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name: PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: EM Lab P&K Tel: Fax

CHAIN OF CUSTODY INFORMATION:

Relinquished By (Signature)	Company	Date	Time	Received By (Signature)
/	Ninyo & Moore			/
/				/

001347215

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	828	E2	South Area	674	Blue Cove Base + Glue	100 LF	N	good
	829	E2	North Area (Main)	675	Blue Carpet + Backing	500 SF	N	good
	830		Roof center	676	Roof Core (Asp. shingles)	3,500 SF		
	831		Roof @ wood vents	677	Caulking	2 SF		
	832		Roof @ wood vents	678	Tape (Duct)	2 SF		
	833		Roof @ vent	679	Caulking	5 SF		
	834		Roof @ Pipe	680	↓	5 SF		
	835		North Area	681	4" Blk Cove Base + Glue	20 LF		
	836		Roof @ HVAC (Duct Seam)	682	Black Mastic	10 SF		
	837		West wall (Plenum)	683	Drywall @ wall Plenum (Exterior)	2,000 SF		
	838		West exterior window	684	Window Putty	60 LF		
	839	↓	Southend Exterior	685	Stucco	200 SF	↓	↓
	840	H1	Chimney North	686	Morter	50 SF	N	good

Ninyo & Moore

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Irvine, CA 92618
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Fax: (949) 753-7071

Project Name: PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory: EM Lab P&K
Tel:
Fax:

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CHAIN OF CUSTODY INFORMATION:

Relinquished By / Signature	Company	Date	Time (24h)	Received By / Signature
/	Ninyo & Moore			/
/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	841	H1	Exterior @ water fleck wall	686	Drywall	30SF	N	good
	842		Exterior Wall - N	687	Stucco	1,300SF		
	843		↓ ↓ - S	↓	↓	↓		
	844		↓ ↓ - W	↓	↓	↓		
	845		Roof Center	688	Roof Cone Asp. shingles	900SF		
	846		@ Roof Wind Bird	689	Mastic	2SF		
	847		Roof @ Pipe	690	↓	10SF		
	848		West Room	691	6" Vinyl Cove Base + Glue	100LF		
	849		↓ ↓	692	4" ↓ ↓	200LF		
	850		Restroom	693	1X1 VFT + Glue	160SF		
	851		West Room	694	1X1 VFT + Glue (2 Layers)	300SF		
	852		West Room	695	1X1 Fiss ACT + Brown mastic	200SF		
	853	↓	East Room	696	Drywall + Joint Comp.	1,100SF	↓	↓

Ninyo & Moore

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CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time	Received By: (sign/print)	Laboratory
1	Ninyo & Moore			1	
1				1	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	854	H1	East Room	696	Drywall + joint comp	1,000 SF	N	Good
	855	↓	West Room	↓	↓	↓	↓	↓
	856	F8	Womens Restroom	697	Drywall (1) + joint comp	2,000 SF		
	857		North Hall	↓	↓	↓		
	858		Mens Restroom	↓	↓	↓		
	859		South addon wall N	698	Drywall (2) + joint comp	1,500 SF		
	860		↓ ↓ W	↓	↓	↓		
	861		↓ ↓ NE	↓	↓	↓	↓	
	862		South end Ceiling	699	4X2 ACT	1,200 SF	Y	
	863		Rm 4 Floor	700	red carpet + Glue	300 SF	N	
	864		South end	701	green Carpet + glue + Level comp.	400 SF		
	865		North Area	702	4" grey Cove Base + Glue	300 SF		
	866	↓	Restroom North	703	1X1 VFT white + glue	400 SF	↓	↓

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001347215

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (signature)	Company	Date	Time (Hrs)	Received By: (signature)
"	Ninyo & Moore			"
"				"

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	867	F8	Ceiling HVAC (N)	704	Duct wrap	100 LF	N	good
	868	"	Room 1	705	Various Flooring Layers	1000 SF	N	good
	869		Southwest Exterior	706	Brown Window Putty	300 LF	N	Fair/good
	870		Northwest ↓	707	grey window Putty	300 LF		
	871		Roof - Center	708	Foam insul Roof Core	3000 SF		
	872		Roof @ Pipe	709	Caulking	100 SF		
	873		South Roof	710	Roof Core (see sheet)	1,500 SF		
	874		Roof South Vent	711	Mastic	2 SF		
	875		Roof Joint (N and So)	712	↓	10 SF	↓	↓

EMLab P&K
A TestAmerica Company

Report for:

Mr. Mike Cushner
Ninyo & Moore - Irvine
475 Goddard
Suite 200
Irvine, CA 92618

Regarding: Project: PCR/Harbor-UCLA
EML ID: 1355705

Approved by:



Approved Signatory
Graziella Ines

Dates of Analysis:
Asbestos PLM: 04-27-2015 to 05-04-2015

Service SOPs: Asbestos PLM (EPA Methods 600/R-93/116 & 600/M4-82-020, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	405
Total Samples Analyzed:	402
Total Samples with Layer Asbestos Content > 1%:	34

Location: 876, Joint compound

Lab ID-Version‡: 6214601-1

Sample Layers	Asbestos Content
White Compound	ND
Sample Composite Homogeneity:	Good

Location: 877, Drywall and joint compound

Lab ID-Version‡: 6214602-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Off-White Joint Compound with Paint	2% Chrysotile
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 878, Drywall and joint compound

Lab ID-Version‡: 6214603-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Joint compound layer detected but not analyzed due to prior positive series.

Location: 879, Drywall and joint compound

Lab ID-Version‡: 6214604-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Joint Coompound layer detected but not analyzed due to prior positive series.

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 880, Window putty Lab ID-Version‡: 6214605-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 881, 1 x 1 ceiling tile (no mastic) Lab ID-Version‡: 6214606-1

Sample Layers	Asbestos Content
Brown Ceiling Tile	ND
Composite Non-Asbestos Content:	85% Cellulose
Sample Composite Homogeneity:	Good

Location: 882, Stucco Lab ID-Version‡: 6214607-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 883, Stucco Lab ID-Version‡: 6214608-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 884, Stucco Lab ID-Version‡: 6214609-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 885, 6" brown cove base and brown mastic Lab ID-Version‡: 6214610-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 886, Various layers Lab ID-Version‡: 6214611-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Brown Glue	ND
Brown Mastic	ND
White Floor Tile	ND
Black Mastic	3% Chrysotile
Green Floor Tile	ND
Composite Non-Asbestos Content:	40% Synthetic Fibers
Sample Composite Homogeneity:	Moderate

Location: 887, 4" brown cove base and mastic Lab ID-Version‡: 6214612-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Black Mastic	ND
Sample Composite Homogeneity:	Moderate

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Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 888, Various layers Lab ID-Version‡: 6214613-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Cream Floor Tile	ND
Black Mastic	ND
White Floor Tile	ND
Black Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Moderate

Location: 889, White speckled VFT 1 x 1 + mastic Lab ID-Version‡: 6214614-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 890, VFS + glue Lab ID-Version‡: 6214615-1

Sample Layers	Asbestos Content
Beige Sheet Flooring with Fibrous Backing	40% Chrysotile
Brown Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 891, Red floor sheeting + mastic Lab ID-Version‡: 6214616-1

Sample Layers	Asbestos Content
Red Sheet Flooring	ND
Black Felt	ND
Composite Non-Asbestos Content:	35% Cellulose
Sample Composite Homogeneity:	Moderate

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 892, 1 x 1 blue VFT Lab ID-Version‡: 6214617-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Brown/Gray Mastic	ND
Sample Composite Homogeneity:	Good

Location: 893, Caulking Lab ID-Version‡: 6214618-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 894, Mastic Lab ID-Version‡: 6214619-1

Sample Layers	Asbestos Content
Black Mastic with White Stones	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 895, Caulking + tape Lab ID-Version‡: 6214620-1

Sample Layers	Asbestos Content
Gray Caulk	ND
White Tape	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Moderate

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Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 896, Tape

Lab ID-Version‡: 6214621-1

Sample Layers	Asbestos Content
Gray Tape	ND
Sample Composite Homogeneity:	Good

Location: 897, Roof cove asp. sheeting

Lab ID-Version‡: 6214622-1

Sample Layers	Asbestos Content
Black Felt	ND
Black Roofing Shingle with Gravel	ND
Black Tar	ND
Composite Non-Asbestos Content:	45% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 898, Roof cove asp. shingles

Lab ID-Version‡: 6214623-1

Sample Layers	Asbestos Content
Black Roofing Felt	ND
Black Roofing Shingle with Off-White Gravel	ND
Black Roofing Shingle with Black Gravel	ND
Composite Non-Asbestos Content:	40% Glass Fibers 30% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 899, Drywall and joint compound

Lab ID-Version‡: 6214624-1

Sample Layers	Asbestos Content
Off-White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 900, Drywall and joint compound

Lab ID-Version‡: 6214625-1

Sample Layers	Asbestos Content
Off-White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 901, Drywall and joint compound

Lab ID-Version‡: 6214626-1

Sample Layers	Asbestos Content
Off-White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 902, Window putty

Lab ID-Version‡: 6214627-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 903, 1 x 1 green vft and mastic

Lab ID-Version‡: 6214628-1

Sample Layers	Asbestos Content
Green Floor Tile	ND
Dark Brown Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 904, Black mastic Lab ID-Version‡: 6214629-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 905, Roof cove asp. sheeting Lab ID-Version‡: 6214630-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Black Roofing Shingle with Gravel	ND
Composite Non-Asbestos Content:	35% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 906, Stucco Lab ID-Version‡: 6214631-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 907, Stucco Lab ID-Version‡: 6214632-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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Location: 908, Stucco Lab ID-Version‡: 6214633-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 909, White 1x1 spec. VFT and glue Lab ID-Version‡: 6214634-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 910, 4" grey cove base and glue Lab ID-Version‡: 6214635-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 911, Blue carpet and glue Lab ID-Version‡: 6214636-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Brown Glue	ND
Composite Non-Asbestos Content:	75% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 912, Drywall and joint compound

Lab ID-Version‡: 6214637-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 913, Drywall and joint compound

Lab ID-Version‡: 6214638-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 914, Drywall and joint compound

Lab ID-Version‡: 6214639-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 915, 2 x 2 CT

Lab ID-Version‡: 6214640-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	65% Cellulose 25% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 916, 4" gray cove base and glue Lab ID-Version‡: 6214641-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Cream Glue	ND
Sample Composite Homogeneity:	Good

Location: 917, 4" gray cove base and glue Lab ID-Version‡: 6214642-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 918, 4 x 2 CT Lab ID-Version‡: 6214643-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	65% Cellulose 25% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 919, Various layers Lab ID-Version‡: 6214644-1

Sample Layers	Asbestos Content
Off-White Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 920, VFS and flue

Lab ID-Version‡: 6214645-1

Sample Layers	Asbestos Content
Beige Sheet Flooring	ND
Tan Mastic	ND
Sample Composite Homogeneity:	Good

Location: 921, Pink carpet and glue

Lab ID-Version‡: 6214646-1

Sample Layers	Asbestos Content
Pink Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	60% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 922, Blue carpet and glue

Lab ID-Version‡: 6214647-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Brown Glue	ND
Composite Non-Asbestos Content:	75% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 923, Drywall and joint compound

Lab ID-Version‡: 6214648-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound with Paint	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 924, Drywall and joint compound Lab ID-Version‡: 6214649-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound with Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 925, Drywall and joint compound Lab ID-Version‡: 6214650-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound with Paint	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 926, Foam insulation roof cove Lab ID-Version‡: 6214651-1

Sample Layers	Asbestos Content
Cream Foam	ND
Sample Composite Homogeneity:	Good

Location: 927, Asp. shingles roof cove Lab ID-Version‡: 6214652-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Gravel	ND
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 928, Drywall and joint compound Lab ID-Version‡: 6214653-1

Sample Layers	Asbestos Content
White Drywall	ND
White Joint Compound	ND
Sample Composite Homogeneity:	Good

Location: 929, Drywall and joint compound Lab ID-Version‡: 6214654-1

Sample Layers	Asbestos Content
White Drywall	ND
White Joint Compound	ND
Sample Composite Homogeneity:	Good

Location: 930, Drywall and joint compound Lab ID-Version‡: 6214655-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 931, Roof cove Asp. shingles Lab ID-Version‡: 6214656-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Light Gray Gravel	ND
Black Roofing Shingle with Brown Gravel	ND
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 932, Roof cove Asp. shingles Lab ID-Version‡: 6214657-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Light Gray Gravel	ND
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 933, Mastic Lab ID-Version‡: 6214658-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Moderate

Location: 934, Mastic Lab ID-Version‡: 6214659-1

Sample Layers	Asbestos Content
Gray/Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Moderate

Location: 935, Mastic and layer Lab ID-Version‡: 6214660-1

Sample Layers	Asbestos Content
Black Mastic	ND
Black Fibrous Material	ND
Composite Non-Asbestos Content:	25% Glass Fibers
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 936, Tape and mastic

Lab ID-Version‡: 6214661-1

Sample Layers	Asbestos Content
Cream Tape	ND
Brown/Black Mastic	10% Chrysotile
Gray/Black Mastic	10% Chrysotile
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: 937, Mastic

Lab ID-Version‡: 6214662-1

Sample Layers	Asbestos Content
Gray/Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Moderate

Location: 938, Drywall

Lab ID-Version‡: 6214663-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 939, Drywall

Lab ID-Version‡: 6214664-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 940, Drywall Lab ID-Version‡: 6214665-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 941, 4 x 2 CT Lab ID-Version‡: 6214666-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Paint	ND
Composite Non-Asbestos Content:	80% Cellulose 5% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 942, Carpet and glue Lab ID-Version‡: 6214667-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Beige Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 943, 4" gray cove base and glue Lab ID-Version‡: 6214668-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Off-White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 944, Drywall and joint compound Lab ID-Version‡: 6214669-1

Sample Layers	Asbestos Content
Gray Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 945, Drywall and joint compound Lab ID-Version‡: 6214670-1

Sample Layers	Asbestos Content
Gray Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 946, Drywall and joint compound Lab ID-Version‡: 6214671-1

Sample Layers	Asbestos Content
Gray Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 947, 9 x 9 green vft and mastic Lab ID-Version‡: 6214672-1

Sample Layers	Asbestos Content
Green Floor Tile	8% Chrysotile
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 948, 1 x 1 vft green and glue Lab ID-Version‡: 6214673-1

Sample Layers	Asbestos Content
Green Floor Tile	ND
Brown/Black Mastic	3% Chrysotile
Sample Composite Homogeneity:	Good

Location: 949, 9 x 9 vft black and mastic Lab ID-Version‡: 6214674-1

Sample Layers	Asbestos Content
Black Floor Tile	8% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Moderate

Location: 950, 1 x 1 vft and mastic Lab ID-Version‡: 6214675-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 951, Various layers Lab ID-Version‡: 6214676-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Tan Mastic	ND
Light Gray Floor Tile	ND
Brown Mastic	ND
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 952, Mastic Lab ID-Version‡: 6214677-1

Sample Layers	Asbestos Content
Gray/Black Mastic	8% Chrysotile
Sample Composite Homogeneity:	Good

Location: 953, Window putty Lab ID-Version‡: 6214678-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 954, Caulking Lab ID-Version‡: 6214679-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Moderate

Location: 955, Mastic Lab ID-Version‡: 6214680-1

Sample Layers	Asbestos Content
Gray/Black Mastic	15% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 956, Roof cove

Lab ID-Version‡: 6214681-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Light Gray Gravel	ND
Black Roofing Shingle with Brown Gravel	ND
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: 957, Mastic

Lab ID-Version‡: 6214682-1

Sample Layers	Asbestos Content
Gray/Black Mastic	15% Chrysotile
Sample Composite Homogeneity:	Good

Location: 958, 4" black cove base and glue

Lab ID-Version‡: 6214683-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 959, White caulking

Lab ID-Version‡: 6214684-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 960, Red flooring and mastic

Lab ID-Version‡: 6214685-1

Sample Layers	Asbestos Content
Red Sheet Flooring with Fibrous Backing	ND
Black Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 961, Carpet and backing

Lab ID-Version‡: 6214686-1

Sample Layers	Asbestos Content
Beige Carpet	ND
Yellow Mastic	ND
Multicolored Fibrous Material	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 962, Drywall and joint compound

Lab ID-Version‡: 6214687-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 963, Drywall and joint compound

Lab ID-Version‡: 6214688-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 964, Drywall and joint compound

Lab ID-Version‡: 6214689-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 965, Roof cove asp- shingles

Lab ID-Version‡: 6214690-1

Sample Layers	Asbestos Content
Black Roofing Shingle	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 966, Various layer tape

Lab ID-Version‡: 6214691-1

Sample Layers	Asbestos Content
Gray Woven Material	ND
Black Mastic	< 1% Chrysotile
Composite Non-Asbestos Content:	30% Cotton 5% Cellulose
Sample Composite Homogeneity:	Good

Location: 967, Mastic

Lab ID-Version‡: 6214692-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 968, Mastic Lab ID-Version‡: 6214693-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 969, Putty Lab ID-Version‡: 6214694-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 970, Stucco Lab ID-Version‡: 6214695-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Plaster	ND
Sample Composite Homogeneity:	Good

Location: 971, Stucco Lab ID-Version‡: 6214696-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Plaster	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 972, Stucco Lab ID-Version‡: 6214697-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Plaster	ND
Sample Composite Homogeneity:	Good

Location: 973, TSI Lab ID-Version‡: 6214698-1

Sample Layers	Asbestos Content
White Semi-Fibrous Material	15% Chrysotile 10% Amosite
Sample Composite Homogeneity:	Good

Comments: Sample 974 was not analyzed due to prior positive series.

Location: 975, Putty Lab ID-Version‡: 6214700-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 976, Mastic Lab ID-Version‡: 6214701-1

Sample Layers	Asbestos Content
Gray/Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 977, Roof cove- asp shingles Lab ID-Version‡: 6214702-1

Sample Layers	Asbestos Content
Black Roofing Shingle	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 978, Mastic Lab ID-Version‡: 6214703-1

Sample Layers	Asbestos Content
Gray/Black Mastic	5% Chrysotile
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 979, 1 x 1 fissure CT and brown mastic Lab ID-Version‡: 6214704-1

Sample Layers	Asbestos Content
Gray Ceiling Tile	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	60% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 980, Level compound Lab ID-Version‡: 6214705-1

Sample Layers	Asbestos Content
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 981, 4" cove base and glue Lab ID-Version‡: 6214706-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 982, Sealant Lab ID-Version‡: 6214707-1

Sample Layers	Asbestos Content
Tan Sealant	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 983, Drywall and joint compound Lab ID-Version‡: 6214708-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 984, Drywall and joint compound Lab ID-Version‡: 6214709-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 985, Drywall and joint compound

Lab ID-Version‡: 6214710-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 986, Red flooring and mastic

Lab ID-Version‡: 6214711-1

Sample Layers	Asbestos Content
Red Sheet Flooring with Fibrous Backing	ND
Black Mastic	ND
Composite Non-Asbestos Content:	30% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 987, Various layers

Lab ID-Version‡: 6214712-1

Sample Layers	Asbestos Content
Green Carpet	ND
Yellow Mastic	ND
Beige Fibrous Material	ND
Red Floor Tile	3% Chrysotile
Black Mastic	5% Chrysotile
Composite Non-Asbestos Content:	60% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 988, Insulation

Lab ID-Version‡: 6214713-1

Sample Layers	Asbestos Content
Pink Insulation	ND
Composite Non-Asbestos Content:	99% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 989, Various layers Lab ID-Version‡: 6214714-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Yellow Mastic	ND
Cream Floor Tile	ND
Yellow Mastic	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 990, Stucco Lab ID-Version‡: 6214715-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 991, Stucco Lab ID-Version‡: 6214716-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 992, Stucco Lab ID-Version‡: 6214717-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 993, Tape and layer

Lab ID-Version‡: 6214718-1

Sample Layers	Asbestos Content
White Tape	ND
Gray Adhesive	ND
Sample Composite Homogeneity:	Good

Location: 994, Roof cove

Lab ID-Version‡: 6214719-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	30% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 995, Caulking

Lab ID-Version‡: 6214720-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 996, 1 x 1 white VFT and glue

Lab ID-Version‡: 6214721-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 997, Various layers Lab ID-Version‡: 6214722-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Yellow Mastic	ND
Red Floor Tile	5% Chrysotile
Black Mastic	ND
Composite Non-Asbestos Content:	60% Synthetic Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

Location: 998, Button board (drywall and plaster) Lab ID-Version‡: 6214723-1

Sample Layers	Asbestos Content
Light Gray Plaster	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 999, Button board (drywall and plaster) Lab ID-Version‡: 6214724-1

Sample Layers	Asbestos Content
Light Gray Plaster	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1000, Button board (drywall and plaster) Lab ID-Version‡: 6214725-1

Sample Layers	Asbestos Content
Light Gray Plaster	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1001, Stucco Lab ID-Version‡: 6214726-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1002, Stucco Lab ID-Version‡: 6214727-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1003, Stucco Lab ID-Version‡: 6214728-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1004, Drywall and joint compound Lab ID-Version‡: 6214729-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1005, Plaster Lab ID-Version‡: 6214730-1

Sample Layers	Asbestos Content
White Compound	ND
Sample Composite Homogeneity:	Good

Location: 1006, 1 x 1 white VFT and glue Lab ID-Version‡: 6214731-1

Sample Layers	Asbestos Content
White Floor Tile	< 1% Chrysotile
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1007, Drywall and joint compound Lab ID-Version‡: 6214732-1

Sample Layers	Asbestos Content
Off-White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1008, Putty Lab ID-Version‡: 6214733-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1009, 4" brown cove base and mastic Lab ID-Version‡: 6214734-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1010, Gray carpet and glue (under wood) Lab ID-Version‡: 6214735-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1011, Gray carpet and glue Lab ID-Version‡: 6214736-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1012, 6" gray cove base and glue Lab ID-Version‡: 6214737-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1013, White VFT 1 x 1 and mastic

Lab ID-Version‡: 6214738-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1014, 4 x 2 CT

Lab ID-Version‡: 6214739-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	55% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 1015, VFS and glue

Lab ID-Version‡: 6214740-1

Sample Layers	Asbestos Content
White Sheet Flooring	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	30% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1016, 1 x 1 fissured CT

Lab ID-Version‡: 6214741-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	55% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1017, Drywall and joint compound

Lab ID-Version‡: 6214742-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1018, Drywall and joint compound

Lab ID-Version‡: 6214743-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1019, Drywall and joint compound

Lab ID-Version‡: 6214744-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1020, Insulation roofing- roof cove

Lab ID-Version‡: 6214745-1

Sample Layers	Asbestos Content
Yellow Foam	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1021, Drywall and joint comp. Lab ID-Version‡: 6214746-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 1022, Drywall and joint comp. Lab ID-Version‡: 6214747-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 1023, Drywall and joint comp. Lab ID-Version‡: 6214748-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided does not follow the guidelines set forth by NVLAP. This analysis was performed by following the NESHAP guidelines.

Location: 1024, Texture coating Lab ID-Version‡: 6214749-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1025, Wood panels

Lab ID-Version‡: 6214750-1

Sample Layers	Asbestos Content
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 1026, Drywall

Lab ID-Version‡: 6214751-1

Sample Layers	Asbestos Content
White Drywall With Paint	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1027, 4 x 2 CT

Lab ID-Version‡: 6214752-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	55% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 1028, 1 x 1 CT and mastic

Lab ID-Version‡: 6214753-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1029, Tape Lab ID-Version‡: 6214754-1

Sample Layers	Asbestos Content
White Tape	ND
Composite Non-Asbestos Content:	90% Cotton
Sample Composite Homogeneity:	Good

Location: 1030, Various layers Lab ID-Version‡: 6214755-1

Sample Layers	Asbestos Content
Red Floor Tile	5% Chrysotile
Black Mastic	10% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1031, 4" cove base and glue Lab ID-Version‡: 6214756-1

Sample Layers	Asbestos Content
Black Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 1032, Various layers Lab ID-Version‡: 6214757-1

Sample Layers	Asbestos Content
Red Floor Tile	3% Chrysotile
White Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Comments: Insufficient black mastic

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1033, Blue 1 x 1 VFT and glue Lab ID-Version‡: 6214758-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Tan Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1034, Various layers Lab ID-Version‡: 6214759-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Mastic	ND
Green Sheet Flooring with Fibrous Backing	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1035, Various layers Lab ID-Version‡: 6214760-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Mastic	ND
Multicolored Floor Tile	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1036, Various layers Lab ID-Version‡: 6214761-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Yellow Mastic	ND
Gray Cementitious Material	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1037, White VFS and level compound Lab ID-Version‡: 6214762-1

Sample Layers	Asbestos Content
White Sheet Flooring	ND
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 1038, 6" gray cove base and glue Lab ID-Version‡: 6214763-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1039, 1 x 1 VFT and glue Lab ID-Version‡: 6214764-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1040, 2 x 2 CT Lab ID-Version‡: 6214765-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	55% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1041, Carpet and glue Lab ID-Version‡: 6214766-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1042, 4" cove base Lab ID-Version‡: 6214767-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1043, Drywall and JC Lab ID-Version‡: 6214768-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1044, Drywall and JC Lab ID-Version‡: 6214769-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1045, Stucco Lab ID-Version‡: 6214770-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1046, Stucco Lab ID-Version‡: 6214771-1

Sample Layers	Asbestos Content
Light Gray Stucco	ND
Sample Composite Homogeneity:	Moderate

Location: 1047, Stucco Lab ID-Version‡: 6214772-1

Sample Layers	Asbestos Content
Light Gray Stucco	ND
Sample Composite Homogeneity:	Moderate

Location: 1048, Stucco Lab ID-Version‡: 6214773-1

Sample Layers	Asbestos Content
Light Gray Stucco	ND
Sample Composite Homogeneity:	Moderate

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Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1049, Stucco Lab ID-Version‡: 6214774-1

Sample Layers	Asbestos Content
Light Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1050, Mastic Lab ID-Version‡: 6214775-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1051, Mastic Lab ID-Version‡: 6214776-1

Sample Layers	Asbestos Content
Black Mastic	3% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1052, Sealant Lab ID-Version‡: 6214777-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1053, Mastic Lab ID-Version‡: 6214778-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 1054, Mastic Lab ID-Version‡: 6214779-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 1055, Caulking Lab ID-Version‡: 6214780-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1056, Roof cove asp sheeting Lab ID-Version‡: 6214781-1

Sample Layers	Asbestos Content
Black Roofing Shingle	ND
Black Roofing Tar	ND
Black Roofing Material	ND
Composite Non-Asbestos Content:	25% Cellulose 15% Glass Fibers
Sample Composite Homogeneity:	Moderate

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Location: 1057, Mastic Lab ID-Version‡: 6214782-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1058, 1 x 1 white spec VFT and glue and VFS and glue Lab ID-Version‡: 6214783-1

Sample Layers	Asbestos Content
Off-White Floor Tile	ND
Brown Mastic	ND
Brown Sheet Flooring with Fibrous Backing	ND
Black Mastic	ND
Cream Mastic	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 1059, Old drywall and joint compound Lab ID-Version‡: 6214784-1

Sample Layers	Asbestos Content
Brown Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1060, Old drywall and joint compound Lab ID-Version‡: 6214785-1

Sample Layers	Asbestos Content
Brown Drywall with Brown Paper	ND
White Joint Compound with Tape	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1061, Old drywall and joint compound Lab ID-Version‡: 6214786-1

Sample Layers	Asbestos Content
Brown Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1062, New drywall and joint compound Lab ID-Version‡: 6214787-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound with Tape	ND
White Non-Fibrous Material	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1063, New drywall and joint compound Lab ID-Version‡: 6214788-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 1064, New drywall and joint compound Lab ID-Version‡: 6214789-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1065, 1 x 1 VFT white/beige and black mastic Lab ID-Version‡: 6214790-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1066, 1 x 1 VFT and glue Lab ID-Version‡: 6214791-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1067, Purple-ish carpet and glue Lab ID-Version‡: 6214792-1

Sample Layers	Asbestos Content
Multicolored Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	65% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1068, 4" burgundy cove base and glue Lab ID-Version‡: 6214793-1

Sample Layers	Asbestos Content
Red Baseboard	ND
Off-White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1069, Carpet and glue Lab ID-Version‡: 6214794-1

Sample Layers	Asbestos Content
Multicolored Carpet	ND
Tan Glue	ND
Composite Non-Asbestos Content:	65% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1070, Brown cove base and glue Lab ID-Version‡: 6214795-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 1071, 2 x 2 ceiling tile Lab ID-Version‡: 6214796-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	60% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 1072, Joint compound Lab ID-Version‡: 6214797-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1073, Drywall and joint compound Lab ID-Version‡: 6214798-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1074, Drywall and joint compound Lab ID-Version‡: 6214799-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1075, Drywall and joint compound Lab ID-Version‡: 6214800-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1076, 6" gray cove base and glue Lab ID-Version‡: 6214801-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1077, 4" pink cove base and glue Lab ID-Version‡: 6214802-1

Sample Layers	Asbestos Content
Pink Baseboard	ND
White Glue	ND
Sample Composite Homogeneity:	Good

Location: 1078, 4 x 2 ACT Lab ID-Version‡: 6214803-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1079, 1 x 1 VFT and glue various layers Lab ID-Version‡: 6214804-1

Sample Layers	Asbestos Content
Gray Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1080, Pink carpet and glue Lab ID-Version‡: 6214805-1

Sample Layers	Asbestos Content
Pink Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	80% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1081, Leveling compound Lab ID-Version‡: 6214806-1

Sample Layers	Asbestos Content
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 1082, Green carpet various layers Lab ID-Version‡: 6214807-1

Sample Layers	Asbestos Content
Green Carpet	ND
Yellow Glue	ND
Black Foam	ND
Sample Composite Homogeneity:	Good

Location: 1083, 1 x 1 VFT and mastic and leveling compound Lab ID-Version‡: 6214808-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Yellow Mastic	ND
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 1084, 4 x 2 CT/ texture coating Lab ID-Version‡: 6214809-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	70% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1085, 1x 1 green VFT and glue Lab ID-Version‡: 6214810-1

Sample Layers	Asbestos Content
Green Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 1086, 4 x 2 CT Lab ID-Version‡: 6214811-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1087, 4" cove base and glue Lab ID-Version‡: 6214812-1

Sample Layers	Asbestos Content
Green Baseboard	ND
Off-White Glue	ND
Sample Composite Homogeneity:	Good

Location: 1088, Mastic Lab ID-Version‡: 6214813-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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Location: 1089, Mastic Lab ID-Version‡: 6214814-1

Sample Layers	Asbestos Content
Gray/Black Mastic	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1090, Sealant Lab ID-Version‡: 6214815-1

Sample Layers	Asbestos Content
Black Sealant	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1091, Mastic Lab ID-Version‡: 6214816-1

Sample Layers	Asbestos Content
Gray/Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1092, Stucco Lab ID-Version‡: 6214817-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

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Location: 1093, Stucco Lab ID-Version‡: 6214818-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1094, Stucco Lab ID-Version‡: 6214819-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1095, Roof cove asp sheeting Lab ID-Version‡: 6214820-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1096, Caulking Lab ID-Version‡: 6214821-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

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Location: 1097, Caulking Lab ID-Version‡: 6214822-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1098, Asp sheeting Lab ID-Version‡: 6214823-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	60% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1099, Roof cove foam insulation Lab ID-Version‡: 6214824-1

Sample Layers	Asbestos Content
Yellow Foam	ND
Sample Composite Homogeneity:	Good

Location: 1100, Gray cove base and glue Lab ID-Version‡: 6214825-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

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Location: 1101, 1 x 1 VFT and glue and L.C. Lab ID-Version‡: 6214826-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 1102, Stucco Lab ID-Version‡: 6214827-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1103, Stucco Lab ID-Version‡: 6214828-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1104, Stucco Lab ID-Version‡: 6214829-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1105, Blue carpet and glue Lab ID-Version‡: 6214830-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1106, Drywall Lab ID-Version‡: 6214831-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1107, Drywall Lab ID-Version‡: 6214832-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1108, Drywall Lab ID-Version‡: 6214833-1

Sample Layers	Asbestos Content
White Joint Compound	ND
Pink Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1109, 4 x 2 ACT Lab ID-Version‡: 6214834-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1110, Gray carpet and various layers Lab ID-Version‡: 6214835-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Mastic	ND
White Floor Tile	ND
Sample Composite Homogeneity:	Good

Location: 1111, Roof cove asp. sheeting Lab ID-Version‡: 6214836-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1112, Sealant Lab ID-Version‡: 6214837-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1113, Mastic Lab ID-Version‡: 6214838-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1114, Mastic Lab ID-Version‡: 6214839-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1115, Mastic Lab ID-Version‡: 6214840-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1116, Glue residue Lab ID-Version‡: 6214841-1

Sample Layers	Asbestos Content
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1117, Stucco Lab ID-Version‡: 6214842-1

Sample Layers	Asbestos Content
White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1118, Stucco Lab ID-Version‡: 6214843-1

Sample Layers	Asbestos Content
White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1119, Stucco Lab ID-Version‡: 6214844-1

Sample Layers	Asbestos Content
White Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1120, 4 x 2 CT Lab ID-Version‡: 6214845-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1121, Brown/beige 1 x 1 VFT and B. mastic Lab ID-Version‡: 6214846-1

Sample Layers	Asbestos Content
Brown/Beige Floor Tile	3% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1122, Gray carpet and glue Lab ID-Version‡: 6214847-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1123, Beige cove base 4" and glue/mastic Lab ID-Version‡: 6214848-1

Sample Layers	Asbestos Content
Beige Baseboard	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 1124, 2" yellow cove base and brown mastic Lab ID-Version‡: 6214849-1

Sample Layers	Asbestos Content
Yellow Baseboard	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1125, 6" cove base and glue Lab ID-Version‡: 6214850-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Off-White Glue	ND
Sample Composite Homogeneity:	Good

Location: 1126, Old carpet Lab ID-Version‡: 6214851-1

Sample Layers	Asbestos Content
Brown/Beige Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1127, 4" gray cove base and glue Lab ID-Version‡: 6214852-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 1128, Drywall and J.C. Lab ID-Version‡: 6214853-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1129, Drywall and J.C. Lab ID-Version‡: 6214854-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1130, Drywall and J.C. Lab ID-Version‡: 6214855-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1131, Drywall and J.C. Lab ID-Version‡: 6214856-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1132, Drywall and J.C. Lab ID-Version‡: 6214857-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1133, Drywall and J.C. Lab ID-Version‡: 6214858-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1134, 4" brown cove base and glue Lab ID-Version‡: 6214859-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1135, Beige spec. 1x 1 VFT and mastic Lab ID-Version‡: 6214860-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Black Mastic	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1136, Carpet and glue and L.C. Lab ID-Version‡: 6214861-1

Sample Layers	Asbestos Content
Multicolored Carpet	ND
Yellow Glue	ND
White Leveling Compound	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1137, 1 x 1 VFT white Lab ID-Version‡: 6214862-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1138, 4 x 2 ACT Lab ID-Version‡: 6214863-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1139, 2 types of caulking Lab ID-Version‡: 6214864-1

Sample Layers	Asbestos Content
White Caulk	ND
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1140, Barrier paper Lab ID-Version‡: 6214865-1

Sample Layers	Asbestos Content
Black Semi-Fibrous Material	5% Chrysotile
Composite Non-Asbestos Content:	20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1141, Drywall and J.C. Lab ID-Version‡: 6214866-1

Sample Layers	Asbestos Content
White Drywall	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 1142, Drywall and J.C. Lab ID-Version‡: 6214867-1

Sample Layers	Asbestos Content
White Drywall	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 1143, Drywall and J.C. Lab ID-Version‡: 6214868-1

Sample Layers	Asbestos Content
White Drywall	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 1144, 4 x 2 ACT Lab ID-Version‡: 6214869-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Paint	ND
Composite Non-Asbestos Content:	55% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1145, 6 " gray cove base and glue Lab ID-Version‡: 6214870-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Beige Glue	ND
Sample Composite Homogeneity:	Good

Location: 1146, White spec 1x1 VFT Lab ID-Version‡: 6214871-1

Sample Layers	Asbestos Content
Off-White Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1147, Green spec 1x1 VFT and glue Lab ID-Version‡: 6214872-1

Sample Layers	Asbestos Content
Green Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1148, Blue 1x1 VFT and glue Lab ID-Version‡: 6214873-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Tan Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1149, Stucco Lab ID-Version‡: 6214874-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Moderate

Location: 1150, Stucco Lab ID-Version‡: 6214875-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Moderate

Location: 1151, Stucco Lab ID-Version‡: 6214876-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Moderate

Location: 1152, Roof cove asp. sheeting Lab ID-Version‡: 6214877-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Black Roofing Tar	ND
Composite Non-Asbestos Content:	30% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1153, Window putty Lab ID-Version‡: 6214878-1

Sample Layers	Asbestos Content
Light Gray Window Putty	ND
Sample Composite Homogeneity:	Good

Location: 1154, 9x9 VFT gray and mastic Lab ID-Version‡: 6214879-1

Sample Layers	Asbestos Content
Gray Floor Tile	2% Chrysotile
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1155, 4" gray cove base and glue Lab ID-Version‡: 6214880-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1156, 4" gray cove base and glue Lab ID-Version‡: 6214881-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1157, 2 layers of 1 x 1 VFT Lab ID-Version‡: 6214882-1

Sample Layers	Asbestos Content
Blue Floor Tile	ND
Yellow Mastic	ND
Beige Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1158, Plaster Lab ID-Version‡: 6214883-1

Sample Layers	Asbestos Content
White Plaster	ND
Sample Composite Homogeneity:	Good

Location: 1159, Plaster Lab ID-Version‡: 6214884-1

Sample Layers	Asbestos Content
White Plaster	ND
Sample Composite Homogeneity:	Good

Location: 1160, Plaster Lab ID-Version‡: 6214885-1

Sample Layers	Asbestos Content
White Plaster	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1161, Drywall and joint compound

Lab ID-Version‡: 6214886-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1162, Roof cove asp. sheeting

Lab ID-Version‡: 6214887-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	30% Glass Fibers 20% Cellulose
Sample Composite Homogeneity:	Good

Location: 1163, Mastic

Lab ID-Version‡: 6214888-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1164, Mastic

Lab ID-Version‡: 6214889-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1165, Mastic Lab ID-Version‡: 6214890-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1166, Mastic Lab ID-Version‡: 6214891-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1167, Mastic Lab ID-Version‡: 6214892-1

Sample Layers	Asbestos Content
Gray/Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1168, Drywall and joint compound Lab ID-Version‡: 6214893-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1169, Drywall and joint compound

Lab ID-Version‡: 6214894-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1170, Drywall and joint compound

Lab ID-Version‡: 6214895-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1171, Black carpet and various layers

Lab ID-Version‡: 6214896-1

Sample Layers	Asbestos Content
Black Carpet	ND
Yellow Glue	ND
Black Semi-Fibrous Material	ND
Composite Non-Asbestos Content:	70% Synthetic Fibers 10% Cellulose
Sample Composite Homogeneity:	Good

Location: 1172, 6" Gray cove base and glue

Lab ID-Version‡: 6214897-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1173, 4 x 2 ACT Lab ID-Version‡: 6214898-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1174, Roof core/ foam insulation Lab ID-Version‡: 6214899-1

Sample Layers	Asbestos Content
Yellow Foam	ND
Sample Composite Homogeneity:	Good

Location: 1175, 2 x 2 VFT beige and glue Lab ID-Version‡: 6214900-1

Sample Layers	Asbestos Content
Beige Sheet Flooring with Fibrous Backing	ND
Tan Glue	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: 1176, VF sheeting white Lab ID-Version‡: 6214901-1

Sample Layers	Asbestos Content
Tan Sheet Flooring with Fibrous Backing	ND
Composite Non-Asbestos Content:	25% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1177, Tape and caulking Lab ID-Version‡: 6214902-1

Sample Layers	Asbestos Content
White Tape	ND
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1178, Roof cove asp. shingles Lab ID-Version‡: 6214903-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 1179, Roof cove asp. shingles Lab ID-Version‡: 6214904-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1180, 1 x1 strait hole CT and brown mastic Lab ID-Version‡: 6214905-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1181, Tape Lab ID-Version‡: 6214906-1

Sample Layers	Asbestos Content
White Tape	ND
Sample Composite Homogeneity:	Good

Location: 1182, 4" brown cove base and glue Lab ID-Version‡: 6214907-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1183, VFS and glue Lab ID-Version‡: 6214908-1

Sample Layers	Asbestos Content
Brown Sheet Flooring with Fibrous Backing	ND
Tan Mastic	ND
Composite Non-Asbestos Content:	20% Cellulose 5% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1184, Putty Lab ID-Version‡: 6214909-1

Sample Layers	Asbestos Content
White Window Putty	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1185, Gray carpet and glue and leveling compound Lab ID-Version‡: 6214910-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Glue	ND
White Leveling Compound	ND
Sample Composite Homogeneity:	Good

Location: 1186, Drywall Lab ID-Version‡: 6214911-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 1187, Drywall Lab ID-Version‡: 6214912-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1188, Drywall Lab ID-Version‡: 6214913-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1189, Drywall Lab ID-Version‡: 6214914-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1190, Gray 4" cove base and glue Lab ID-Version‡: 6214915-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1191, Drywall and joint compound Lab ID-Version‡: 6214916-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1192, Drywall and joint compound Lab ID-Version‡: 6214917-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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Location: 1193, Drywall and joint compound

Lab ID-Version‡: 6214918-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1194, Brown carpet and glue

Lab ID-Version‡: 6214919-1

Sample Layers	Asbestos Content
Brown Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1195, Blue carpet and glue

Lab ID-Version‡: 6214920-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Yellow Glue	ND
Composite Non-Asbestos Content:	90% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1196, 4 x 2 ACT

Lab ID-Version‡: 6214921-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	45% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1197, 4" gray cove base and glue Lab ID-Version‡: 6214922-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1198, Red caulking Lab ID-Version‡: 6214923-1

Sample Layers	Asbestos Content
Red Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1199, Stucco Lab ID-Version‡: 6214924-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1200, Stucco Lab ID-Version‡: 6214925-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1201, Stucco Lab ID-Version‡: 6214926-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1202, Caulking Lab ID-Version‡: 6214927-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1203, Asp. sheeting Lab ID-Version‡: 6214928-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	45% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1204, Roof core asp sheeting Lab ID-Version‡: 6214929-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1205, Mastic Lab ID-Version‡: 6214930-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1206, Mastic Lab ID-Version‡: 6214931-1

Sample Layers	Asbestos Content
Gray/Black Mastic	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1207, Roof core Lab ID-Version‡: 6214932-1

Sample Layers	Asbestos Content
Yellow Foam	ND
Sample Composite Homogeneity:	Good

Location: 1208, Stucco Lab ID-Version‡: 6214933-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

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Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1209, Stucco Lab ID-Version‡: 6214934-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1210, Stucco Lab ID-Version‡: 6214935-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1211, Roof core asp. sheeting Lab ID-Version‡: 6214936-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 1212, Mastic Lab ID-Version‡: 6214937-1

Sample Layers	Asbestos Content
Gray/Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Good

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Location: 1213, Caulking

Lab ID-Version‡: 6214938-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1214, TSI

Lab ID-Version‡: 6214939-1

Sample Layers	Asbestos Content
White Semi-Fibrous Material	15% Chrysotile 5% Amosite
Sample Composite Homogeneity:	Good

Location: 1215, Drywall

Lab ID-Version‡: 6214940-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 1216, Roof core asp. shingles

Lab ID-Version‡: 6214941-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Good

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Location: 1217, Mastic Lab ID-Version‡: 6214942-1

Sample Layers	Asbestos Content
Gray/Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1218, Mastic Lab ID-Version‡: 6214943-1

Sample Layers	Asbestos Content
Black Mastic	< 1% Chrysotile
Composite Non-Asbestos Content:	3% Cellulose
Sample Composite Homogeneity:	Good

Location: 1219, Sealant Lab ID-Version‡: 6214944-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 1220, Caulking Lab ID-Version‡: 6214945-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1221, Duct tape Lab ID-Version‡: 6214946-1

Sample Layers	Asbestos Content
White Tape (Duct)	ND
Composite Non-Asbestos Content:	90% Cotton
Sample Composite Homogeneity:	Good

Location: 1222, Gray carpet and glue Lab ID-Version‡: 6214947-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Beige Glue	ND
Composite Non-Asbestos Content:	65% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1223, Plaster Lab ID-Version‡: 6214948-1

Sample Layers	Asbestos Content
Off-White Plaster	ND
Sample Composite Homogeneity:	Good

Location: 1224, Plaster Lab ID-Version‡: 6214949-1

Sample Layers	Asbestos Content
Light Gray Plaster	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1225, 1 x 1 w. spec. VFT and glue Lab ID-Version‡: 6214950-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Mastic	ND
Sample Composite Homogeneity:	Good

Location: 1226, 6" gray cove base and glue Lab ID-Version‡: 6214951-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 1227, TSI Lab ID-Version‡: 6214952-1

Sample Layers	Asbestos Content
Gray Tape Compound (TSI)	10% Amosite 5% Chrysotile
Composite Non-Asbestos Content:	40% Glass Fibers
Sample Composite Homogeneity:	Moderate

Comments: Samples 1228 and 1229 were not analyzed due to prior positive series.

Location: 1230, 1 x 1 beige VFT and glue Lab ID-Version‡: 6214955-1

Sample Layers	Asbestos Content
Off-White Floor Tile	ND
Gray Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1231, 2 x 2 ACT Lab ID-Version‡: 6214956-1

Sample Layers	Asbestos Content
Gray Ceiling Tile with Paint	ND
Composite Non-Asbestos Content:	65% Cellulose 25% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1232, Drywall and joint comp Lab ID-Version‡: 6214957-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1233, Drywall and joint comp Lab ID-Version‡: 6214958-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1234, Drywall and joint comp Lab ID-Version‡: 6214959-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
White Joint Compound	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1235, Roof core

Lab ID-Version‡: 6214960-1

Sample Layers	Asbestos Content
Black Roofing Felt	ND
Black Roofing Mastic	ND
White Foam	ND
Gray Semi-Fibrous Material	ND
Composite Non-Asbestos Content:	40% Cellulose 30% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: 1236, Roofing material

Lab ID-Version‡: 6214961-1

Sample Layers	Asbestos Content
Black Roofing Material and Paint	ND
Composite Non-Asbestos Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: 1237, Caulking

Lab ID-Version‡: 6214962-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Moderate

Location: 1238, Stucco

Lab ID-Version‡: 6214963-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1239, Stucco Lab ID-Version‡: 6214964-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1240, Stucco Lab ID-Version‡: 6214965-1

Sample Layers	Asbestos Content
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 1241, Sealant Lab ID-Version‡: 6214966-1

Sample Layers	Asbestos Content
Dark Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 1242, Caulking Lab ID-Version‡: 6214967-1

Sample Layers	Asbestos Content
Off-White Caulk	ND
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1243, Caulking Lab ID-Version‡: 6214968-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: 1244, Tape Lab ID-Version‡: 6214969-1

Sample Layers	Asbestos Content
White Tape with Dark Gray Adhesive	ND
Sample Composite Homogeneity:	Good

Location: 1245, Duct tape Lab ID-Version‡: 6214970-1

Sample Layers	Asbestos Content
Beige Woven Material / Tape	ND
Off-White Mastic	ND
Composite Non-Asbestos Content:	55% Cellulose
Sample Composite Homogeneity:	Good

Location: 1246, 4 x 2 ACT Lab ID-Version‡: 6214971-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1247, 4" gray cove base and glue Lab ID-Version‡: 6214972-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1248, Plaster Lab ID-Version‡: 6214973-1

Sample Layers	Asbestos Content
Gray/White Plaster	ND
Sample Composite Homogeneity:	Moderate

Location: 1249, Plaster Lab ID-Version‡: 6214974-1

Sample Layers	Asbestos Content
Gray/White Plaster	ND
Sample Composite Homogeneity:	Good

Location: 1250, Plaster Lab ID-Version‡: 6214975-1

Sample Layers	Asbestos Content
Gray/White Plaster	ND
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1251, Brown cove base and paper and mastic Lab ID-Version‡: 6214976-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Mastic	ND
Beige Woven Material	ND
Composite Non-Asbestos Content:	30% Cotton
Sample Composite Homogeneity:	Good

Location: 1252, Texture coat Lab ID-Version‡: 6214977-1

Sample Layers	Asbestos Content
White Texture Coat	ND
Sample Composite Homogeneity:	Good

Location: 1253, 1 x 1 white VFT Lab ID-Version‡: 6214978-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Sample Composite Homogeneity:	Good

Location: 1254, Drywall and texture and joint compound Lab ID-Version‡: 6214979-1

Sample Layers	Asbestos Content
Off-White Texture	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1255, Drywall and texture and joint compound

Lab ID-Version‡: 6214980-1

Sample Layers	Asbestos Content
Off-White Texture	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 1256, Drywall and texture and joint compound

Lab ID-Version‡: 6214981-1

Sample Layers	Asbestos Content
Off-White Texture	ND
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: 1257, 1 x 1 fissured ACT and mastic

Lab ID-Version‡: 6214982-1

Sample Layers	Asbestos Content
Beige Ceiling Tile with White Surface	ND
Brown Mastic	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: 1258, Mastic

Lab ID-Version‡: 6214983-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	2% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1259, Stucco Lab ID-Version‡: 6214984-1

Sample Layers	Asbestos Content
Light Gray Stucco	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1260, Stucco Lab ID-Version‡: 6214985-1

Sample Layers	Asbestos Content
Light Gray Stucco	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1261, Stucco Lab ID-Version‡: 6214986-1

Sample Layers	Asbestos Content
Beige Stucco	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1262, Sealant Lab ID-Version‡: 6214987-1

Sample Layers	Asbestos Content
Gray/Black Sealant	< 1% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1263, Cloth tape Lab ID-Version‡: 6214988-1

Sample Layers	Asbestos Content
White Tape (Cloth)	ND
Composite Non-Asbestos Content:	90% Cotton
Sample Composite Homogeneity:	Good

Location: 1264, 4" blue cove base and glue Lab ID-Version‡: 6214989-1

Sample Layers	Asbestos Content
Black Base Coat	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 1265, Roof core Lab ID-Version‡: 6214990-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	50% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 1266, Drywall and joint compound Lab ID-Version‡: 6214991-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

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‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(800) 651-4802 Fax (623) 780-7695 www.emlab.com

Client: Ninyo & Moore - Irvine
C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1267, Drywall and joint compound

Lab ID-Version‡: 6214992-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1268, Drywall and joint compound

Lab ID-Version‡: 6214993-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1269, 6" gray cove base and glue

Lab ID-Version‡: 6214994-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 1270, VFT various layers

Lab ID-Version‡: 6214995-1

Sample Layers	Asbestos Content
Gray Floor Tile	ND
Beige Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

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Re: PCR/Harbor-UCLA

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Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1271, Roof core Lab ID-Version‡: 6214996-1

Sample Layers	Asbestos Content
Black Roofing Material	ND
Composite Non-Asbestos Content:	30% Glass Fibers 20% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: 1272, Roof core Lab ID-Version‡: 6214997-1

Sample Layers	Asbestos Content
Yellow Foam	ND
Sample Composite Homogeneity:	Good

Location: 1273, 1 x 1 white spec VFt and glue Lab ID-Version‡: 6214998-1

Sample Layers	Asbestos Content
White Floor Tile	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

Location: 1274, 4" cove base and glue Lab ID-Version‡: 6214999-1

Sample Layers	Asbestos Content
Gray Baseboard	ND
Tan Glue	ND
Sample Composite Homogeneity:	Good

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Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1275, Drywall and joint compound Lab ID-Version‡: 6215000-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1276, Drywall and joint compound Lab ID-Version‡: 6215001-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Location: 1277, Drywall and joint compound Lab ID-Version‡: 6215002-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 1278, Stucco Lab ID-Version‡: 6215003-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

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C/O: Mr. Mike Cushner
Re: PCR/Harbor-UCLA

Date of Receipt: 04-22-2015 and 05-01-2015
Date of Report: 05-04-2015

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: 1279, Stucco

Lab ID-Version‡: 6215004-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1280, Stucco

Lab ID-Version‡: 6235279-1

Sample Layers	Asbestos Content
White Stucco	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
Michael Cushner

Date Sampled:
Sampled By: Pedro Rodrigu
Sampled By:
Date Sampled:

001355705

oratory:
Em Lab P&K
Tel: (866) 465-6655
Fax:

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	*Received By: (sign/print)	Laboratory
P. Pedro Rodrigu	Ninyo & Moore	4/22/15	1624	042215	
				4:24	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	876	D3	Wall East Closet	713	Joint Compound	10 SF	Y	good
	877		Room 1 Ceiling	714	Drywall + Joint comp	2,000 SF	N	good
	878		Room 2 wall					
	879		Hall wall					
	880		Exterior South window	715	Window Putty	80 LF	Y	Good
	881		Ceiling Cntr	716	1x1 Ceiling Tile Fissured (No Mastic)	250 SF	Y	Good
	882		Exterior Southwest wall	717	Stucco	1,200 SF	N	good
	883		West					
	884		South					
	885		South end	718	6" Brown Cove Base + Brown mastic	100 LF	N	good
	886		Room 3B Floor	719	Various Layers	2,000 SF		
	887		North Men's Restroom	720	4" Brown Cove Base + mastic	25 LF		
	888		Hall Janitors Closet Floor	721	Various Layers	1,200 SF		

* Asbestos PLM EPA Method 600/R-93/116
* Standard TAT
* First Positive Stop per HA NO. with Results 1% and greater

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Lab
Tel:
Fax:
001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			Dave / 042215 4:24pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	889	D3	South Lab	722	White speckled VFT 1'x1' + Mastic	300 SF	N	good
	890	↓	Employee Restroom	721	VFS + Glue	150 SF	N	good
	891	↓	East Closet	728	Red Floor sheeting + Mastic	200 SF	↓	↓
	892	D2.5	Closet/East	729	1'x1' Blue VFT	50 SF	↓	↓
	893	D3	North Roof	730	Caulking	50 SF	↓	↓
	894	↓	Roof @ Pipe Center	731	Mastic	30 SF	↓	↓
	895	↓	West Exterior HVAC Duct	732	Caulking + Tape	10 SF	↓	↓
	896	↓	Roof @ HVAC Duct	733	Tape	20 SF	↓	↓
	897	↓	Roof Center	734	Roof Core Asp. Sheeting	4150 SF	↓	↓
	898	↓	Roof ~~Center~~	735	↓ Asp. Shingles	1,800 SF	↓	↓
	899	Hallway D2-D3	Wall Northeast	736	Drywall + Joint Comp.	2,000 SF	↓	↓
	900	↓	Wall Southeast	↓	↓	↓	↓	↓
	901	↓	Wall West	↓	↓	↓	↓	↓

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ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laborator** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
"	Ninyo & Moore			[illegible] 042215 4:24pm	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	902	Hallway D2-D3	Hall Ext. windows	737	Window Putty	40 LF	N/A	Fair
	903	↓	Floor	738	1X1 Gray VFT + Mastic	2,000 SF	N	good
	904	D3.5	Roof @ Pipe North	729	Black Mastic	20 SF	N	good
	905	|	Roof Center	740	Roof Cone Asp. Sheeting	1,000 SF	|	|
	906	|	Exterior Walls	741	Stucco	1,500 SF	|	|
	907	|	↓ ↓ -N	↓	↓	↓	|	|
	908	|	↓ ↓ -W	↓	↓	↓	|	|
	909	|	Janitors Room	742	White 1X1 Speck. VFT + Glue	1000 SF	|	|
	910	|	↓ ↓	743	4" Gray CBase Base + Glue	300 LF	|	|
	911	|	Hall South	744	Blue Carpet + Glue	2,000 SF	|	|
	912	|	Hall Wall	745	Drywall + Joint Compound	2,500 SF	|	|
	913	|	Restroom wall	↓	↓ ↓	↓	|	|
	914	↓	Janitors Closet wall	↓	↓ ↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:
Labora Tel: Fax:	001355705	

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
"	Ninyo & Moore			042215 4:24 pm	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	915	D3.5	Restroom Cubs	746	2'x2' CT	1,000 SF	N	good
	916	D2.5	Room 4	747	4" Grey Cov Base + Glue	400 LF	N	good
	917	D2A	Hall	748	↓	200 LF	↓	
	918	D2.5	Conf Room	749	4'x2' CT	400 SF	Y	
	919	D2A	Restroom Floor	750	Various Layers	50 SF	N	
	920	D2.5	Hall Floor	751	VFS + glue	200 SF		
	921	D2A	Hall Floor	752	Pink Carpet + Glue	1,000 SF		
	922	D2.5	Rm 4	753	Blue Carpet + glue	300 SF		
	923	"	Rm 4 wall	754	Drywall + Joint Compound	1,300 SF		
	924		↓		↓			
	925		3					
	926	↓	Roof	755	Foam insulation Roof Cone	1,800 SF		
	927	D2A	Roof	756	Asp. shingles Roof Cone	1,200 SF	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laborat** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
. /	Ninyo & Moore			04275 4:24 pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	928	D2A	Closet wall	757	Drywall + Joint Comp	2,000 SF	N	good
	929	↓	↓ Ceiling	↓	↓ ↓	↓	↓	↓
	930	↓	Hall wall	↓	↓ ↓	↓	↓	↓
	931	E4	Roof	758	Roof Cone Asp. shingles	5,000 SF	↓	↓
	932	↓	Roof	759	↓ Asp. Sheeting	800 SF	↓	↓
	933	↓	Roof @ vent	760	Mastic	20 SF	↓	↓
	934	↓	↓ ↓ Pipe	761	↓	20 SF	↓	↓
	935	E4 Annex	Roof	762	Mastic + Layer	40 SF	↓	↓
	936	↓	↓	763	Tape + Mastic	30 SF	↓	↓
	937	↓	Roof E4/E4annex Joint	764	Mastic	40 SF	↓	↓
	938	annex D5	Hall Wall	765	Drywall	1,200 SF	↓	↓
	939	↓	West wall	↓	↓	↓	↓	↓
	940	↓	Copy Room North	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Labora Tel: Fax: 001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			04 2215 4:24pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	941	DS	Ceiling	766	4x2 CT	500 SF	Y	Good
	942	05	Floor Hall	767	Carpet + Glue	1000 SF	N	↓
	943	↓	Copy Rm	768	4" Grey Cove Base + Glue	100 LF	↓	↓
	944	01	South wall	769	Drywall + Joint Comp	2,000 SF	N	good
	945	↓	Ceiling	↓	↓ ↓	↓	↓	↓
	946	↓	North Wall	↓	↓ ↓	↓	↓	↓
	947	↓	-Floor Lab Room C	770	9x9" Green VFT + Mastic	200 SF	N	good
	948	↓	Lab Room 9	771	1x1 VFT green + Glue	200 SF	↓	↓
	949	↓	Room 7	772	9"x9" VFT Black + Mastic	300 SF	↓	↓
	950	↓	Restroom (1)	773	1x1 VFT + Mastic	400 SF	↓	↓
	951	↓	@ Hall	774	Various layers	150 SF	↓	↓
	952	↓	Roof @ vent	775	Mastic	30 SF	↓	↓
	953	↓	Exterior	776	Window Putty	80 LF	N	↓

ASBESTOS BULK SAMPLE DATA SHEET

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Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory:
Tel:
Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
. /	Ninyo & Moore			04215 4:24 pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	954	D1	Roof @ Duct/Vent	777	Caulking	20 SF	N	good
	955	↓	Roof @ Pipe	778	Mastic	20 SF	N	good
	956	↓	↓	779	Roof Coat	3,000 SF	↓	↓
	957	↓	Roof @ Vent/South	780	Mastic	10 SF	↓	↓
	958	F6	NW Hall	781	4" Blown Cove Base + Glue	200 LF	↓	↓
	959	↓	Room 6/6B	782	White Caulking	2SF	↓	↓
	960	↓	Room 2	783	Red Floor + Mastic	2,000 SF	↓	↓
	961	↓	North end	784	Carpet + Body	350 SF	↓	↓
	962	↓	Hall West Wall	785	Drywall + Joint comp	1,800 SF	↓	↓
	963	↓	Rm 5 East Wall	↓	↓ ↓	↓	↓	↓
	964	↓	Rm 2 S. Wall	↓	↓ ↓	↓	↓	↓
	965	↓	Roof North	786	Roof Coat Asphalt shingles	3,000 SF	↓	↓
	966	↓	Roof @ HVAC/Duct	787	Various Layer Tape	30 SF	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Labora Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
./	Ninyo & Moore			04225 4:24 pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	967	F6	Roof @ wood Block	788	Mastic	30 SF	N	good
	968	↓	↓ ↓ Pipe	789	↓	20 SF	↓	↓
	969	↓	Exterior Windows	790	Putty	60 LF	Y	↓
	970	↓	↓ Wall - South	791	Stucco	1,800 SF	N	↓
	971	↓	- NW	↓	↓	↓	↓	↓
	972	↓	↓ - N	↓	↓	↓	↓	↓
	973	FS	NE (1960) Water Heater @ Pipe Run	792	TSI	30 SF	N	Good
	974	↓	Crawl Space	793	↓	2 SF	↓	↓
	975	↓	Exterior Windows	794	Putty	200 LF	Y/N	↓
	976	↓	Roof @ Pipe	795	Mastic	5 SF	N	↓
	977	↓	Roof	796	Roof Cone - Asp Shingles	2,000 SF	↓	↓
	978	↓	Roof @ Wooden Joist	797	Mastic	5 SF	↓	↓
	979	↓	North	798	1'x1' Fissured CT + Brown Mastic	1,000 SF	Y	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
"	Ninyo & Moore			042215 4:24pm	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	980	F5	SE Hall	799	Level Compound	20 SF	Y	good
	981	"	Women's Restroom	800	4" Blem Cove Base + Glue	25 SF	N	"
	982	"	@ N. Restroom Sink	801	Sealent	1 SF	"	"
	983	"	West Hall wall	802	Drywall + Jt. Comp	1,800 SF	"	"
	984	"	Main lobby Wall	"	"	"	"	"
	985	"	Restroom - NW	"	"	"	"	"
	986	Hallway F5/F6	Hall/Restroom Area	803	Red Flooring + mastic	200 SF	"	"
	987	F5	West floor	804	Various Layers	1,000 SF	"	"
	988	"	Ceiling Plenum	805	insulation	1,800 SF	"	"
	989	"	SE Room Floor	806	Various Layers	1,000 SF	"	"
	990	"	South wall	807	Stucco	2,000 SF	"	"
	991	"	West	"	"	"	"	"
	992	"	East	"	"	"	"	"

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laborat
Tel:
Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
"	Ninyo & Moore			[signature] 042215 4:24PM	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	993	Cottage #141	Roof @ vent	808	TAR + Layer	10 SF	N	Good
	994	"	Asp. shingles	809	~~Asphalt SF~~ Roof Core	1,200 SF	"	"
	995	"	@ Wirly Bird	810	Caulking	15 SF	"	"
	996	"	Restroom	811	1x1 white VF + Color	50 SF	"	"
	997	"	Boiler Room Floor	812	Various Layers	1,200 SF	"	"
	998	"	Ceiling @ Closet	813	Button Board (Drywall + Plaster)	1,400 SF	"	"
	999	"	Wall @ Celing Plenum	"	"	"	"	"
	1000	"	Wall @ Hall	"	"	"	"	"
	1001	"	Exterior North wall	814	Stucco	1,500 SF	"	"
	1002	"	East wall	"	"	"	"	"
	1003	"	West	"	"	"	"	"
	1004	F1	North Wall	815	Drywall + Joint Comp	1,200 SF	"	"
	1005	"	Plaster on Wood wall	816	Plaster	2,000 SF	"	"

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"	Ninyo & Moore			042215 4:24pm	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1006	F2	Brown Room floor	817	1x1 white VFT + Glue	150 SF	N	good
	1007		- Room Wall	818	Drywall + Joint Comp	1,000 SF	N	good
	1008		Exterior Windows	819	Putty	20 LF	Y/N	good
	1009		North Room	820	4" Brown Cove Base + mastic	100 LF	N	good
	1010	F10	Main Entrance Floor	821	Grey Carpet + Glue (under wood)	300 SF	N	good
	1011		Print room Floor	822	Grey Carp. + Glue	400 SF		
	1012		N Restroom/Hall	823	6" Grey Cove Base + Glue	300 SF		
	1013		East closet	824	White VFT 1x1' + mastic	400 SF		
	1014		" "	825	4½2' CT	40 SF	Y	
	1015		Womens Restroom	826	VFS + Glue	100 SF	N	
	1016		Hall Ceiling	827	1x1 Fissured CT	1,000 SF	Y	
	1017		East room wall	828	Drywall + Joint comp.	1,800 SF	N	
	1018		West room	"	" "	"	"	"

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Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
Michael Cushner

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. /	Ninyo & Moore			DAS 042215 4:24pm	
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LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1019	F10	East Hall wall	828	Drywall + Joint Comp.	1,800 SF	N	good
	1020	F10	Roof - Center	829	insulation Roofing — Roof cone	3,000 SF	N	good
	1021	F9	South atrium	830	Drywall + Joint Comp.	1,800 SF	N	good
	1022		North end wall					
	1023		West hall wall					
	1024		North wall	831	Texture Coating	100 SF		
	1025		Southwest Ceiling	832	Wood Panels	500 SF		
	1026		Room 9 - Ceiling	833	Drywall	400 SF		
	1027		Room 11	834	4x2 CT	1,200		
	1028		NW Main Area	835	1x1 CT + Mastic	300 SF		
	1029		North (@ Hall) HVAC/Duct	836	Tape	25 SF		
	1030		Rm 4 - Floor	837	Various Layers	300 SF		
	1051		West Hall	838	4" Cove Base + Glue	300 SF		

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"	Ninyo & Moore			042215 4:24pm	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1032	F9	Room 6 Floor	839	Various layers	250 SF	N	good
	1033		Women's Restroom	840	Blue 1X1 VFT + glue	400 SF		
	1034		Room 9	841	Various layers	500 SF		
	1035		M. Restroom / N Hall	842	↓ ↓	500 SF		
	1036	↓	Room 8 / Hall	843	↓ ↓	500 SF		
	1037	3-South	Floor near exit	844	white VFS + level comp	1,000 SF		
	1038		North wall	845	6" Gray Cove Base + Glue	1,000 LF		
	1039		Restroom	846	1X1 VFT + Glue	400 SF		
	1040		↓	847	2x2 CT	1,000 SF		
	1041		South end Floor	848	Carpet + Glue	1,000 SF		
	1042		Room B1	849	4" Cove Base	500 SF		
	1043		Room B1	850	Drywall + JC	1600 SF		
	1044	↓	Room B1	↓	↓ ↓	↓	↓	↓

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	Ninyo & Moore			042215 4:24pm	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1045	3-South	East Exterior wall	851	Stucco	1,000	N	good
	1046	imaging center	North wall - Exterior	852	Stucco	2,000	N	good
	1047		South					
	1048		NE					
	1049		Roof wall @ air Handler Structure	853	Stucco	300 SF	N	good
	1050		Roof @ Wall/Base	854	Mastic	30 SF	N	good
	1051		Roof @ Vent	855	Mastic	30 SF		
	1052		Roof @ HVAC Duct	856	Sealant	30 SF	N	good
	1053		Roof @ North Pipe	857	Mastic	30 SF		
	1054		Roof @ HVAC Duct/Base	858		25 SF		
	1055		Roof @ Facia Seams	859	Caulking	20 SF		
	1056		Roof - Center	860	Roof Core Asp. Sheeting	3,000 SF		
	1057		Roof @ Vent/motor	861	Mastic	10 SF		

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Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

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Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
. /	Ninyo & Moore			04225 4:24pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1058	Imaging Center	Janitors closet Floor	862	1'x1' white spec. VFT + Glue + VFS+Glue	25 SF	N	good
	1059	↓	↓ ↓ wall	863	old Drywall + Joint comp.	1,100	↓	↓
	1060	↓	↓ ↓	↓	↓ ↓ ↓	↓	↓	↓
	1061	↓	North Room/Store	↓	↓ ↓ ↓	↓	↓	↓
	1062	↓	West wall	864	New Drywall + Joint comp	2,000 SF	↓	↓
	1063	↓	SAV Room N. wall	↓	↓ ↓ ↓	↓	↓	↓
	1064	↓	East Wall	↓	↓ ↓ ↓	↓	↓	↓
	1065	↓	SAV Room Floor North	865	1x1 VFT white/beige + Black mastic	300 SF	↓	↓
	1066	↓	Film Prep Room Floor	866	1x1 VFT + Glue	150 SF	↓	↓
	1067	↓	SAV Room	867	Purple-ish Carpet + Glue	400 SF	↓	↓
	1068	↓	SAV Room	867	4" Burgundy Cove Base + Glue	30 LF	↓	↓
	1069	↓	Conference Room	868	Carpet + Glue	800 SF	↓	↓
	1070	↓	Hall	869	Brown Cove Base + Glue	1,200 SF	↓	↓

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Date Sampled:
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Date Sampled:

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Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			09/09/22/15 4:24pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1071	Imaging Center	SAV Rm Ceilg	870	2X2' Ceilg Tile	1,500 SF	Y	good
	1072	Professional Building	Hall	871	Joint Compound	300 SF	N	good
	1073		North Rooms Wall	872	Drywall + Joint Comp.	3,000 SF	N	good
	1074		South Rooms					
	1075		West Rooms					
	1076		East Restroom	873	6" Grey Cove Base + Glue	110 LF		
	1077		SW Rooms	874	4" Pink Cove Base + Glue	300 LF		
	1078		@ Room 903	875	4X2 ACT	2,000 SF	Y	
	1079		South Rooms	876	1x1 VFT + Glue various layers	2,000 SF	N	
	1080		Waiting Room	877	Pink Carpet + Glue	1,000 SF		
	1081		Hallway Floor	878	Leveling Compound	1,000 SF		
	1082		600/700 Lobby	879	Green Carpet + Backing Various Layers	700 SF		
	1083		East Room	880	1x1 VFT + Mastic + Leveling Comp.	1,000 SF		

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Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
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Laboratory
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Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
" /	Ninyo & Moore			042215	4:24 pm
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1084	Professional Building	700/600 West Rooms	881	4x2 CT/Texture Coating	1,000 SF	N	good
	1085	"	Garage/Electrical Room	882	1x1 Green VFT+Glue	450 SF	N	good
	1086	"	Hall	883	4x2 CT	1,200 SF	N	good
	1087	"	Garage Room	884	4" Cove Base + Glue	1,000	N	"
	1088	"	Roof under wooden Block	885	Mastic	100 SF	"	"
	1089	"	Roof @ Pipe	886	"	"	"	"
	1090	"	" " HVAC Duct Seams	887	Sealant	20 SF	"	"
	1091	"	Roof @ Pitch pocket	888	Mastic	150 SF	"	"
	1092	"	Exterior Wall N	889	Stucco	5,000 SF	"	"
	1093	"	" " S	"	"	"	"	"
	1094	"	" " W	"	"	"	"	"
	1095	"	Roof @ NE	890	Roof Cone Asp. Sheeting	8,000 SF	"	"
	1096	"	Roof @ Fascia Seams	891	Caulking	100 SF	"	"

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Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laborat Tel: Fax:

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. /	Ninyo & Moore			042215 4:24 pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1097	Protected Building	Roof @ HVAC Ref Seams	892	Caulking	150 SF	N	good
	1098	↓	Roof @ Parapet wall	893	Asp. Sheeting	1,000 SF	N	good
	1099	1-East	Roof Center	894	Roof Core Foam Insul.	9,000 SF	N	good
	1100		Kitchen	895	Gray Cove Base + Glue	1,000 SF	N	good
	1101		↓	896	1X1 VFT + glue + L.C.	50 SF		
	1102		Exterior wall - W	897	Stucco	2,000 SF		
	1103		↓ - N	↓	↓	↓	↓	↓
	1104		↓ - S	↓	↓	↓	↓	↓
	1105		Lobby / Cont. Room	898	Blue Carpet + Glue	1,000 SF	N	good
	1106		Office E wall	899	Drywall	2,200 SF		
	1107		Cont. Room West wall	↓	↓	↓	↓	↓
	1108		Cont. Room wall	↓	↓	↓	↓	↓
	1109	↓	↓ ↓ Ceiling	900	4x2 ACT	1,000 SF	Y	good

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/	Ninyo & Moore	✓		[illegible] 042215 4:24pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1110	1-East	Restroom lobby Floor	901	Grey Carpet + Various Layer	1,000 SF	N	good
	1111	2-East	Roof Center	902	Roof Cone Asp Sheety	5,000 SF	N	good
	1112	↓	Roof @ HVAC Duct	903	Sealant	20 SF	N	good
	1113	↓	↓ ↓ ↓ Base	904	Mastic	10 SF	↓	↓
	1114	↓	Roof @ Pipe	905	↓	5 SF	↓	↓
	1115	↓	↓ ↓ pitch pocket	906	Mastic	10 SF	↓	↓
	1116	↓	unfinished Floor	907	Glue Residue	100 SF	↓	↓
	1117	↓	Exterior Wall	908	Stucco	2,500 SF	↓	↓
	1118	↓	↓ ↓	↓	↓	↓	↓	↓
	1119	↓	↓ ↓	↓	↓	↓	↓	↓
	1120	↓	Offices	909	4X2 CT	1,000 SF	↓	↓
	1121	↓	Telecom / Electrical Room	910	Brown/Beige 1X1 VFT + B. Mastic	300 SF	↓	↓
	1122	↓	Offices	911	Grey carpet + Glue	200 SF	↓	↓

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Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager:
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. /	Ninyo & Moore			04225 4:24pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1123	2-East	Telecom Room	912	Beige Cove Base 4" + Glue/Mastic	20 LF	N	good
	1124	2-East	Modem	913	2" yellow Cove Base + Brown Mastic	25 LF	N	
	1125		offices	914	6" Cove Base + Glue	50 LF		
	1126		Telecom Room	915	old carpet	25 SF		
	1127		Phone Room	916	4" Grey Cove Base + Glue	30 LF		
	1128		Modem Room	917	Drywall + J.C.	1,000 SF		
	1129		offices					
	1130		Telecom/South					
	1131	Library	2nd Floor Wall	918	Drywall + Joint Comp.	3,000 SF		
	1132		Copy Room 1st Floor Wall					
	1133		Wall North 1st Floor					
	1134		2nd Floor	919	4" Brown Cove Base + Glue	1,000 LF		
	1135		Room 217 -Floor	920	Beige Spec. 1x1 VFT + Mastic	150 SF		

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/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1136	Library	2nd Floor	921	Carpet + glue + L. L.	1,000 SF	N	good
	1137		Copy Room	922	1x1 VFT White	150 SF	↓	
	1138		Hall/Main Area	923	4x2 ACT	2,000 SF	Y	
	1139		- Exterior Concrete wall seams	924	2 Types of Caulking	100 SF	N	
	1140	↓	- Roof Hatch Joint Room 217	925	Barrier Paper	2 SF	↓	
	1141	M1	Near Restroom	926	Drywall + Joint Comp.	2,000 SF	N	
	1142		Southwest office Area	↓	↓ ↓	↓		
	1143		North wall	↓	↓ ↓	↓		
	1144		Kitchen	927	4x2 ACT	600 SF		
	1145		Restroom	928	6" Grey Cove Base + Glue	600 LF		
	1146		mens Restroom	929	White spec. 1x1 VFT	500 SF		
	1147		Restroom Floor	930	Grey spec. 1x1 VFT + Glue	100 SF		
	1148	↓	Kitchen ↓	931	Blue 1x1 VFT + Glue	50 SF		

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/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1149	T1	Exterior North	932	Stucco	1,000 SF	N	good
	1150							
	1151							
	1152		Roof - Center	933	Roof Comp Asp. Sheeting	1,600 SF		
	1153		Exterior - West	934	Window Putty	8LF		
	1154	Central Plant	Main Entrance	935	9x9 VTF Grey + Mastic	250 SF		
	1155		Conference Room	936	4" Grey Cove Base + Glue	200LF		
	1156		Main Entrance	937	Light	100LF		
	1157		Control Rm	938	2 Layers of 1X1 VFT	400 SF		
	1158		Mechanical Room	939	Plaster	2,000 SF		
	1159							
	1160		Stair Case Wall					
	1161		Garage door	940	Drywall + Joint C.	100LF		

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- /	Ninyo & Moore			04225 4:24 pm	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1162	Central plant	Roof @ Center	941	Roof Core asp. sheeting	4,800 SF	N	Good
	1163		Roof @ Pipe	942	Mastic	10 SF		
	1164		↓ ↓ Vent	943	Mastic - asp. shingles	25 SF		
	1165		Roof @ Capped Pipe	944		50 SF		
	1166		Roof @ Pitchpocket	945		50 SF		
	1167	↓	↓ ↓ Smoke Stack	946	↓	30 SF	↓	↓
	1168	D5.5	Wall @ Hallway	947	Drywall + Joint Comp.	2,500 SF		
	1169		Center Hall Wall	↓	↓ ↓	↓		
	1170		East Hall	↓	↓ ↓	↓		
	1171		West Hall	948	Blue Carpet + Various layers	500 SF		
	1172		West Wall	949	4" Grey Core Board + Glue	1,000 LF		
	1173		North Hall	950	4x2 ACT	1,800 SF		
	1174	↓	Roof / West	951	Roof Core / Foam Insul.	5,000 SF	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			042215 14:24	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1175	DS.5	Hall	952	2X2 VFT beige + Glue	1,800 SF	N	good
	1176	↓	N. Hall	953	VFSheeting white	1,000 SF	N	good
	1177	DS	@ HVAC Duct Seams	954	Tape + Coating	20 SF		
	1178		Roof	955	Roof Cove Asp. shingles	1,000 SF		
	1179		Roof west	956	Roof Cove Asp. Sheeting	300 SF		
	1180		North Hall	957	1X1 Strait Hole CT + Brown Mastic	1,000 SF		
	1181		Roof @ Pipe	958	Tape	10 SF		
	1182		Men's Restroom	959	411 Brown Cove Base + Glue	200 LF		
	1183		↓ ↓	960	VFS + Glue	200 SF		
	1184		West exterior windows	961	Putty	80 LF		
	1185		West Hall	962	Grey Carpet + glue + Leveling comp.	2,500 SF		
	1186		Men's Restroom Ceiling	963	Drywall	1,500 SF		
	1187	↓	West exit	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laborato Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			042215 4:24	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1188	D5	Restroom	963	Drywall	1,500 SF	N	good
	1189	↓	West womens Restroom	↓	↓	↓	↓	↓
	1190	↓	South Hall	964	Grey 4" Conc Block + Glue	1,000 LF	N	good
	1191	D9	Central Hall	965	Drywall + joint comp	2,500 SF	N	good
	1192	↓	East Hall	↓	↓	↓	↓	↓
	1193	↓	North Hall	↓	↓	↓	↓	↓
	1194	↓	East Offices	966	Brown Carpet + Glue	1,000 SF	↓	↓
	1195	↓	SW ↓	967	Blue Carpet + Glue	↓	↓	↓
	1196	↓	North Hall	968	4x2 ACT	1,200 SF	↓	↓
	1197	↓	South Hall	969	4" Grey Conc Block + Glue	1,000 LF	↓	↓
	1198	↓	@ HVAC Duct in ceiling plenum	970	Red caulking	10 SF	↓	↓
	1199	↓	Exterior SW wall	971	Stucco	2,000 SF	↓	↓
	1200	↓	↓ E wall	↓	↓	↓	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory:** Tel: Fax: 001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			1 042215 4:24	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1201	D9	Exterior West Wall	971	Stucco	2,000 SF	N	good
	1202		Roof Fascia Seams	972	Caulking	10 SF		
	1203		Roof @ Parapit wall	973	asp. sheeting	8,000		
	1204		Roof SW	974	Roof Cone +asp. sheet	3,000 SF		
	1205		Roof @ pipe	975	Mastic	10 SF		
	1206	F0	Roof @ vent	976	Mastic	2 SF		
	1207		Roof	977	Roof Cone	2,200 SF		
	1208	F2	Exterior NE-wall	978	Stucco	2000 SF		
	1209	F1	NE wall					
	1210	F1	West wall					
	1211		Roof - Center	979	Roof Cone & asp. sheeting	1,000 SF		
	1212		Roof @ vent	980	Mastic	10 SF		
	1213		Exterior NW wall	981	Caulking	10 SF		

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	Project Name : PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	Laboratory: Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			042215 4:24	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1214	F1	Crawl space	982	TSI	200LF	Y	Fair
	1215	F1	Wall	983	Drywall	200SF	N	good
	1216	F1/F2	Roof Center	984	Roof Core Asp. Shingles	1,000SF	↓	↓
	1217	↓	Roof Wishy Bird	985	Mastic	20SF	↓	↓
	1218	↓	Roof @ Pipe (E)	986	↓	10SF	↓	↓
	1219	↓	↓ @ HVAC Duct	987	Sealant	10SF	↓	↓
	1220	↓	Roof ↓ ↓ ↓	988	Caulk	10SF	↓	↓
	1221	↓	Exterior HVAC	989	Duct Tape	20SF	↓	↓
	1222	warehouse 1	South Wall/Ceiling	990	Grey-Carpet + Glue	2,000SF	N	good
	1223	↓	Basement Wall	991	Plaster	200SF	↓	↓
	1224	↓	2nd Floor, Wall	↓	↓	↓	↓	↓
	1225	↓	Conf. Room	992	1X1 W. SPEC. VFT + Glue	800SF	↓	↓
	1226	↓	↓	993	6" Grey Cove Base + Glue	800LF	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618
Tel: (949) 753-7070
Fax: (949) 753-7071

Project Name : PCR/Harbor-UCLA
Project No.: 209023002
Project Manager: Michael Cushner

Date Sampled:
Sampled By: Pedro Rodriguez
Sampled By:
Date Sampled:

Laboratory
Tel:
Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
"	Ninyo & Moore			04 2215 4:24	
"				"	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1227	Warehouse 1	Basmt	994	TSI	2,000 LF	N	good
	1228	"	"	"	"	"	"	"
	1229	"	"	"	"	"	"	"
	1230		Basmt Break Room	995	1X1 - Beige VFT + Glue	200 SF	N	good
	1231		Hallway	996	2X2 ACT	2,000 SF		
	1232		Top. Floor wall	997	Drywall + Joint Comp	2,000 SF		
	1233		offices west	"	"	"		
	1234		Hall East	"	"	"		
	1235		Roof - Center	998	Roof Core	2,000 SF		
	1236		Roof @ Pipes	999	Roofing Material	10 SF		
	1237		" " Duct Seams	1000	Caulking	30 SF		
	1238		Exterior Wall Roof Structure	1001	Stucco	600 SF		
	1239		"	"	"	"	"	"

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory:** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	*Received By: (sign/print)	Laboratory
./	Ninyo & Moore			042215 4:24	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1240	Warehouse 1	Exterior Wall - Roof Structure	1001	Stucco	600 SF	N	good
	1241	↓	Roof @ HVAC Duct	1002	Sealant	50 SF	↓	↓
	1242	↓	Roof / Roof Structure	1003	Caulking	5 SF	↓	↓
	1243	↓	Roof @ Electrical Conduit	1004	↓ ↓	10 SF	↓	↓
	1244	↓	Roof @ Vent	1005	Tape	30 SF	↓	↓
	1245	↓	↓ ↓ Duct Seams	1006	Duct Tape	60 SF	↓	↓
	1246	1-South	Room 16	1007	4x2 ACT	300 SF	↓	↓
	1247	↓	↓ ↓	1008	4" Gray Cove Base + Glue	100 LF	↓	↓
	1248	↓	Wall South	1009	Plaster	1,000 SF	↓	↓
	1249	↓	↓ West	↓	↓	↓	↓	↓
	1250	↓	↓ North	↓	↓	↓	↓	↓
	1251	↓	North area	1010	Brown Cove Base + Paper + mastic	700 LF	↓	↓
	1257	↓	Hall wall	1011	Texture Coat	1,000 SF	↓	↓

Ninyo & Moore

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory:** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)
/	Ninyo & Moore			10/22/15 4:24
/				/

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1253	1-South	Hall Floor	1012	1x1 white VFT	1,000	N	Fair
	1254		Wall North	1013	Drywall + Texture + J.C.	1,500 SF		good
	1255		wall South					
	1256		wall west					
	1257		Room 18	1014	1x1 Fissured ACT + mastic	300 SF		
	1258		Roof @ vent pipe	1015	Mastic	35 SF		
	1259		Exterior wall SE	1016	Stucco	1,800 SF		
	1260		E					
	1261		NE					
	1262		Roof @ Conduit N	1017	Sealant	35 SF		
	1263		Roof @ HVAC duct	1018	Cloth tape	30 SF		
	1264		CRV Phyc. Room	1019	4" Blk Cove Base + Glue	100 LF		
	1265		Roof	1020	Roof Coat	1,800 SF		

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory:** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			042215 4:	24
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1266	warehouse 2	Restroom Wall	1021	Drywall + Joint compound	1,000 SF	N	good
	1267	↓	NE Wall	↓	↓	↓	↓	↓
	1268	↓	↓ ↓	↓	↓ ↓	↓	↓	↓
	1269	↓	offices	1022	6" Grey Cove Base + Glue	200LF	↓	↓
	1270	↓	Restroom	1023	VFT various Layers	300 SF	↓	↓
	1271	3-South	Roof	1024	Roof Cone	1,800 SF	↓	↓
	1272	2-South	↓	1025	Roof Cone	2,000 SF	↓	↓
	1273	↓	North Floor	1026	1X1 white spec. VFT + Glue	1,000 SF	↓	↓
	1274	↓	Rm 6	1027	4" Cove Base + Glue	1,000 LF	↓	↓
	1275	↓	North wall	1028	Drywall + Joint Cmp	2,500 SF	↓	↓
	1276	↓	East	↓	↓ ↓	↓	↓	↓
	1277	↓	NWest	↓	↓ ↓	↓	↓	↓
	1278	↓	Exterior Wall E	1029	Stucco	2,000 SF	↓	↓

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** PCR/Harbor-UCLA Project No.: 209023002 Project Manager: Michael Cushner	Date Sampled: Sampled By: Pedro Rodriguez Sampled By: Date Sampled:	**Laboratory** Tel: Fax:

001355705

CHAIN OF CUSTODY INFORMATION:

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
/	Ninyo & Moore			042215 4:24	
/				/	

LabID	Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
	1279	2-South	Exterior Wall N	1029	Stucco	2,000 SF	N	good
	1280	↓	↓ ↓ SE	↓	↓	↓	↓	↓

APPENDIX C

XRF TESTING METHODOLOGY

XRF TESTING METHODOLOGY

To assess the painted surfaces for future contractor worker safety, x-ray fluorescence (XRF) testing technologies were utilized. The testing was conducted in general accordance with the following regulation: *Title 17, California Code of Regulations, Division 1, Chapter 8, Accreditation Certification, and Work Practice in Lead Related Construction, Section 36000.*

After a visual assessment, accessible painted surfaces were screened for lead content with a NITON XLp 300A XRF spectrum analyzer. XRF readings were taken using the standard paint mode. Standard paint mode measurements have no predetermined testing length, and automatically adjust to account for various types of substrates and material's densities. In the standard paint mode, the NITON 300A XLp XRF collects an XRF assay until either a K-shell or L-shell result is indicated as either positive or negative, compared to the threshold level based on the current precision of the test. Correction for paint matrix and substrate effects is performed automatically by the XRF analyzer.

XRF readings were made on testing combinations in all room equivalents in an effort to test typical materials that are representative of the room equivalent. Testing combinations were tested non-destructively by holding the shutter of the XRF against the surface being tested. At each XRF assay location, the trigger is depressed to open the shutter, and one reading was made using the standard paint testing mode. Results of each assay were recorded in the memory of the XRF spectrum analyzer and downloaded via the software provided by the manufacturer. In addition, the results of each assay were read and recorded on the XRF Data Sheet field data sheet.

The XRF testing orientation is depicted on the attached sample location maps. The "A" direction was initially assigned to the direction of the street, and the subsequent directions ("B," "C," and "D") were assigned clockwise from the "A" direction. Should the subject site be located on the corner of two streets, the "A" direction is assigned to the direction of the street address of the subject site.

To ensure that the XRF equipment was working properly, various quality control tests were performed before, during, and after the on-site work. At the beginning of the work day, three start up validation measurements were made in the K and L calibration mode, using the calibration check standard associated with the particular XRF that was used. This painted standard contains a known quantity of lead and allows the XRF operator to determine whether the instrument is functioning within acceptable tolerance ranges for accuracy and precision, as determined by the manufacturer. Calibration checks were generally collected on the red 1.06 milligram per cubic centimeter (mg/cm^2) and/or yellow 1.57 mg/cm^2 Standard Reference Material paint film, developed by the National Institute of Standards and Technology.

In addition to the three starts up tests, calibration readings are collected between each building, after four hours, and at the completion of XRF testing. Results of each calibration reading were recorded within the memory of the XRF spectrum analyzer and on the XRF Data Sheet. The quality control tests taken during testing at the subject site were within the acceptable performance range prescribed by the XRF equipment manufacturer. Documentation of the quality control calibration check is included in the Table 2.

APPENDIX D

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH FORM 8552

State of California—Health and Human Services Agency | California Department of Public Health

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation 2/15/2015 to 4/2/2015

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

☑ Lead Inspection ☐ Risk assessment ☐ Clearance Inspection ☐ Other (specify) _____

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
1000 West Carson Street	Torrance	USA	90502

Construction date (year) of structure	Type of structure	Children living in structure?
1930's to 1950's	☐ Multi-unit building ☐ School or daycare ☐ Single family dwelling ☑ Other Medical Facility	☐ Yes ☑ No ☐ Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
County of Los Angeles - Peter Allen	310-222-3302

Address [number, street, apartment (if applicable)]	City	State	Zip Code
1000 West Carson Street Box 499	Torrance	CA	90509

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

☑ No lead-based paint detected ☑ Intact lead-based paint detected ☑ Deteriorated lead-based paint detected

☐ No lead hazards detected ☐ Lead-contaminated dust found ☐ Lead-contaminated soil found ☐ Other_____

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Jonathan Johnson	949-400-0028

Address [number, street, apartment (if applicable)]	City	State	Zip Code
475 Goddard Suite 200	Irvine	CA	92618

CDPH certification number	Signature	Date
26456		5/5/2015

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

Appendix F

Energy Data Worksheets

Harbor-UCLA Medical Center
Draft EIR
Appendix F, Energy Data Worksheets

F.1 Construction Energy Data Worksheets

F.2 Operational Energy Data Worksheets

Appendix F.1

Construction Energy Data

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

Summary

Master Plan Project

758,318	gallons of diesel fuel for hauling of demolition debris, grading and excavation materials, and vendor deliveries
971,427	gallons of diesel fuel for heavy-duty construction equipment
3,427,646	gallons of fuel (primarily gasoline) for construction worker trips
1,729,745	Total Gallons Diesel
3,427,646	Total Gallons Gasoline
115,316	Annual Average Gallons Diesel (over 15-year Master Plan construction period)
228,510	Annual Average Gallons Gasoline (over 15-year Master Plan construction period)

LA Biomed

8,375	gallons of diesel fuel for hauling of demolition debris, grading and excavation materials, and vendor deliveries
73,864	gallons of diesel fuel for heavy-duty construction equipment
17,858	gallons of fuel (primarily gasoline) for construction worker trips
82,239	Total Gallons Diesel
17,858	Total Gallons Gasoline
5,483	Annual Average Gallons Diesel (over 15-year Master Plan construction period)
1,191	Annual Average Gallons Gasoline (over 15-year Master Plan construction period)

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

Master Plan Project: Off-Road Equipment

Equipment ≤ 50 hp		
pounds fuel/hp-hr (OFFROAD2011 model, ≤ 50 hp):	0.408	lb/hp-hr
diesel pounds/gallon (CARB density assumption):	7.07	lb/gal
diesel gallons/hp-hr:	0.0577	gal/hp-hr
Total hp-hr for equipment ≤ 50 hp (cased on CalEEMod run):	927,150	hp-hr
Total diesel gallons:	53,505	gal
Equipment > 50 hp		
pounds fuel/hp-hr (OFFROAD2011 model, > 50 hp):	0.367	lb/hp-hr
diesel pounds/gallon (CARB density assumption):	7.07	lb/gal
diesel gallons/hp-hr:	0.0519	gal/hp-hr
Total hp-hr for equipment > 50 hp (based on CalEEMod run):	17,683,139	hp-hr
Total diesel gallons:	917,923	gal
Total diesel gallons (off-road equipment):	**971,427**	**gal**

Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
Phase C							-
Demolition	Concrete/Industrial Saws	1	8	81	0.73	139	65,753
Demolition	Excavators	1	8	162	0.38	139	68,455
Demolition	Graders	1	8	174	0.41	139	79,330
Demolition	Rubber Tired Loaders	1	8	199	0.36	139	79,664
Demolition	Tractors/Loaders/Backhoes	4	8	97	0.37	139	159,639
Grading	Air Compressors	1	8	78	0.48	652	195,287
Grading	Concrete/Industrial Saws	1	8	81	0.73	652	308,422
Grading	Cranes	1	8	226	0.29	652	341,857
Grading	Excavators	1	8	162	0.38	652	321,097
Grading	Forklifts	1	8	89	0.2	652	92,845
Grading	Graders	1	8	174	0.41	652	372,109
Grading	Rubber Tired Dozers	1	8	255	0.4	652	532,032
Grading	Rubber Tired Loaders	1	8	199	0.36	652	373,674
Grading	Tractors/Loaders/Backhoes	5	8	97	0.37	652	936,011

Grading	Welders	1	8	46	0.45	652	107,971
SCE SY	Cement and Mortar Mixers	1	8	9	0.56	129	5,201
SCE SY	Generator Sets	1	8	84	0.74	129	64,149
SCE SY	Graders	1	8	174	0.41	129	73,623
SCE SY	Tractors/Loaders/Backhoes	3	7	97	0.37	129	97,226
SCE SY	Welders	1	8	46	0.45	129	21,362
Building Construction	Air Compressors	1	8	78	0.48	911	272,863
Building Construction	Cranes	1	7	226	0.29	911	417,949
Building Construction	Forklifts	1	8	89	0.2	911	129,726
Building Construction	Graders	1	8	174	0.41	911	519,926
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	911	686,612
Building Construction	Welders	1	8	46	0.45	911	150,862
Paving 2	Cement and Mortar Mixers	1	6	9	0.56	36	1,089
Paving 2	Paving Equipment	1	6	130	0.36	36	10,109
Paving 2	Rollers	1	6	80	0.38	36	6,566
Paving 2	Trenchers	1	8	80	0.5	36	11,520
Architectural Coating	Air Compressors	1	6	78	0.48	127	28,529
Paving	Paving Equipment	1	6	130	0.36	84	23,587
Paving	Rollers	1	6	80	0.38	84	15,322
Paving	Tractors/Loaders/Backhoes	2	8	97	0.37	84	48,236
Paving	Trenchers	1	8	80	0.5	84	26,880
Phase M							
Demolition	Concrete/Industrial Saws	2	8	81	0.73	52	49,196
Demolition	Excavators	1	8	162	0.38	52	25,609
Demolition	Tractors/Loaders/Backhoes	1	8	97	0.37	52	14,930
Grading	Excavators	1	8	162	0.38	53	26,101
Grading	Graders	1	8	174	0.41	53	30,248
Grading	Rubber Tired Loaders	1	8	199	0.36	53	30,375
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	53	45,652
Paving	Cement and Mortar Mixers	2	6	9	0.56	87	5,262
Paving	Tractors/Loaders/Backhoes	4	8	97	0.37	87	99,918
Building Construction	Air Compressors	1	8	78	0.48	95	28,454
Building Construction	Cranes	2	7	226	0.29	95	87,168
Building Construction	Forklifts	1	8	89	0.2	95	13,528
Building Construction	Tractors/Loaders/Backhoes	1	7	97	0.37	95	23,867
Building Construction	Welders	1	8	46	0.45	95	15,732
Paving 2	Paving Equipment	2	6	130	0.36	65	36,504

Paving 2	Tractors/Loaders/Backhoes	1	8	97	0.37	65	18,663
Paving 2	Trenchers	1	8	80	0.5	65	20,800
Phase I							
Demolition	Concrete/Industrial Saws	2	8	81	0.73	122	115,422
Demolition	Excavators	1	8	162	0.38	122	60,083
Demolition	Rubber Tired Dozers	1	8	255	0.4	122	99,552
Demolition	Rubber Tired Loaders	1	8	199	0.36	122	69,921
Demolition	Tractors/Loaders/Backhoes	3	8	97	0.37	122	105,086
Grading	Graders	1	8	174	0.41	64	36,526
Grading	Rubber Tired Dozers	1	8	255	0.4	64	52,224
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	64	55,127
Building Construction	Cranes	1	7	226	0.29	250	114,695
Building Construction	Forklifts	1	8	89	0.2	250	35,600
Building Construction	Welders	1	8	46	0.45	250	41,400
Paving	Cement and Mortar Mixers	1	8	9	0.56	57	2,298
Paving	Paving Equipment	1	8	130	0.36	57	21,341
Paving	Rollers	1	8	80	0.38	57	13,862
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	57	16,366
Paving	Trenchers	1	8	80	0.5	57	18,240
Architectural Coating	Air Compressors	1	6	78	0.48	57	12,804
Phase II							
Grading	Rubber Tired Loaders	1	8	199	0.36	64	36,680
Grading	Tractors/Loaders/Backhoes	1	8	97	0.37	64	18,376
Building Construction	Air Compressors	1	8	78	0.48	95	28,454
Building Construction	Cranes	2	7	226	0.29	95	87,168
Building Construction	Forklifts	1	8	89	0.2	95	13,528
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	95	71,601
Building Construction 2	Air Compressors	1	8	78	0.48	108	32,348
Building Construction 2	Cranes	1	7	226	0.29	108	49,548
Building Construction 2	Tractors/Loaders/Backhoes	2	7	97	0.37	108	54,266
Building Construction 3	Air Compressors	1	8	78	0.48	108	32,348
Building Construction 3	Cranes	1	7	226	0.29	108	49,548
Building Construction 3	Forklifts	1	8	89	0.2	108	15,379
Building Construction 3	Tractors/Loaders/Backhoes	3	7	97	0.37	108	81,399
Building Construction 3	Welders	1	8	46	0.45	108	17,885
Building Construction 4	Air Compressors	1	8	78	0.48	202	60,503
Building Construction 4	Cranes	1	7	226	0.29	202	92,674

Building Construction 4	Forklifts	2	8	89	0.2	202	57,530
Building Construction 4	Tractors/Loaders/Backhoes	2	7	97	0.37	202	101,497
Building Construction 4	Welders	2	8	46	0.45	202	66,902
Architectural Coating	Air Compressors	1	6	78	0.48	114	25,609
Paving	Cement and Mortar Mixers	1	8	9	0.56	93	3,750
Paving	Paving Equipment	1	8	130	0.36	93	34,819
Paving	Rollers	1	8	80	0.38	93	22,618
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	93	26,702
Paving	Trenchers	1	8	80	0.5	93	29,760
Phase III							
Demolition	Concrete/Industrial Saws	2	8	81	0.73	221	209,084
Demolition	Excavators	1	8	162	0.38	221	108,838
Demolition	Rubber Tired Dozers	1	8	255	0.4	221	180,336
Demolition	Rubber Tired Loaders	1	8	199	0.36	221	126,660
Demolition	Tractors/Loaders/Backhoes	3	8	97	0.37	221	190,361
Grading	Graders	1	8	174	0.41	121	69,057
Grading	Rubber Tired Dozers	1	8	255	0.4	121	98,736
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	121	69,483
Building Construction	Cement and Mortar Mixers	1	8	9	0.56	355	14,314
Building Construction	Cranes	1	7	226	0.29	355	162,867
Building Construction	Forklifts	1	8	89	0.2	355	50,552
Building Construction	Tractors/Loaders/Backhoes	2	7	97	0.37	355	178,373
Building Construction	Welders	1	8	46	0.45	355	58,788
Paving	Cement and Mortar Mixers	1	8	9	0.56	62	2,500
Paving	Paving Equipment	1	8	130	0.36	62	23,213
Paving	Rollers	1	8	80	0.38	62	15,078
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37	62	17,801
Paving	Trenchers	1	8	80	0.5	62	19,840
Architectural Coating	Air Compressors	1	6	78	0.48	62	13,928
Phase IV							
Grading	Graders	1	8	174	0.41	154	87,891
Grading	Rubber Tired Dozers	1	8	255	0.4	154	125,664
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	154	132,649
Building Construction 2	Air Compressors	2	8	78	0.48	283	169,528
Building Construction 2	Cranes	2	7	226	0.29	283	259,669
Building Construction 2	Forklifts	2	8	89	0.2	283	80,598
Building Construction 2	Rubber Tired Loaders	1	8	199	0.36	283	162,193

Building Construction 2	Tractors/Loaders/Backhoes	8	7	97	0.37	283	568,785
Building Construction 2	Welders	3	8	46	0.45	283	140,594
Building Construction 3	Air Compressors	1	8	78	0.48	305	91,354
Building Construction 3	Cranes	1	7	226	0.29	305	139,928
Building Construction 3	Tractors/Loaders/Backhoes	2	7	97	0.37	305	153,250
Building Construction 3	Welders	2	8	46	0.45	305	101,016
Architectural Coating	Air Compressors	1	6	78	0.48	154	34,595
Paving	Cement and Mortar Mixers	1	8	9	0.56	162	6,532
Paving	Forklifts	1	8	89	0.2	162	23,069
Paving	Paving Equipment	1	8	130	0.36	162	60,653
Paving	Rollers	1	8	80	0.38	162	39,398
Paving	Tractors/Loaders/Backhoes	2	8	97	0.37	162	93,027
Paving	Trenchers	1	8	80	0.5	162	51,840
Paving	Welders	1	8	46	0.45	162	26,827
Phase V							
Grading	Air Compressors	2	8	78	0.48	173	103,634
Grading	Excavators	1	8	162	0.38	173	85,199
Grading	Rubber Tired Loaders	1	8	199	0.36	173	99,150
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	173	149,015
Building Construction	Cranes	2	7	226	0.29	173	158,738
Building Construction	Forklifts	1	8	89	0.2	173	24,635
Building Construction	Tractors/Loaders/Backhoes	4	7	97	0.37	173	173,851
Building Construction	Welders	1	8	46	0.45	173	28,649
Building Construction 2	Tractors/Loaders/Backhoes	3	7	97	0.37	107	80,645
Building Construction 3	Forklifts	1	8	89	0.2	455	64,792
Building Construction 3	Tractors/Loaders/Backhoes	2	7	97	0.37	455	228,619
Building Construction 4	Cranes	1	7	226	0.29	260	119,283
Building Construction 4	Forklifts	1	8	89	0.2	260	37,024
Building Construction 4	Rubber Tired Loaders	2	8	199	0.36	260	298,022
Building Construction 4	Tractors/Loaders/Backhoes	3	7	97	0.37	260	195,959
Building Construction 4	Welders	1	8	46	0.45	260	43,056
Architectural Coating	Air Compressors	1	6	78	0.48	276	62,001
Building Construction 5	Air Compressors	1	8	78	0.48	86	25,759
Building Construction 5	Cranes	2	7	226	0.29	86	78,910
Building Construction 5	Forklifts	1	8	89	0.2	86	12,246
Building Construction 5	Tractors/Loaders/Backhoes	1	7	97	0.37	86	21,606
Building Construction 6	Cranes	1	7	226	0.29	146	66,982

Building Construction 6	Forklifts	1	8	89	0.2	146	20,790
Building Construction 6	Tractors/Loaders/Backhoes	1	7	97	0.37	146	36,680
Paving	Cement and Mortar Mixers	1	8	9	0.56	80	3,226
Paving	Paving Equipment	1	8	130	0.36	80	29,952
Paving	Rollers	1	8	80	0.38	80	19,456
Paving	Tractors/Loaders/Backhoes	3	8	97	0.37	80	68,909
Paving	Trenchers	2	8	80	0.5	80	51,200
Phase VI							
Demolition	Concrete/Industrial Saws	2	8	81	0.73	85	80,417
Demolition	Excavators	3	8	162	0.38	85	125,582
Demolition	Rubber Tired Dozers	2	8	255	0.4	85	138,720
Demolition	Rubber Tired Loaders	1	8	199	0.36	85	48,715
Demolition	Tractors/Loaders/Backhoes	3	8	97	0.37	85	73,216
Grading	Air Compressors	1	8	78	0.48	675	202,176
Grading	Graders	1	8	174	0.41	675	385,236
Grading	Rubber Tired Loaders	1	8	199	0.36	675	386,856
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	675	581,418
Building Construction	Air Compressors	1	8	78	0.48	374	112,020
Building Construction	Cranes	1	7	226	0.29	374	171,584
Building Construction	Forklifts	1	8	89	0.2	374	53,258
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	374	281,880
Building Construction	Welders	1	8	46	0.45	374	61,934
Paving	Paving Equipment	1	8	130	0.36	93	34,819
Paving	Rollers	1	8	80	0.38	93	22,618
Paving	Tractors/Loaders/Backhoes	2	8	97	0.37	93	53,404
Paving	Trenchers	1	8	80	0.5	93	29,760
Architectural Coating	Air Compressors	1	6	78	0.48	93	20,892

Total hp-hr for equipment ≤ 50 hp (cased on CalEEMod run):	927,150
Total hp-hr for equipment > 50 hp (based on CalEEMod run):	17,683,139

Harbor-UCLA Master Plan
Construction Gasoline and Diesel Fuel Estimate

Master Plan Project: Construction Workers

Fuel Consumption Factor:[1]	0.0354	gallons/mile
Total Worker Trips:	6,589,474	trips
Trip Distance (CalEEMod assumed value):	14.7	miles/trip
Total Worker Miles:	96,865,268	miles
Total gallons (workers):	**3,427,646**	gal (primarily gasoline)

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; LDA, LDT1, LDT2; Annual; 2016-2030).

Phase	Worker Trips/Day	Days	Total Worker Trips
Phase M			
Demolition	102	52	5,304
Grading	252	53	13,356
Paving	156	87	13,572
Building Construction	150	95	14,250
Paving 2	28	65	1,820
Phase C			
Demolition	80	139	11,120
Grading	174	652	113,448
SCE SY	233	129	30,057
Building Construction	260	911	236,860
Paving 2	28	36	1,008
Architectural Coating	44	127	5,588
Paving	48	84	4,032
Phase I			
Demolition	128	122	15,616
Grading	499	64	31,936
Building Construction	516	250	129,000
Paving	40	57	2,280
Architectural Coating	68	57	3,876

Phase II			
Grading	18	64	1,152
Building Construction	270	95	25,650
Building Construction 2	270	108	29,160
Building Construction 3	270	108	29,160
Building Construction 4	455	202	91,910
Architectural Coating	92	114	10,488
Paving	80	93	7,440
Phase III			
Demolition	140	221	30,940
Grading	280	121	33,880
Building Construction	715	355	253,825
Paving	48	62	2,976
Architectural Coating	80	62	4,960
Phase IV			
Grading	536	154	82,544
Building Construction 2	3,654.00	283	1,034,082
Building Construction 3	3,654.00	305	1,114,470
Architectural Coating	360	154	55,440
Paving	118	162	19,116
Phase V			
Grading	486	173	84,078
Building Construction	1,770.00	173	306,210
Building Construction 2	1,770.00	107	189,390
Building Construction 3	1,770.00	455	805,350
Building Construction 4	1,770.00	260	460,200
Architectural Coating	92	276	25,392
Building Construction 5	465	86	39,990
Building Construction 6	465	146	67,890
Paving	26	80	2,080
Phase VI			
Demolition	466	85	39,610
Grading	72	675	48,600
Building Construction	2,688.00	374	1,005,312
Paving	540	93	50,220
Architectural Coating	52	93	4,836
		Total Worker Trips	**6,589,474**

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

Master Plan Project: On-Road Trucks (Vendors Trucks)

EMFAC2014 Diesel Fuel Consumption Factor:[1]	0.1585	gallons/mile
Vendor Truck Trips (based on CalEEMod run):[2]	459,781	trips
Trip Distance (CalEEMod assumed value):	6.9	miles/trip
Total diesel gallons (on-road trucks):	**502,772**	gal

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; T7 Single Construction; Annual; 2016-2030

2 This is a highly conservative estimate as it assumes the number of vendor truck trips during a peak day would occur every day throughout the building construction phase.

Phase	Vendor Trips/Day	Days	Total Vendor Trips
Phase M			
Demolition	2	52	104
Grading	2	53	106
Building Construction	27	95	2,565
Phase C			
Demolition	4	139	556
Grading	4	652	2,608
SCE SY	27	129	3,483
Building Construction	25	911	22,775
Paving	2	84	168
Phase I			
Demolition	2	122	244
Grading	2	64	128
Building Construction	49	250	12,250

Phase II			
Grading	2	64	128
Building Construction	38	95	3,610
Building Construction 2	38	108	4,104
Building Construction 3	38	108	4,104
Building Construction 4	40	202	8,080
Phase III			
Demolition	2	221	442
Grading	2	121	242
Building Construction	43	355	15,265
Phase IV			
Grading	2	154	308
Building Construction 2	157	283	44,431
Building Construction 3	157	305	47,885
Phase V			
Grading	4	173	692
Building Construction	151	173	26,123
Building Construction 2	153	107	16,371
Building Construction 3	153	455	69,615
Building Construction 4	151	260	39,260
Building Construction 5	153	86	13,158
Building Construction 6	151	146	22,046
Phase VI			
Demolition	4	85	340
Grading	2	675	1,350
Building Construction	260	374	97,240
		Total	**459,781**

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

Master Plan Project: On-Road Trucks (Haul Trucks)

EMFAC2011 Diesel Fuel Consumption Factor:[1]	0.1585	gallons/mile
Vendor Truck Trips (based on CalEEMod run):[2]	80,625	trips
Trip Distance (CalEEMod assumed value):	20.0	miles/trip
Total diesel gallons (on-road trucks):	**255,546**	gal

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; T7 Single Construction; Annual; 2016-2030

Phase	Vendor Trips/Day	Days	Total Haul
Phase M			5,198
Phase C			7,482
Phase I			14,355
Phase III			11,889
Phase IV			12,067
Phase V			14,080
Phase VI			15,554
		Total	**80,625**

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

LA Biomed: Off-Road Equipment

Equipment ≤ 50 hp		
pounds fuel/hp-hr (OFFROAD2011 model, ≤ 50 hp):	0.408	lb/hp-hr
diesel pounds/gallon (CARB assumption):	7.07	lb/gal
diesel gallons/hp-hr:	0.0577	gal/hp-hr
Total hp-hr for equipment ≤ 50 hp (cased on CalEEMod run):	68,393	hp-hr
Total diesel gallons:	3,947	gal
Equipment > 50 hp		
pounds fuel/hp-hr (OFFROAD2011 model, > 50 hp):	0.367	lb/hp-hr
diesel pounds/gallon (CARB assumption):	7.07	lb/gal
diesel gallons/hp-hr:	0.0519	gal/hp-hr
Total hp-hr for equipment > 50 hp (based on CalEEMod run):	1,346,908	hp-hr
Total diesel gallons:	69,917	gal
Total diesel gallons (off-road equipment):	**73,864**	**gal**

Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
LA BIOMED							
Architectural Coating	Air Compressors	1	6	78	0.48	130	29,203
Building Construction 2	Cranes	1	7	226	0.29	230	105,519
Building Construction 2	Forklifts	3	8	89	0.2	230	98,256
Grading	Excavators	1	8	162	0.38	77	37,921
Building Construction	Cranes	1	7	226	0.29	183	83,957
Building Construction	Forklifts	3	8	89	0.2	183	78,178
Building Construction	Generator Sets	1	8	84	0.74	183	91,002
Paving	Pavers	2	8	125	0.42	108	90,720
Paving	Rollers	2	8	80	0.38	108	52,531
Building Construction 2	Generator Sets	1	8	84	0.74	230	114,374
Grading	Rubber Tired Dozers	1	8	255	0.4	77	62,832
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	183	137,925
Grading	Graders	1	8	174	0.41	77	43,945
Grading	Tractors/Loaders/Backhoes	3	8	97	0.37	77	66,325
Paving	Paving Equipment	2	8	130	0.36	108	80,870
Building Construction 2	Tractors/Loaders/Backhoes	3	7	97	0.37	230	173,349
Building Construction 2	Welders	1	8	46	0.45	230	38,088
Building Construction	Welders	1	8	46	0.45	183	30,305

Total hp-hr for equipment ≤ 50 hp (cased on CalEEMod run):	68,393
Total hp-hr for equipment > 50 hp (based on CalEEMod run):	1,346,908

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

LA Biomed: Construction Workers

Fuel Consumption Factor:[1]	0.0354	gallons/mile
Total Worker Trips:	34,331	trips
Trip Distance (CalEEMod assumed value):	14.7	miles/trip
Total Worker Miles:	504,666	miles
Total gallons (workers):	**17,858**	gal (primarily gasoline)

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; LDA, LDT1, LDT2; Annual; 2016-2030).

Phase	Worker Trips/Day	Days	Total Worker Trips
LA BIOMED			
Building Construction 2	72	230	16,560
Grading	15	77	1,155
Building Construction	72	183	13,176
Paving	15	108	1,620
Architectural Coating	14	130	1,820
		Total Worker Trips	**34,331**

Harbor-UCLA Master Plan
Construction Energy Demand Estimates

LA Biomed: On-Road Trucks

EMFAC2011 Diesel Fuel Consumption Factor:[1]	0.1585	gallons/mile
Vendor Truck Trips (based on CalEEMod run):[2]	7,659	trips
Trip Distance (CalEEMod assumed value):	6.9	miles/trip
Total diesel gallons (on-road trucks):	**8,375**	gal

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; T7 Single Construction; Annual; 2016-2030
2 This is a highly conservative estimate as it assumes the number of vendor truck trips during a peak day would occur every day throughout the building construction phase.

Phase	Vendor Trips/Day	Days	Total Vendor Trips
LA BIOMED			
Building Construction 2	37	77	2,849
Building Construction	37	130	4,810
		Total	**7,659**

Appendix F.2
Operational Energy Data Worksheets

Harbor-UCLA Master Plan
Operational Energy Demand Estimates

Energy and VMT Estimates

Land Use	Natural Gas demand (million kBTU/yr)	Electricity demand (million kWh/yr)	Electricity demand from water demand (million kWh/yr)	Annual VMT
Master Plan	23.64	17.35	3.56	75,933,038
Biomed	4.38	3.27	1.84	8,430,802
	28.02	**20.62**	**5.40**	**84,363,840**

CalEEMod Land Use	Approx. Floor Surface Area (sqft)	Natural Gas (kBTU/yr)	Electricity (kWh/yr)	Annual VMT
General Light Industry	35,000	1,966,500	1.47E+06	858,267
General Office Building	130,635	1,083,620	1.71E+06	5,180,486
Hospital	129,205	13,898,600	5.69E+06	19,013,040
Library	271,272	342,450	2.56E+05	3,194,737
Medical Office Building	22,500	3,422,500	5.42E+06	38,667,079
Research & Development	412,598	7,229,500	5.40E+06	13,914,128
Strip Mall	45,402	48,913	4.88E+05	2,843,429
Unrefrigerated Warehouse-No Rail	475,000	31,327	1.89E+05	692,675

Land Use	Approx. Floor Surface Area (sqft)
Bioscience Tech Park	250,000
Total Area Master Plan 2030 Total	2,457,355
Total Area Master Plan 2030 excluding Bioscience Tech Park	2,207,355

Land Use	CalEEMod Indoor Water Use (Mgal/yr)	CalEEMod Outdoor Water Use (Mgal/yr)	Total Water Use (Mgal/yr)	Electricity Demand from water Demand (million kWh)
General Light Industry	29.88	0.00	29.88	0.39
General Office Building	23.22	14.23	37.45	0.46
Hospital	34.04	6.48	40.52	0.52
Library	0.70	1.10	1.81	0.02
Medical Office Building	51.77	9.86	61.63	0.78
Research & Development	233.56	0.00	233.56	3.04
Strip Mall	2.59	1.59	4.18	0.05
Unrefrigerated Warehouse-No Rail	10.50	0.00	10.50	0.14

CalEEMod Land Use	Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
General Light Industry	9727	111	1272	1911
General Office Building	9727	111	1272	1911
Hospital	9727	111	1272	1911
Library	9727	111	1272	1911
Medical Office Building	9727	111	1272	1911
Research & Development	9727	111	1272	1911
Strip Mall	9727	111	1272	1911
Unrefrigerated Warehouse-No Rail	9727	111	1272	1911

Source: California Emissions Estimator Model (CalEEMod), Version 2013.2.2.

Harbor-UCLA Master Plan
Operational Energy Demand Estimates

Fuel Usage from VMT

Annual VMT (Master Plan Project):	75,933,038	miles/year			
Annual VMT (LA Biomed):	8,430,802	miles/year			

Fuel Type:[1]	GAS	DSL	ELEC		
Percent:	85.1%	8.2%	6.7%		
Miles per Gallon Fuel:	31.67	13.38	-		
Annual VMT by Fuel Type (Master Plan Project):	64,643,723	6,226,502	5,062,813	miles/year	
Annual VMT by Fuel Type (LA Biomed):	7,177,356	691,325	562,121	miles/year	
Annual Fuel Usage (Master Plan Project):	2,041,355	465,237	-	gal/year	
Annual Fuel Usage (LA Biomed):	226,651	51,655	-	gal/year	
Annual Fuel Savings from Electric Vehicles (Master Plan Project):[2]	-	-	159,876	gal/year	(assumed to be gasoline)
Annual Fuel Savings from Electric Vehicles (LA Biomed):[2]	-	-	17,751	gal/year	(assumed to be gasoline)

Notes:

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; Fleet Average; Annual; 2030).
2. Assumes electric vehicles would replace traditional gasoline-fueled vehicles.

Appendix G

Service Provider Correspondence

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

February 10, 2016

Robert Hilman, Senior Planner II
City of Santa Monica
PCR Services Corporation
201 Santa Monica Boulevard, Suite 500
Santa Monica, CA 90401

Dear Mr. Hilman:

FIRE PROTECTION SERVICES QUESTIONNAIRE, "HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN PROJECT", ENHANCE THE INTERACTIVE RELATIONSHIP BETWEEN THE CLINICAL, EDUCATIONAL, AND RESEARCH COMPONENTS OF THE MEDICAL CAMPUS AND TO UPDATE IT CONCURRENT WITH GROWTH IN THE REGION, LOS ANGELES (FFER 201600013)

The Fire Protection Services Questionnaire has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. The LACFD division in which the Project Site is located and the statistics for that division (e.g., size, areas covered, No. of fire stations, and existing service area population).

   The Project Site is located within LACFD's Division I, which is made up of three battalions and twenty fire stations providing services to the cities of Carson, Gardena, Hawthorne, Lawndale, Lomita, Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, and Rolling Hills Estates.

2. LACFD fire station(s) providing fire protection services to the Project Site, broken into the primary responding station and the secondary responding stations, and the emergency and non-emergency response times from these stations to the Project Site.

   Fire Station 36, located at 127 W. 223rd Street, Carson, CA 90745, is the jurisdictional station (1st-due) for the Project Site.

   During 2015, Fire Station 36 had an emergency response time of 4:34 minutes and a non-emergency response time of 6:23 minutes. Based on the distance to the Project Site (Vermont/220th Street), it is estimated that Fire Station 36 would have an estimated emergency response time of 3:33 minutes.

   Fire Station 127, located at 2049 E. 223rd Street, Carson, CA 90810, is the 2nd-due. During 2015, Fire Station 127 had an emergency response time of 5:09 minutes and a non-emergency response time of 6:54 minutes. Based on the distance to the Project Site (Vermont/220th Street), it is estimated that Fire Station 127 would have an estimated emergency response time of 7:30 minutes.

3. Most recent data on the annual number of emergency and non-emergency calls received by each of the LACFD fire station serving the Project Site.

   During 2015, Fire Station 36 responded to a total of 6,416 emergency incidents, of which 136 were fires, 5,538 were medical incidents and 742 were other types; there were 248 non-emergency incidents.

   During 2015, Fire Station 127 responded to a total of 937 emergency incidents, of which 39 were fires, 730 were medical incidents and 168 were other types; there were 53 non-emergency incidents.

4. Service boundaries and service population served by each of the LACFD fire station(s) serving the Project Site.

   Fire Station 36 has a jurisdictional service boundary of 7.27 square miles and Fire Station 127 has a jurisdictional service boundary of 4.96 square miles; however, the Los Angeles County Fire Department operates under a regional concept in its approach to providing fire protection and emergency medical services wherein the closet available resource is responded to an incident anywhere in the District's service territory based on distance and availability, without regard to jurisdictional or municipal boundaries.

In addition, the Fire Department does not calculate service-to-population ratios. Such ratios do not properly reflect the need for fire protection and emergency medical services. They do not account for demand caused by non-residential structures, vehicular incidents, transient population, and vacant land with combustible vegetation.

5. Equipment and staff of the LACFD fire stations serving the Project Site (e.g., engines, trucks, squads, total full-time and part-time staff, number of firefighters on 24-hour duty, paramedic staff and services, etc.).

   Fire Station 36 is staffed with 2 4-person engine companies; Engine 36 staffed with 1-Captain, 1-Fire Fighter Specialist, 1-Fire Fighter/Paramedic and 1- fire fighter, and Engine 236 staffed with 1-Captain, 1-Fire Fighter Specialist and 2-Fire Fighters, and a 2-person-paramedic squad staffed with 2-Fire Fighter/Paramedics for each 24-hour shift for a total of thirty full-time personnel.

   Fire Station 127 is staffed with a 6-person Light Force which consists of a 4-person quint, which is a combination engine/ladder truck apparatus staffed with 1-Captain, 1-Fire Fighter Specialist and 2-Fire Fighters, and a 2-person engine company staffed with 1-Fire Fighter Specialist and 1-Fire Fighter for each 24-hour shift for a total of eighteen full-time personnel.

6. The fire stations from other jurisdictions (e.g., the cities of Los Angeles, Carson Torrance, etc.) that respond to emergency calls from the Project Site, as required, under mutual aid agreements with the County.

   It is automatic aid agreements that would specify what resources from other local agencies respond to a specific area. There is no automatic aid agreement with any fire protection agency that affects the Project Site. Mutual aid is by definition available everywhere but is meant to be invoked only in rare and unusual circumstances.

7. Planned improvements to LACFD firefighting facilities in the area (i.e., expansion, new facilities, additional staffing, etc.), if applicable.

   To date, there are no planned improvements in the immediate area of the Project Site.

8. LACFD distance and response time standard(s) relevant to the Project.

   The Fire Department uses national guidelines of a 5-minute response time for the

1st-arriving unit for fire and EMS responses and 8 minutes for the advanced life support (paramedic) unit in urban areas.

9. LACFD development requirements relevant to the Project, including, but not limited to:

   This question should be addressed by Land Development Division.

   a. Fire flow;
   b. Fire protection devices (e.g., sprinklers, alarms);
   c. Fire access (including ingress/egress, turning radii, driveway width, grading, etc.);
   d. Fire hydrants and spacing

10. Any special fire protection requirements, concerns, or necessary measures due to the location or other attributes of the Project (such as for new buildings of up to 7 stories in height).

    This question should be addressed by Land Development Division. Planning has no further comments.

LAND DEVELOPMENT UNIT:

The Land Development Unit is reviewing the proposed "Harbor-UCLA Medical Center Campus Master Plan Project" for access and water system requirements. The Land Development Unit comments are only general requirements. Specific fire and life safety requirements will be addressed during the review for building and fire plan check phases. There may be additional requirements during this time.

The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

Access Requirements

1. The proposed development will require multiple ingress/egress access for the circulation of traffic and emergency response issues.

2. All on-site Fire Department's vehicular access roads shall be labeled as "Private Driveway and Fire Lane" on the site plan along with the widths clearly depicted on the plan. Labeling is necessary to assure the access availability for Fire

Department use. The designation allows for appropriate signage prohibiting parking.

a. The Fire Apparatus Access Road shall be cross-hatch on the site plan, with the width clearly noted on the plan.

3. Every building constructed shall be accessible to Fire Department's apparatus by way of access roadways with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

4. Fire Apparatus Access Roads must be installed and maintained in a serviceable manner prior to and during the time of construction.

5. The edge of the Fire Apparatus Access Road shall be located a minimum of 5 feet from the building or any projections there from.

6. The Fire Apparatus Access Roads and designated fire lanes shall be measured from flow line to flow line.

7. The dimensions of the approved Fire Apparatus Access Roads shall be maintained as originally approved by the fire code official.

8. Provide a minimum unobstructed width of 28 feet exclusive of shoulders and an unobstructed vertical clearance "clear to sky" Fire Department's vehicular access to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building when the height of the building above the lowest level of the Fire Department's vehicular access road is more than 30 feet high or the building is more than three stories. The access roadway shall be located a minimum of 15 feet and a maximum of 30 feet from the building and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

9. If the Fire Apparatus Access Road is separated by island, provide a minimum unobstructed width of 20 feet exclusive of shoulders and an unobstructed vertical clearance "clear to sky" Fire Department's vehicular access to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building.

10. Dead-end Fire Apparatus Access Roads in excess of 150 feet in length shall be provided with an approved Fire Department turnaround. Include the dimensions of the turnaround, with the orientation of the turnaround shall be properly placed in the direction of travel of the access roadway.

11. Fire Department Access Roads shall be provided with a 32 foot centerline turning radius. Indicate the centerline, inside, and outside turning radii for each change in direction on the site plan

12. Fire Apparatus Access Roads shall be designed and maintained to support the imposed load of fire apparatus weighing 75,000 lbs., and shall be surfaced so as to provide all-weather driving capabilities. Fire apparatus access roads having a grade of 10 percent or greater shall have a paved or concrete surface.

13. Provide approved signs or other approved notices or markings that include the words "NO PARKING - FIRE LANE". Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. Signs shall be provided for fire apparatus access roads, to clearly indicate the entrance to such road or prohibit the obstruction thereof and at intervals as required by the Fire Inspector.

14. A minimum 5 foot wide approved firefighter access walkway leading from the fire department access road to all required openings in the building's exterior walls shall be provided for firefighting and rescue purposes. Clearly identify firefighter walkway access routes on the site plan. Indicate the slope and walking surface material. Clearly show the required width on the site plan.

15. Fire Apparatus Access Roads shall not be obstructed in any manner including by the parking of vehicles or the use of traffic calming devices including but not limited to, speed bumps, or speed humps. The minimum widths and clearances established in Fire Code Section 503.2.1 shall be maintained at all times.

16. Traffic Calming Devices including but not limited to, speed bumps, and speed humps shall be prohibited unless approved by the fire code official.

17. Security barriers, visual screen barriers or other obstructions shall not be installed on the roof of any building in such a manner as to obstruct firefighter access or egress in the event of fire or other emergency. Parapets shall not exceed 48 inches from the top of the parapet to the roof surface on more than two sides. Clearly indicate the height of all parapets in a section view.

18. Approved building address numbers, building numbers, or approved building identification shall be provided and maintained so as to be plainly visible and legible from the street fronting the property. The numbers shall contrast with their background, be Arabic numerals or alphabet letters, and be a minimum of 4 inches high with a minimum stroke width of 0.5 inch.

19. Multiple residential and commercial buildings having entrances to individual units not visible from the street or road shall have unit numbers displayed in groups for all units within each structure. Such numbers may be grouped on the wall of the structure or mounted on a post independent of the structure and shall be positioned to be plainly visible from the street or road as required by Fire Code 505.3 and in accordance with Fire Code 505.1.

20. Gate Requirements: The method of gate control shall be subject to review by the Fire Department prior to approval. All gates, to control vehicular access, shall be in compliance with the following:

    a. Any single gated opening used for ingress and egress shall be a minimum of 28 feet in-width, clear-to-sky.

    b. Any divided gate opening (when each gate is used for a single direction of travel i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky.

    c. Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device.

    d. The security gate shall be provided with an approved means of emergency operation, and shall be maintained operational at all times and replaced or repaired when defective. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F220. Gates shall be of the swinging or sliding type. Construction of gates shall be of materials that allow manual operation by one person.

e. Gate plans shall be submitted to the Fire Department prior to installation. These plans shall show all locations, widths, and details of the proposed gates.

Water System Requirements

1. All fire hydrants shall measure 6"x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal, and shall be installed in accordance with the County of Los Angeles Fire Department Regulation 8.

2. The development may require fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, the installation of an automatic fire sprinkler system, and type(s) of construction used.

3. The fire hydrant spacing shall be every 300 feet for both the public and the on-site hydrants. The fire hydrants shall meet the following requirements:

   a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.

   b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant.

   c. Additional hydrants will be required if hydrant spacing exceeds specified distances.

4. All required PUBLIC fire hydrants shall be installed, tested, and accepted prior to beginning construction.

5. All private on-site fire hydrants shall be installed, tested, and approved prior to building occupancy.

   a. Plans showing underground piping for private on-site fire hydrants shall be submitted to the Sprinkler Plan Check Unit for review and approval prior to installation.

6. An approved automatic fire sprinkler system is required for the proposed buildings within this development. Submit design plans to the Fire Department Sprinkler Plan Check Unit for review and approval prior to installation.

For any questions regarding the report, please contact FPEA Wally Collins at (323) 890-4243, or at Wally.Collins@fire.lacounty.gov.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance.

2. The County of Los Angeles Fire Department's Forestry Division has no further comments regarding this project.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department has no comments regarding the project fire protection services questionnaire.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

KEVIN T. JOHNSON, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

KTJ:ad

Lester

OFFICE OF THE SHERIFF

COUNTY OF LOS ANGELES

HALL OF JUSTICE

JIM MCDONNELL, SHERIFF

March 31, 2016

Mr. Robert Hilman, Senior Planner II
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

Dear Mr. Hilman:

RESPONSES TO REQUEST FOR INFORMATION
SHERIFF'S FACILITIES AND SERVICES FOR
HARBOR-UCLA MEDICAL CENTER MASTER PLAN PROJECT

Thank you for inviting the Los Angeles County Sheriff's Department (Department) to respond to your Request for Information Regarding Sheriff's Facilities and Services (Request), dated January 28, 2016, for the Harbor-UCLA Medical Center Master Plan (Master Plan). The Master Plan is a policy document to guide long-term development at the Harbor-UCLA Medical Center (Medical Center), a 72-acre campus in the unincorporated community of Harbor City. The Master Plan proposes to create a cohesive campus setting for the Medical Center by: renovating the existing hospital building; replacing aging buildings; and constructing a new hospital tower, biomedical research facilities, parking facilities, and various other site amenities (Project). Upon full implementation of the Master Plan, the Medical Center will contain 2,457,000 square feet of floor area (92% increase over existing conditions), support 7,494 employees (37% increase), and accommodate 730,824 annual patient visits (34% increase).

Law enforcement services to the Medical Center and immediate surroundings are provided by multiple units within the Department. The Medical Center is located in the service area of the Department's Carson Station (Station). Accordingly, the Station reviewed the Request and authored the attached response (see correspondence, dated March 22, 2016, from Captain Chris E. Marks). Law enforcement services within the Medical Center itself are provided by the Department's County Services Bureau (CSB). Thus, CSB also reviewed the request and provided additional information (see correspondence, dated March 18, 2016, from Captain Britta S. Steinbrenner). Lastly, the Department's Transit Bureau South (TBS) provides transit related law enforcement

services for the Los Angeles County Metropolitan Transportation Authority, which serves the Medical Center. In response to the proposal for a Transit Oriented District for the area, TBS has provided information as well (see correspondence, dated March 17, 2016, from Captain Karl R. Schow).

For future reference, the Department provides the following updated contact information (new mailing address) for all requests for review comments, law enforcement service information, California Environmental Quality Act documents, and other related correspondence:

Tracey Jue, Director
Facilities Planning Bureau
Los Angeles County Sheriff's Department
4700 Ramona Boulevard, Fourth Floor
Monterey Park, California 91754
TJue@lasd.org

Attention: Lester Miyoshi, Departmental Facilities Planner
LHMiyosh@lasd.org

Should you have any questions regarding this matter, please contact me at (323) 526-5657, or your staff may contact Lester Miyoshi of my staff at (323) 526-5664.

Sincerely,

JIM McDONNELL, SHERIFF

Tracey Jue, Director
Facilities Planning Bureau

761551N52A – SH-AD-32A (11/90)

COUNTY OF LOS ANGELES

SHERIFF'S DEPARTMENT

"A Tradition of Service"

DATE: March 17, 2016

FILE NO.:

OFFICE CORRESPONDENCE

FROM: KARL R. SCHOW, CAPTAIN
TRANSIT BUREAU SOUTH

TO: TRACEY JUE, DIRECTOR
FACILITIES PLANNING BUREAU

SUBJECT: **HARBOR-UCLA MEDICAL CENTER MASTER PLAN**

The project site for the Harbor-UCLA Medical Center is within Los Angeles County Sheriff's Department, County Services Bureau and Carson Station's policing Jurisdiction. The Los Angeles County Sheriff's Department, Transit Bureau South, has the policing responsibility for the Los Angeles County Metropolitan Transportation Authority (Metro) and shares jurisdiction in that area for transit related crimes only.

Transit Bureau South has two reporting districts in the area. 6851 is the actual reporting district at the project site and 6853 boarders the west side of that location. There were no reported transit related crimes at the project site in 2015. There was a minimal amount of transit related crime in the reporting districts surrounding the project site; however, none of those crimes are related to Harbor-UCLA Medical Center.

After reviewing the master plan, I have determined this project will not have an impact on Transit Bureau South's law enforcement responsibilities. It appears the bus stops that are in the master plan are no different than the bus stops we currently service at that location.

Any additional information needed regarding emergency responses and responsibility at the project site, should be addressed by the Los Angeles County Sheriff's Department, County Services Bureau.

KRS:BS:bs

761551N25A - SH-AD-32A (2/72)

COUNTY OF LOS ANGELES

SHERIFF'S DEPARTMENT

A Tradition of Service Since 1850

DATE: March 18, 2016

OFFICE CORRESPONDENCE FILE NO:

FROM: BRITTA S. STEINBRENNER, CAPTAIN
COUNTY SERVICES BUREAU

TO: TRACY JUE, DIRECTOR
FACILITIES PLANNING BUREAU

SUBJECT: **HARBOR-UCLA MEDICAL CENTER MASTER PLAN PROJECT INITIAL PROJECTIONS - COUNTY SERVICES BUREAU**

The following information is provided by County Services Bureau (CSB) in response to a Request for Information (Request), dated January 28, 2016, from PCR Services Corporation (Requestor). The Requestor is a consultant to the Los Angeles County Department of Public Works (DPW), and is preparing an environmental impact report for the Harbor-UCLA Medical Center Master Plan (Master Plan). The Master Plan was completed in 2012, and serves as a policy document to guide long-term development at the Harbor-UCLA Medical Center, a 72-acre campus bounded by Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street, in the unincorporated community of West Carson.

The Master Plan proposes to renovate the existing hospital building, replace aging buildings, and construct a new hospital tower, biomedical research facilities, parking facilities, and various other site amenities in a cohesive campus setting (Project). Construction of the proposed Project will proceed in phases through 2030. Upon full implementation of the Master Plan, the campus will contain 2,457,000 square feet of floor area (92% increase over existing conditions), 7,494 employees (37% increase), and 730,824 annual patient visits (34% increase).

The information below is formatted to correspond with the format of the Request:

1. The Medical Center is located within the service area of the Carson Sheriff's Station. However, law enforcement services to this location are provided by CSB. CSB also manages contract security guards at the Medical Center and other County facilities. During the reporting period beginning January 1, 2015 and ending December 31, 2015, there were a total of 67 Part I crimes committed at the Medical Center, including:

   - Murder/non-negligent homicide 0
   - Forcible rape 0
   - Robbery 1
   - Aggravated Assault 1
   - Burglary 1
   - Motor vehicle theft 19
   - Larceny/theft 45
   - Arson 0

2. Sheriff's stations nearest the Medical Center include the Carson Sheriff's Station (two miles), Lomita Sheriff's Station (five miles), Compton Sheriff's Station (eight miles), and Lakewood Sheriff's Station (fourteen miles).

3. As of January 1, 2016, the CSB office at the Medical Center is staffed by 24 sworn personnel and 25 civilian employees. Assets assigned to the CSB at the Medical Center include four radio cars, one Sheriff's Security Officer Vehicle, two unmarked vehicles, two T3 Chariots and four bicycles. CSB operates on a 24-hour basis utilizing multiple shifts (day, night, and early morning). CSB also manages 82 non-LASD security personnel. Based on estimations of increased square footage, indicating a 37% increase in staffing, and a 34% increase in patient load, current staffing levels will have to be increased to meet this need.

4. CSB occupies offices on the first floor of the Medical Center. This enables CSB personnel to be on-site when law enforcement services are needed, and enables LASD personnel to effectively manage contract security guards at this location. Information pertaining to the service boundaries and service populations do not apply to CSB at this location.

5. Arson Explosives Detail: Provides fire and explosive, investigative, technical, and emergency response services. All team members are certified bomb technicians and arson investigators.

   Canine Services Detail: Assists patrol and search operations utilizing specially trained canine deputies and handlers.

   Emergency Services Detail: Coordinates and conducts mountain search and rescue operations, underwater search and rescue operations, swift water and flood rescue operations. All deputies are certified paramedics and rescue divers.

   Haz-Mat Detail: Responds to incidents involving chemical, biological, radiological, and nuclear weapons.

   Special Enforcement Detail: Provides high-risk tactical operations in response to incidents involving barricaded persons, hostage situations, high-risk warrants, and security for visiting dignitaries.

6. The Department's Emergency Operations Bureau, specifically the Tactical Planning Unit and Sheriff's Response Team, responds to any natural or manmade disaster or emergency that requires the provision of law, order, emergency care, and shelter for disaster victims. The Department also adheres to the policies and procedures of the Los Angeles County Operational Area Emergency Response Plan (OAERP). The OAERP is maintained by the County Office of Emergency Management (OEM), and outlines the organizational structure for the County's coordinated response to catastrophic events. The Department also works in partnership with the OEM to maintain the County's Emergency Operations Center (EOC) in a state of operational readiness. The EOC is the County's central command and management facility occupied by liaisons from County, State, and Federal agencies for the purpose of implementing the principles of emergency preparedness and emergency management at a strategic level, and ensuring the continuity of government operations.

7. Since CSB occupies offices within the Medical Center, CSB personnel response times to calls for service are extremely rapid. Response times for emergent, priority, and routine calls for service are maintained within department standards, often times within 5 minutes.
8. The County Office of Emergency Management maintains the framework for mutual aid agreements between the Department and neighboring law enforcement agencies, including the police departments of the Cities of Los Angeles, Long Beach, Torrance, and Gardena.
9. CSB has occupied office space at the Medical Center since 2010. CSB occupies a main office inside of the hospital which consists of approximately 927 square feet, and includes administrative offices, report writing area and dispatch center. CSB also occupies a locker room located at 21840 Normandie Avenue, Torrance CA. It is located at the west end of the campus. The area is approximately 1,672 square feet. The locker room contains male and female locker rooms, restroom/shower, male and female bunk rooms, a kitchenette, as well as a secure parking area for 11 vehicles. The CSB Harbor-UCLA dispatch area was recently remodeled however it is undersized and would not be adequate for use if there was an expansion of hospital facilities and corresponding staffing models. CSB Harbor-UCLA administrative offices are also inadequate in size. The building housing the locker room is currently slated to be torn down as part of the master plan. CSB is aware the Master Plan for the Medical Center includes offices and facilities dedicated to CSB needs and personnel.
10. The Department generally prescribes to the principles of Crime Prevention through Environmental Design (CPTED). The goal of CPTED is to reduce opportunities for criminal activities by employing physical design features that discourage anti-social behavior, while encouraging the legitimate use of the site. The overall tenets of CPTED include defensible space, territoriality, surveillance, lighting, landscaping, and physical security. With advanced notice, CSB personnel are available to assist in developing an effective CPTED with the Project developer.

Thank you for including CSB in the environmental review process for the proposed Project. Should you have any questions regarding this matter, please contact Captain Britta Steinbrenner at (213) 974-1120 or Lieutenant Chris Kovac at (310) 222-3311.

BSS:GLE:kmk

OFFICE OF THE SHERIFF

COUNTY OF LOS ANGELES

HALL OF JUSTICE

JIM MCDONNELL, SHERIFF

(310) 830-1123

March 22, 2016

Ms. Tracey Jue, Director
Facilities Planning Bureau
1000 South Fremont Avenue
Building A9-East, Fifth Floor, Unit 47
Alhambra, California 91803

SUBJECT: RESPONSE TO REQUEST FOR INFORMATION REGARDING SHERIFF'S FACILITIES AND SERVICES FOR THE HARBOR-UCLA MEDICAL CENTER MASTER PLAN PROJECT

The following information is provided by the Carson Sheriff's Station (Station) in response to a Request for Information (Request), dated January 28, 2016, from PCR Services Corporation (Requestor). The Requestor is a consultant to the Los Angeles County Department of Public Works (DPW), and is preparing an environmental impact report for the Harbor-UCLA Medical Center Master Plan (Master Plan). The Master Plan was completed in 2012, and serves as a policy document to guide long-term development at the Harbor-UCLA Medical Center, a 72-acre campus bounded by Carson Street, Vermont Avenue, Normandie Avenue, and 220th Street, in the unincorporated community of Harbor City.

The Master Plan proposes to renovate the existing hospital building, replace aging buildings, and construct a new hospital tower, biomedical research facilities, parking facilities, and various other site amenities in a cohesive campus setting (Project). Construction of the proposed Project will proceed in phases through 2030. Upon full implementation of the Master Plan, the campus will contain 2,457,000 square feet of floor area (92% increase over existing conditions), 7,494 employees (37% increase), and 730,824 annual patient visits (34% increase).

OFFICE OF THE SHERIFF

COUNTY OF LOS ANGELES

HALL OF JUSTICE

JIM MCDONNELL, SHERIFF

The information below is formatted to correspond with the format of the Request:

1. The Medical Center is located in the unincorporated community of Harbor City, for which Carson Station (South Patrol Division) provides general law enforcement services. The medical center is located within Los Angeles County Sheriff's Department (LASD) Reporting District 8545. County Services Bureau (County Services Division) provides law enforcement services for Reporting District 8545. See response from County Services Bureau for further.

2. County Services Bureau (CSB) is the primary provider of law enforcement services to the Medical Center. They have an office inside the Medical Center. Other Sheriff's stations nearest the Medical Center include the Carson (two miles), Lomita (five miles), Compton (eight miles), and Lakewood (fourteen miles) stations.
CSB provides primary law enforcement services to the Medical Center. CSB also manages contract security guards at the Medical Center and other County facilities.

3. As of January 1, 2016, Carson Station is staffed by approximately 177 sworn personnel and 40 civilian employees. Assets assigned to Carson Station include an undisclosed number of patrol vehicles, motorcycles, unmarked vehicles, and other specialty vehicles. The Station is equipped with a helipad for emergency flight operations. The Station operates on a 24-hour basis utilizing multiple shifts (day, night, and early morning) and an undisclosed number of personnel per shift.
The Medical Center contains offices that are occupied by CSB. This enables CSB personnel to be on-site when law enforcement services are needed, and allows them to effectively manage contract security guards at that location. As of January 1, 2016, the office is staffed by CSD personnel during daytime hours, seven days a week.

4. Carson Sheriff's Station is located at 21356 South Avalon Boulevard in the City of Carson, and is approximately two miles from the Medical Center. The Station's service area is approximately 24.21 square miles, and includes the City of Carson and unincorporated communities of Rancho Dominquez, Torrance, and Harbor City.
The estimated resident population of our service area is 117,000. Projections are not available for future service areas and resident populations.

5. Arson Explosives Detail: Provides fire and explosive, investigative, technical, and emergency response services. All team members are certified bomb technicians and arson investigators.

   Canine Services Detail: Assists patrol and search operations utilizing specially trained canine deputies and handlers.

   Emergency Services Detail: Coordinates and conducts mountain search and rescue operations, underwater search and rescue operations, swift water and flood rescue operations. All deputies are certified paramedics and rescue divers.

   Hazardous Materials Detail: Responds to incidents involving chemical, biological, radiological, and nuclear weapons.

   Special Enforcement Detail: Provides high-risk tactical operations in response to incidents involving barricaded persons, hostage situations, high-risk warrants, and security for visiting dignitaries.

6. The Department's Emergency Operations Bureau (EOB), specifically the Tactical Planning Unit and Sheriff's Response Team, responds to any natural or manmade disaster or emergency that requires the provision of law, order, emergency care, and shelter for disaster victims. The Department also adheres to the policies and procedures of the Los Angeles County Operational Area Emergency Response Plan (OAERP). The OAERP is maintained by the County Office of Emergency Management (OEM), and outlines the organizational structure for the County's coordinated response to catastrophic events. The Department

also works in partnership with the OEM to maintain the County's Emergency Operations Center (EOC) in a state of operational readiness. The EOC is the County's central command and management facility occupied by liaisons from County, State, and Federal agencies for the purpose of implementing the principles of emergency preparedness and emergency management at a strategic level, and ensuring the continuity of government operations.

7. Target response times to calls for service are not established by the Department. Rather, the Department generally adheres to the following, widely-accepted law enforcement industry standards for responding to emergent, priority, and routine calls for service: 10 minutes, 20 minutes, and 60 minutes, respectively.

   The Station's estimated response times to the Medical Center for emergent, priority, and routine calls for service are as follows: 4 minutes, 7 minutes, and 28 minutes, respectively.

8. The OEM maintains the framework for mutual aid agreements between the Department and neighboring law enforcement agencies, including the police departments of the cities of Los Angeles, Long Beach, Torrance, and Gardena.

9. The Station was built in 1974, and has operated above capacity for many years. Presently there are plans in development to expand this facility in order to meet the growing needs of the communities we serve.

10. Special Protection Requirements or Recommendations: The community surrounding the Medical Center currently experiences traffic congestion due to the Medical Center, freeway access, and major thoroughfares. Many agencies, some from substantial distances away, transport patients to the Medical Center to utilize its Type I trauma center and its mental health services. The surrounding areas have also experienced an increase in the amount of homeless persons loitering on the streets and sleeping in encampments. It is believed this is at least in part due to the lack of transportation and placement services available. Many of those

patients transported there end up as part of the homeless population in the areas surrounding the Medical Center upon their release from the facility.

Carson Station has experienced an increase in the amount of calls for service and reported Part 1 crimes in the unincorporated communities that surround the Medical Center. See attached document.

With the proposed increase in the size of the Medical Center, the increase in the amount of patients and visitors and the increase in Medical Center employees, additional consultation and study should be afforded to adequately estimate the need for additional law enforcement services.

Additional consideration should be allowed for installation of shared video monitoring by the three Sheriff divisions (Carson Station, County Services Bureau, Transit Services Division) for the area surrounding the Medical Center.

Lastly, all additional planning should include the creation of the Transit Oriented District currently in a simultaneous planning stage.

Thank you for including Carson Station in the environmental review process for the proposed Project. Should you have any questions regarding this matter, please contact me or Lieutenant Bill Evans at (310) 830-1123.

Sincerely,
JIM McDONNELL, SHERIFF

Chris E. Marks, Captain
Carson Station Commander

Unincorporated Areas
Calls for Service, Average Response Times, 918 calls & Part I Crimes
2011 -2015

Calls For Service					
Emergent	298	384	308	336	420
Priority	887	1084	1123	1170	1241
Routine	3582	3826	3822	4231	4783
Total:	**4767**	**5294**	**5253**	**5737**	**6444**

Source: RAPS_13

Average Response Times					
Emergent	5.1	5.5	4.6	5.2	4.2
Priority	8.2	9	8.4	7.9	7.7
Routine	42.1	49.3	38.5	36.1	32.2

Source: RAPS_417

918 Calls					
P918 and P918V	45	68	68	72	123
918 and 918V	31	62	68	83	74
Total:	**76**	**130**	**136**	**155**	**197**

Source: RAPS Incident Inquiry

Part 1 Crimes					
Homicide	0	4	2	4	1
Rape	1	1	1	3	1
Robbery, Weapon	8	17	14	11	13
Robbery, Strong-arm	12	15	9	7	10
Aggravated Assault	58	57	48	45	47
Burglary, Residence	82	82	98	81	103
Burglary, Other structure	39	43	47	56	57
Grand Theft	61	47	52	58	59
Grand Theft Auto	89	106	97	121	108
Arson	3	2	6	2	3
Vehicle Burglary	103	118	113	95	119
Petty Theft	118	144	107	121	127
Part I Total	**574**	**636**	**594**	**604**	**648**

Source: 515C

Robert Hilman

From: Clement Lau [clau@parks.lacounty.gov]
Sent: Thursday, February 11, 2016 7:18 AM
To: Robert Hilman
Cc: Julie Yom
Subject: RE: Harbor-UCLA Medical Center Project: Request for Information

Hi Robert,

Thank you for your e-mail and letter. Please find below my responses to your questions:

1. The only park in the unincorporated community of West Carson is Park Learning Grove County Park (http://parks.lacounty.gov/wps/portal/dpr/Parks/Park_Learning_Grove_County_Park). It is classified as a "pocket park" and has an area of 0.53 acres. The County entered into a Community Recreation Agreement (CRA) with the Los Angeles Unified School District for this park area on the campus of Meyler Street School. According to the CRA, the park is only open two hours a day during the week, from 2:30 to 4:30 pm (Monday through Friday). The park is closed on Saturdays, Sundays, and holidays.
2. Based on the latest data available through the Los Angeles Countywide Parks Needs Assessment (http://lacountyparkneeds.org/), Los Angeles County has an average of 3.3 acres of local parkland per 1,000 residents. West Carson has 0.02 acre of parkland per 1,000 residents (0.53 acres / 21,715 residents x 1,000).
3. Park Learning Grove has very limited hours and no amenities. Even though a CRA is in place, it is unclear whether the park is actually open during those hours because the school has complete control over access to the park.
4. The Los Angeles Neighborhood Land Trust (LANLT), an non-profit organization, is in the process of developing a 8.5-acre neighborhood park located at 1000 West 204th Street in West Carson. The County will be contributing Quimby (park) funds to assist in the development of this park. For more information about this project, please contact Mark Glassock with the LANLT. Also, my Department is in the process of developing the Countywide Parks Needs Assessment Report. When published in May, it will contain a list of priority park projects identified by community members for each Study Area, including West Carson.
5. As indicated in the Parks and Recreation Element of the County General Plan, the County's goal for local parkland is 4 acres per 1,000 residents.
6. Given the lack of parkland in West Carson and limited availability of vacant land for new park development, the Harbor-UCLA Medical Center may consider partnering with my Department to develop a project like the Martin Luther King, Jr. Fitness Garden (http://parks.lacounty.gov/wps/portal/dpr/Parks/Martin_Luther_King_Jr_Fitness_Park). This garden complements the Martin Luther King, Jr. Center for Public Health building in Willowbrook, and offers a walking path and par course fitness equipment surrounded by beautiful flowers and shrubs.

If you have any questions or need clarification, please let me know.

Clement

Clement Lau, AICP
Departmental Facilities Planner II
County of Los Angeles
Department of Parks and Recreation
Planning and CEQA Section
510 S. Vermont Avenue
Los Angeles, CA 90020
Tel: (213) 351-5120

Fax: (213) 639-3959
E-mail: clau@parks.lacounty.gov
Please note that our office is closed on Fridays.

From: Robert Hilman <R.Hilman@pcrnet.com>
Sent: Thursday, January 28, 2016 1:36:48 PM
To: Clement Lau
Subject: Harbor-UCLA Medical Center Project: Request for Information

Dear Mr. Lau,

PCR Services Corporation (PCR) is preparing an Environmental Impact Report (EIR) for the Harbor-UCLA Medical Center Master Plan Project (Project) pursuant to the California Environmental Quality Act (CEQA). The EIR will include an assessment of the Project's potential impacts on parks and recreational facilities and services. In order to adequately identify and assess the full range of the Project's potential impacts, we are requesting information from your agency. Attached please find an information request letter and Project Description attachment. In order to maintain the schedule for the EIR, we would appreciate your written response by **Friday, February 12, 2016**.

If you have any questions concerning this request, please contact me at (310) 451-4488 (x1111). If you would prefer to e-mail your responses, please send them to r.hilman@pcrnet.com.

We appreciate your time and assistance with this request which is also being sent to you via regular U.S. mail.

Sincerely,

Robert Hilman
Senior Planner II

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Robert Hilman

From: Cedric Hicks [CHicks@carson.ca.us]
Sent: Tuesday, February 02, 2016 2:32 PM
To: Robert Hilman
Cc: Arnold Carraway; Shannan Powell
Subject: RE: Harbor-UCLA Medical Center Project: Request for Information
Attachments: Harbor-UCLA Needs Assessment.xlsx

Hi Robert,
Pursuant to our conversation today, the following report has been developed which includes City of Cason parks that would be impacted by residents from the Harbor Gateway area as well as the Harbor UCLA Medical Center. Included in the report are Carson, Carriage Crest and Veterans Parks.

Included in the cc's are staff of the City of Carson Recreation and Human Services Division; Arnold Carraway, Recreation/Human Services Superintendent and Shannan Powell, Admin Specialist.
Sincerely,

Cedric L. Hicks, Sr.
City of Carson
Director of Community Services
310-847-3570 Office

Carson
All-America City
NATIONAL CIVIC LEAGUE
2015

City Hall is Closed on Fridays

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From: Robert Hilman [mailto:R.Hilman@pcrnet.com]
Sent: Thursday, January 28, 2016 2:09 PM
To: Cedric Hicks
Subject: Harbor-UCLA Medical Center Project: Request for Information

Dear Mr. Hicks

PCR Services Corporation (PCR) is preparing an Environmental Impact Report (EIR) for the Harbor-UCLA Medical Center Master Plan Project (Project) pursuant to the California Environmental Quality Act (CEQA). The EIR will include an assessment of the Project's potential impacts on parks and creational facilities and services (the Project site is located in unincorporated area and served by County of L.A. Parks, but we would also like to address any potential for impacts to parks in the City of Carson). In order to adequately identify and assess the full range of the Project's potential impacts,

we are requesting information from your agency. Attached please find an information request letter and Project Description attachment. In order to maintain the schedule for the EIR, we would appreciate your written response by **Friday, February 12, 2016**.

If you have any questions concerning this request, please contact me at (310) 451-4488 (x1111). If you would prefer to e-mail your response, please send it to r.hilman@pcrnet.com.

We appreciate your time and assistance with this request which is also being sent to you via regular U.S. mail.

Sincerely,

Robert Hilman
Senior Planner II

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City of Carson
Harbor-UCLA Medical Center Project
Needs Assessment Report
February 2016

Location of Park	Size of Park	Classification of Park	Service Areas of Park	Ratio of Parkland per Resident	Current Capacity/ Level of Use of Park	City-adopted parks & rec Standards & Acreage Goals Used in Analyzing Project
Carson Park 21411 S. Orrick Ave. Carson, CA 90745	10.83 Acres	Community Use	Carson, Uninc. West Carson, Harbor Gateway, Wilmington, Harbor City, Torrance	0.75 park acres/ 1,000 residents	Heavily Utilized by Service Area	Determined by Carson City Council
Carriage Crest Park 23800 Figueroa Street Carson, CA 90745	4.85 Acres	Community Use	Carson, Uninc. West Carson, Harbor Gateway, Wilmington, Harbor City, Torrance	0.71 park acres/ 1,000 resident	Heavily Utilized by Service Area	Determined by Carson City Council
Veterans Park 22400 Moneta Ave. Carson, CA 90745	12.31 Acres	Community Use	Carson, Uninc. West Carson, Harbor Gateway, Wilmington, Harbor City, Torrance	1.23 park acres/ 1,000 resident	Moderately Utilized by Service Area	Determined by Carson City Council

Recreational Facilities near the Project Site	Future plans for construction or expansion of City parks
N/A	
N/A	
N/A	

Robert Hilman

From: Mark Glassock [mglassock@lanlt.org]
Sent: Monday, February 29, 2016 5:46 PM
To: Robert Hilman
Cc: Clement Lau (clau@parks.lacounty.gov)
Subject: RE: Harbor-UCLA Medical Center Project: Request for Information

Dear Robert,

Thanks for reaching out. We're very excited about the park development project.

Answers to questions below:

Would the park be a County park or a LANLT park? Park may become a public park to be operated and maintained by the County of Los Angeles, pending the approval of a lease agreement by the Board of Supervisors. The park site is owned by the Del Amo Neighborhood Park LLC.

When is the park expected to be completed and operational? We're currently scheduled for a Spring 2018 opening.

What amenities (e.g., playing fields, picnic benches, restrooms, etc.) would be provided at the park? The current design of the park includes the following:

- Children's play area
- Basketball court
- Baseball/softball field
- Walking and jogging trails
- Benches and picnic tables
- Parking lot
- Planting and irrigation (including California native plant species)
- Security lighting
- Maintenance building and yard
- Restroom building
- 2 futsal courts
- Volleyball court
- Shade structures
- Exercise equipment
- Performance area

Name of the park? The park is currently unnamed. We should have something by May.

Please let me know if you have any additional questions.

Thanks,

Mark

Mark Glassock, MPH
Director of Special Projects

Los Angeles Neighborhood Land Trust
315 W. 9th St., Suite 950
Los Angeles, CA 90015
213-572-0188 x221
213-337-2702 (direct)
www.lanlt.org

Give LA the gift of green space! Donate today!

From: Robert Hilman [mailto:R.Hilman@pcrnet.com]
Sent: Friday, February 26, 2016 10:33 AM
To: Mark Glassock <mglassock@lanlt.org>
Subject: FW: Harbor-UCLA Medical Center Project: Request for Information

Hello Mr. Glassrock,

One more quick question. What will be the name of the park?

Thanks,

Robert Hilman
Senior Planner II

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From: Robert Hilman
Sent: Friday, February 26, 2016 10:06 AM
To: 'mglassock@lanlt.org'
Subject: Harbor-UCLA Medical Center Project: Request for Information

Hello Mr. Glassrock,

Clement Lau at the County of Los Angeles Department of Parks and Recreation recommended I contact.

PCR is preparing an Environmental Impact Report (EIR) for the above referenced Project located at 1000 W. Carson Street on unincorporated (e.g., County) land in Torrance. As part of this effort, we are preparing an analysis of the Project's potential impacts on public parks. Clement indicated that the Los Angeles Neighborhood Land Trust (LANLT) is in the process of developing an 8.5-acre neighborhood park at 1000 W. 204th Street, with the County contributing or to contribute Quimby (park) funds to assist in the development of this park. It would be a great help if you could answer the following questions for us concerning this park:

1. Would the park be a County park or a LANLT park?
2. When is the park expected to be completed and operational?
3. What amenities (e.g., playing fields, picnic benches, restrooms, etc.) would be provided at the park?

Thanks,

Robert Hilman
Senior Planner II

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Robert Hilman

From: Jones, John [JJONES@TorranceCA.gov]
Sent: Monday, February 01, 2016 1:00 PM
To: Robert Hilman
Subject: RE: Harbor-UCLA Medical Center Project: Request for Information

Mr. Hilman

Thank you for answering my call today. After review of this project, there is no impact on the City of Torrance Parks or Programs.

John Jones
Community Services Director

From: Robert Hilman [mailto:R.Hilman@pcrnet.com]
Sent: Thursday, January 28, 2016 2:06 PM
To: Jones, John
Subject: Harbor-UCLA Medical Center Project: Request for Information

Dear Mr. Jones,

PCR Services Corporation (PCR) is preparing an Environmental Impact Report (EIR) for the Harbor-UCLA Medical Center Master Plan Project (Project) pursuant to the California Environmental Quality Act (CEQA). The EIR will include an assessment of the Project's potential impacts on parks and creational facilities and services (the Project site is located in unincorporated area and served by County of L.A. Parks, but we would also like to address any potential for impacts to parks in the City of Torrance). In order to adequately identify and assess the full range of the Project's potential impacts, we are requesting information from your agency. Attached please find an information request letter and Project Description attachment. In order to maintain the schedule for the EIR, we would appreciate your written response by **Friday, February 12, 2016**.

If you have any questions concerning this request, please contact me at (310) 451-4488 (x1111). If you would prefer to e-mail your response, please send it to r.hilman@pcrnet.com.

We appreciate your time and assistance with this request which is also being sent to you via regular U.S. mail.

Sincerely,

Robert Hilman
Senior Planner II

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LOS ANGELES UNIFIED SCHOOL DISTRICT

Facilities Services Division

DATE: January 29, 2016

TO: Robert Hilman. Senior Planner II
PCR Services Corporation
One Venture, Suite 150
Irvine, CA 92618

FROM: Rena Perez, Director
Master Planning & Demographics

SUBJECT: Environmental Impact Report Information Requested for: ***HARBOR-UCLA MEDICAL CENTER PROJECT,*** *the project includes the addition and renovation of the existing Hospital bldg. for other uses, new biomedical research facilities in a bioscience campus area, parking, replacement of other aging facilities and bldgs. The Medical Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east and Normandie Avenue on the west, Los Angeles, CA, 90502.*

Included please find a ***LAUSD Schools Enrollments and Capacities Report*** for the schools that may be impacted by the development project(s) in question. This report contains data on each school's current and projected capacities, enrollments, and school calendars, and is designed to address any questions pertaining to overcrowding and factors related to school capacity.

Please note that the data in this report *already take into account* portable classrooms on site, additions being built onto existing schools, student permits and transfers, specific educational programs running at the schools, and any other operational activities or educational programming that affects the capacities and enrollments of LAUSD's schools. Schools listed in the report reflect data from school year (SY) 14-15. Enrollment and capacities reflect data from SY 13-14.

Additional information on LAUSD's Capital Improvement programs can be found on LAUSD's Facilities Services Division main webpage at www.laschools.org.

MASTER PLANNING AND DEMOGRAPHICS RESPONSE TO SPECIFIC QUESTIONS

Question: 1 The project is located in a **High School** attendance choice/option area. Please see LAUSD Schools Enrollments and Capacities Report details;

Questions: 2 & 6 Please refer to the Enrollments and Capacities Report for identification of any new schools planned to relieve known overcrowding.

Questions: 4 & 5 Please contact the LAUSD Developer Fee Program Office (DFPO) at (213) 241-0715 for more information regarding fees and student generation rates.

ATTACHMENTS

1. LAUSD SCHOOLS ENROLLMENTS AND CAPACITIES REPORT
2. BOUNDARY DESCRIPTIONS FOR SCHOOLS SERVING PROPOSED PROJECT
   Attendance area boundary descriptions for existing schools identified as serving the proposed project.

Sincerely,

Rena Perez, Director

Los Angeles Unified School District - Facilities Services Division – Master Planning & Demographics
333 S. Beaudry Ave., 23rd Floor, Los Angeles, CA 90017
Telephone (213) 241-8044 • Fax (213) 241-2076

LAUSD SCHOOLS ENROLLMENTS AND CAPACITIES

PROJECT SERVED: Harbor-UCLA Medical Center Project, the project includes the addition and renovation of the existing Hospital bldg for other uses, new biomedical research facilities in a bioscience campus area, parking, replacement of other aging facilities and bldgs. The Medical Campus is bordered by Carson St on the north, 220th St on the south, Vermont Ave on the east and Normandie Ave on the west, Los Angeles, CA, 90502.

SCHOOL YEAR: 2013-2014
(Schools listed in the report reflect data from school year (SY) 14-15. Enrollment and capacities reflect data from SY 13-14.)

1	2	3	4	5	6	7	8	9	10	11	12
Location Code	School Name	Current Calendar	Current Capacity	Resident Enrollment	Actual Enrollment	**Current seating overage/(shortage)**	Overcrowded **Now**?	Projected Capacity	Projected Enrollment	**Projected seating overage/(shortage)**	Overcrowding Projected in **Future**?
7342	MEYLER EL	1 TRK	846	818	797	28	**Yes**	733	909	(176)	**Yes**
8487	WHITE MS	1 TRK	1743	1428	1701	315	**No**	1543	1270	273	**No**
a	**SCHOOL CHOICE AREA TOTALS (schools listed below)**	**-**	**3443**	**3207**	**3253**	**236**	**No**	**2910**	**3177**	**(267)**	**Yes**
	NARBONNE HS ZONE OF CHOICE										
8779	NARBONNE SH	1 TRK	2956	-	2486	-	-	2502	-	-	-
8838	NARBONNE SH HARTS LA	1 TRK	487	-	344	-	-	408	-	-	-

[a] Schools & programs that are part of a "school choice area" pull enrollments from the school(s) that have resident areas, as defined by attendance boundaries.
The individual school and calculated total capacities and enrollments for school choice areas are reported to show current and projected seating overage/shortage and overcrowding (shaded green color).
If any of the school choice area schools is multi-track, then the service area is considered overcrowded.

Schools Planned to Relieve Known Overcrowding

	None

13
N/A

NOTES:

[1] School's ID code.

[2] School's name

[3] The current calendar the school is operating on. Schools operate on a 'multi-track' calendar (listed as 4 TRK), because of overcrowded conditions.

[4] School's current operating capacity, or the maximum number of students the school can serve while operating on its current calendar. Excludes capacity allocated to charter co-locations. Includes capacity for magnet program.

[5] The total number of students living in the school's attendance area and who are eligible to attend the school. Includes magnet students.
-Multi-track calendars are utilized as one method of providing relief to overcrowded schools by increasing enrollment capacities.
-A key goal of the Superintendent and Board of Education is to return all schools to a traditional 2-semester calendar (1 TRK).

[6] The number of students actually attending the school now, including magnet students.

[7] Current seating overage or (shortage): equal to (current capacity) - (resident enrollment).

[8] Current overcrowding status of school or service area. The school or area is currently overcrowded if any of these conditions exist:
-A school is currently on a multi-track calendar.
-There is currently a seating shortage.
-There is currently a seating overage of LESS THAN or EQUAL TO a 'safety margin' of 30 seats.

[9] School planning capacity. Formulated from a baseline calculation of the number of eligible classrooms after implementing LAUSD operational goals and shifting to a 2-semester (1 TRK) calendar. Includes capacity allocated to by charter co-locations. Includes capacity for magnet programs.

[10] Projected 5-year total number of students living in the school's attendance area and who are eligible to attend the school. Includes magnet students.

[11] Projected seating overage or (shortage): equal to (projected capacity) - (projected enrollment).

[12] Projected overcrowding status of school. The school will be considered overcrowded in the future if any of these conditions exist:
-A school remains on a multi-track calendar.
-There is a seating shortage in the future.
-There is a seating overage of LESS THAN or EQUAL TO a 'safety margin' of 30 seats in the future.

[13] The anticipated capacity of new schools planned for the area. While these new seats will help offset projected overcrowding at the existing schools listed in this report, there may be other overcrowded schools not listed here that are also targeted to be relieved by these new schools. Therefore, it should not be assumed that these planned school capacities will be allocated solely towards offsetting overcrowding at the existing schools listed here.

* Independent Charter: Capacity and/or enrollment information may not be reported for some independent charters.

^ Current capacity shown for QEIA (Quality Education Investment Act) schools includes class-size reduction due to QEIA. Excludes capacity used by charter co-locations. Projected capacity excludes class-size reduction due to QEIA.

‡ Magnet Schools with Resident Kindergarten Enrollment: Resident enrollment is reported for Kindergarten only. Actual enrollment is reported for all grades in school. Projected capacities and enrollments not reported.

o Continuous Enrollment Magnets (CEM) are magnet schools that enroll students from an attendance area boundary and offer year-round enrollment. Priority is given to students residing within the attendance boundary. All other eligible LAUSD students will be selected provided there is still space available.
The school listed in this report includes total enrollment and capacities for all CEM schools on site.

LOS ANGELES UNIFIED SCHOOL DISTRICT
Information **T**echnology **D**ivision

LOC. CODE: 7342

SUBJECT: UPDATE BOUNDARY DESCRIPTION FOR MEYLER STREET SCHOOL EFFECTIVE SEPTEMBER 1, 1963 (CLARIFIED 2-19-91) (UPDATED 7-1-95).

Reconfiguration has changed the grade levels serviced by this school and the boundary description has been updated to reflect this change. This updating does not change the intent of the boundary as it was approved on September 1, 1963 (clarified 2-19-91). The description starts at the most northwesterly corner and follows the streets in clockwise order. Boundaries are on the center of the street unless otherwise noted.

This is an official copy for your file.

(GRADES K-5)

219TH STREET * NORMANDIE AVENUE * CARSON STREET * HARBOR FREEWAY * 223RD STREET * VERMONT AVENUE * SEPULVEDA BOULEVARD * LOS ANGELES UNIFIED SCHOOL DISTRICT BOUNDARY.

For assistance, please call Demographic and Boundary Unit, Information Technology Division, at (213) 625-6181.

APPROVED: JOHN K. NAGATA, Assistant Superintendent, Information Technology Division

DISTRIBUTION:

School	Demographic and Boundary Unit
Heritage School	School Traffic and Safety Education Section
Pupil Statistics	Department of Transportation, City of L. A.
Transportation Branch	

LOS ANGELES UNIFIED SCHOOL DISTRICT
Facilities **S**ervices **D**ivision

LOC. CODE: 8487 **COST CENTER: 1848701**

SUBJECT: UPDATE BOUNDARY DESCRIPTION FOR STEPHEN M. WHITE MIDDLE SCHOOL EFFECTIVE JULY 1, 1995 (CLARIFIED 3-14-2003; 10-1-2007) (UPDATED 7-1-1996; 7-1-2010).

Reconfiguration has changed the grade levels serviced by this school and the boundary description has been updated to reflect this change. This updating does not change the intent of the boundary as it was approved on July 1, 1995 clarified 3-14-2003, 10-1-2007; updated 7-1-1996). The description starts at the most northwesterly corner and follows the streets in clockwise order. Boundaries are on the center of the street unless otherwise noted.

This is an official copy for your file.

(GRADES 6 - 8)

190TH STREET * HARBOR FREEWAY * SAN DIEGO FREEWAY * LOS ANGELES COUNTY FLOOD CONTROL CHANNEL * DOLORES STREET AND EXTENSION * 231ST STREET AND EXTENSION (BOTH SIDES EXCLUDED, INCLUDING 23101 DOLORES STREET) * MAIN STREET * SEPULVEDA BOULEVARD * HARBOR FREEWAY * 228TH STREET * MAIN STREET TO 220TH STREET * MAIN STREET (BOTH SIDES) * CARSON STREET * FIGUEROA STREET * DOMINGUEZ STREET EXTENDED * MAIN STREET * DEL AMO BOULEVARD * NORMANDIE AVENUE * 212TH STREET (BOTH SIDES EXCLUDED) * ROYAL BOULEVARD AND EXTENSION * FLOOD CONTROL CHANNEL * JAFFREY AVENUE (BOTH SIDES EXCLUDED) AND EXTENSION * 214TH STREET (BOTH SIDES EXCLUDED) * VERMONT AVENUE * CARSON STREET * HARBOR FREEWAY * 223RD STREET * VERMONT AVENUE * SEPULVEDA BOULEVARD * NORMANDIE AVENUE * LOS ANGELES COUNTY FLOOD CONTROL CHANNEL * LOS ANGELES UNIFIED SCHOOL DISTRICT BOUNDARY * FRANCISCO STREET (BOTH SIDES) * NORMANDIE AVENUE.

(GRADES 7 - 8)

DEL AMO BOULEVARD * MAIN STREET * DOMINGUEZ STREET EXTENDED * FIGUEROA STREET * CARSON STREET * VERMONT AVENUE * 214TH STREET (BOTH SIDES) * JAFFREY AVENUE (BOTH SIDES) AND EXTENSION * FLOOD CONTROL CHANNEL * ROYAL BOULEVARD AND EXTENSION * 212TH STREET (BOTH SIDES) * NORMANDIE AVENUE.

OPTIONAL: WHITE MIDDLE SCHOOL AND CAROLDALE LEARNING COMMUNITY

(GRADES 6 - 8)

CARSON STREET * MAIN STREET (BOTH SIDES EXCLUDED) TO 220TH STREET * MAIN STREET * 228TH STREET * HARBOR FREEWAY * SEPULVEDA BOULEVARD * VERMONT AVENUE * 223RD STREET * HARBOR FREEWAY

(OVER)

OPTIONAL: WHITE, CARNEGIE, AND WILMINGTON MIDDLE SCHOOLS

(THIS OPTION DEPENDENT ON SPACE AVAILABLE AT WILMINGTON MIDDLE SCHOOL).

(GRADES 6 - 8)

231ST STREET AND EXTENSIONS (BOTH SIDES, INCLUDING 23100 DOLORES STREET) TO ANCHOR AVENUE * 231ST STREET * BAYPORT STREET * AVALON BOULEVARD * SEPULVEDA BOULEVARD * MAIN STREET

For assistance, please call Master Planning & Demographics, Facilities Services Division, at (213) 241-8044.

APPROVED: JAMES SOHN, Chief Facilities Executive, Facilities Services Division

DISTRIBUTION: School
Transportation Branch
Master Planning and Demographics
Office of Environmental Health and Safety
Department of Transportation, City of L. A.

LOS ANGELES UNIFIED SCHOOL DISTRICT
Facilities **S**ervices **D**ivision

LOC. CODE: 8779 **COST CENTER: 1877901**

SUBJECT: CLARIFICATION OF THE BOUNDARY DESCRIPTION FOR NATHANIEL NARBONNE SENIOR HIGH SCHOOL EFFECTIVE MAY 1, 1971 (CORRECTED 8-15-1974) (UPDATED 7-1-1995) (CLARIFIED 10-1-2007).

This clarification of the existing boundary description does not change the intent of the boundary as it was approved on May 1, 1971 (corrected 8-15-1974; updated 7-1-1995). (Changes have been highlighted by "strikeout" and/or boldface type.) The description starts at the most northwesterly corner and follows the streets in clockwise order. Boundaries are on the center of the street unless otherwise noted.

This is an official copy for your file.

(GRADES 9 - 12)

FRANCISCO STREET (BOTH SIDES) TO NORMANDIE AVENUE * FRANCISCO STREET AND EXTENSION * VERMONT AVENUE * LOMITA BOULEVARD * HARBOR FREEWAY * PACIFIC COAST HIGHWAY * BIXBY SLOUGH AND EXTENSION WEST OF UNION OIL COMPANY REFINERY * A LINE EXTENDED WESTERLY, EXCLUDING 2550 AND 2551 GAFFEY STREET, 2230 AND 2231 TAPER AVENUE, TO WESTERN AVENUE * WESTERN AVENUE * SOUTH BOUNDARY OF GREEN HILLS MEMORIAL PARK CEMETERY AND EXTENSION * LOS ANGELES UNIFIED SCHOOL DISTRICT BOUNDARY.

For assistance, please call Master Planning & Demographics, Facilities Services Division, at (213) 893-6850.

APPROVED: JOSEPH A. MEHULA, Chief Facilities Executive, Facilities Services Division

DISTRIBUTION:
School
Pupil Statistics
Transportation Branch
Master Planning and Demographics
School Traffic and Safety Education Section
Department of Transportation, City of L. A.

County Library
County of Los Angeles Public Library ■ www.colapublib.org
7400 East Imperial Hwy., Downey, CA 90242 ■ (562) 940-8400
"Enriching Lives"

Skye Patrick
Library Director

February 12, 2016

TO: Robert Hillman, PCR Services Corporation
Senior Planner II

FROM: Yolanda De Ramus
Chief Deputy Director

SUBJECT: **HARBOR-UCLA MEDICAL CENTER PROJECT: REQUEST FOR INFORMATION**

This is in response to your request for County Library information in preparation for an EIR for the above project. The requested information is attached.

If you have any questions or need additional information, please feel free to contact Elsa Muñoz at (562) 940-8450 or emunoz@library.lacounty.gov.

YDR:AT:EM:ll
U:\STAFFSERVICES\DEVELOPER FEE\EIR\Harbor-UCLA Medical Center\Harbor-UCLA Medical Center Project Response.docx

c: Elsa Muñoz, Head, Support Services, Public Library
Beth Wilson, Library Administrator, Public Services Administration

1. **The following information for each of the County library facilities serving the Project site:**

   The project area is in unincorporated LA County and it is within the County of Los Angeles Public Library's Carson Library service area. The project is less than one (1) mile away from Carson Library.

   a. **Size of library buildings (square footage):**

      33,112

   b. **Personnel/staff:**

      23 total staff (part time and full time)

   c. **Collection size and amenities:**

      2014-2015 Collection of books and other materials- 118,133

      - Meeting Room: Capacity 125
      - Children's area
      - Family Place
      - Teen Space
      - Study Room
      - Book Drop for returning items accessible 24 hours
      - Household Battery Recycling Site
      - In person and telephone research assistance
      - Photocopier
      - Live Homework Help
      - Homework Center
      - Free Wi-fi

   d. Service area boundaries:

   The service area is 19.4 miles and the boundaries approximately and loosely fall inside the following perimeter:
   North-side- 190th to 192nd, to University Dr, to Wilmington Ave, to E. Del Amo Blvd.
   East-side- 710 frwy, to S. Santa Fe Ave., to 405 frwy, to Intermodal Wy, to Middle Rd
   South-side- W. Lomita Blvd
   West-side- S. Normandie Ave

   e. Programmed or target service population (please indicate the basis for the population):

   79,838 (2014-2015 Census)

   f. Actual population served, including assigned census tracts upon which service population is determined:

   2014-2015 Borrowers: 73,648

g. Hours of operation

Mon 10 - 8
Tue 10 - 8
Wed 10 - 8
Thu 10 - 8
Fri 10 - 6
Sat 10 - 5
Sun 1 - 5

2. Would the Project be located within a service area of any other libraries?

Not within any other County of Los Angeles Public Library service areas.

3. Any planned, funded, and/or scheduled service improvements or expansions to County Library facilities that would serve the Project.

Interior refurbishments for the Carson Library are under discussion. These improvements will not significantly impact the service capacity of the library.

4. County Library standards and goals used to assess any Project demand for library facilities and the adequacy of library facilities to meet this demand.

The County Library determines the service needs of an area by applying its current service level guidelines to the total population of the area. These guidelines are a minimum of 0.50 gross square foot of library facility space per capita and 2.75 items (books and other library materials) per capita. The current Carson Library exceeds the demands of the service area per Department standards by providing 2.4 sq. ft. of library facility space per capita. However, it falls under the Department's standards for collection materials by currently having a collection of 1.48 items per capita. In addition, in order to mitigate the impact of new developments, The Public Library applies a mitigation fee for each new residential unit in unincorporated areas known was the Library Facilities Mitigation Fee. Any developer proposing new residential units will be required to pay the Library Facilities Mitigation Fee in effect at the time the building permits for the project are issued. For this project, the Fee would not apply since residential units have not been proposed for development.

Appendix H

Noise Data and Reports

Harbor-UCLA Medical Center
Draft EIR
Appendix H-1, Noise Worksheets

1 Ambient Noise Data

2 Construction Noise Calculations

3 Off-Site Construction Traffic Noise Calculations

4 Traffic Noise Model Calibration Results

5 Off-Site Traffic Noise Calculations

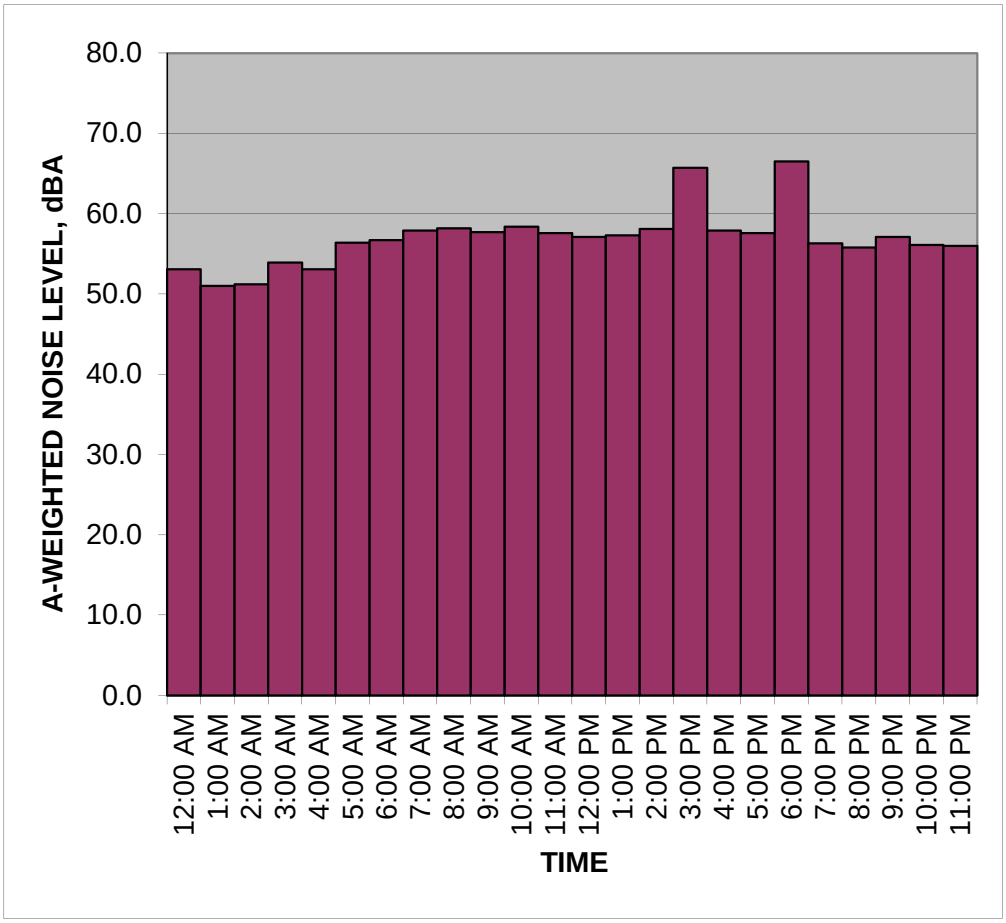
Appendix 1
Ambient Noise Data

Measured Ambient Noise Levels

Project: Harbor UCLA
Location: R1 -
Sources: Ambient

Date: September 30, 2013

TIME	HNL, dB(A)
12:00 AM	53.1
1:00 AM	51.0
2:00 AM	51.2
3:00 AM	53.9
4:00 AM	53.1
5:00 AM	56.4
6:00 AM	56.7
7:00 AM	57.9
8:00 AM	58.2
9:00 AM	57.7
10:00 AM	58.4
11:00 AM	57.6
12:00 PM	57.1
1:00 PM	57.3
2:00 PM	58.1
3:00 PM	65.7
4:00 PM	57.9
5:00 PM	57.6
6:00 PM	66.5
7:00 PM	56.3
8:00 PM	55.8
9:00 PM	57.1
10:00 PM	56.1
11:00 PM	56.0
CNEL, dB(A):	**62.7**



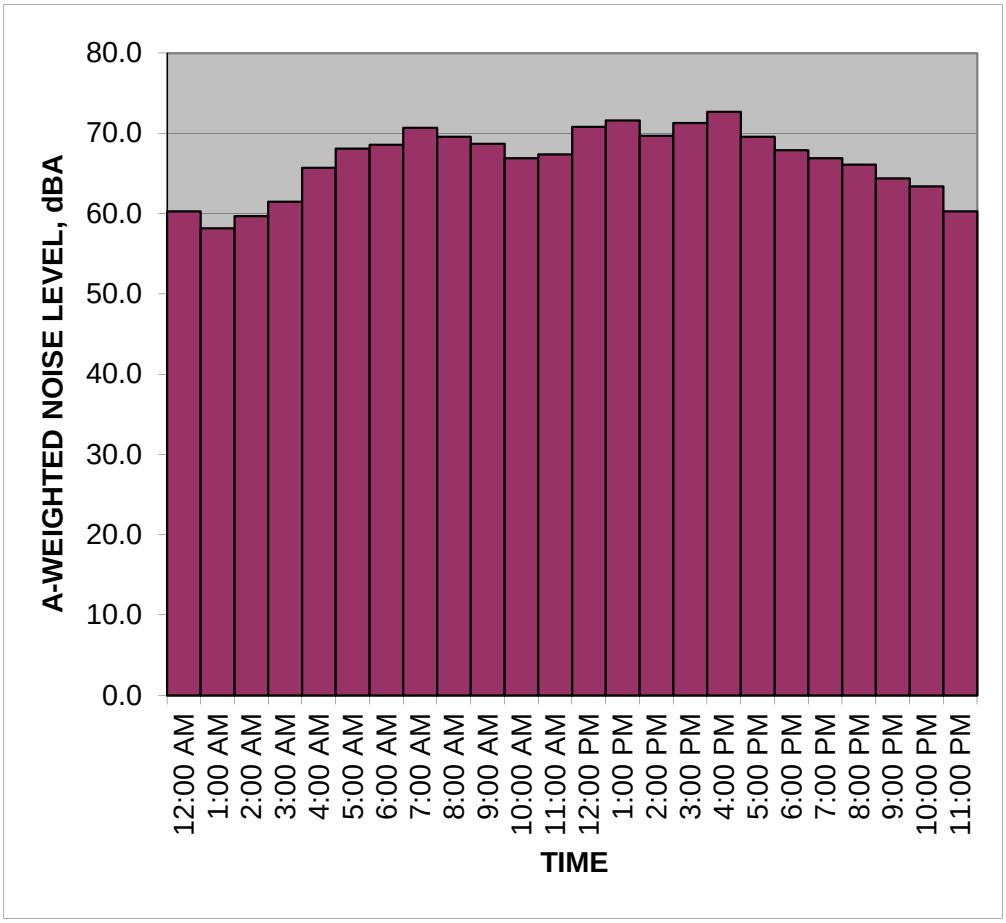
NOTES:

Measured Ambient Noise Levels

Project: Harbor UCLA
Location: R5 - Along Vermont Avenue
Sources: Ambient

Date: September 30, 2013

TIME	HNL, dB(A)
12:00 AM	60.3
1:00 AM	58.2
2:00 AM	59.7
3:00 AM	61.5
4:00 AM	65.7
5:00 AM	68.1
6:00 AM	68.6
7:00 AM	70.7
8:00 AM	69.6
9:00 AM	68.7
10:00 AM	66.9
11:00 AM	67.4
12:00 PM	70.8
1:00 PM	71.6
2:00 PM	69.7
3:00 PM	71.3
4:00 PM	72.7
5:00 PM	69.6
6:00 PM	67.9
7:00 PM	66.9
8:00 PM	66.1
9:00 PM	64.4
10:00 PM	63.4
11:00 PM	60.3
CNEL, dB(A):	**72.3**



NOTES:

Appendix 2
Construction Noise Calculations

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase C: Central Plant ,Central IT building, and Surface Parking

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Utility Tunnel					**89**	***85***				**50**	***46***		
Concrete/Industrial Saws	2	90	20%	80	89	82	85	0	1300	50	43	46	15
Excavators	1	81	40%	80	77	73	76	0	1300	38	34	37	15
Rubber Tired Loader	1	79	50%	80	75	72	75	0	1300	36	33	36	15
Water Trucks	1	80	10%	80	76	66	69	0	1300	37	27	30	15
Tractors/Loaders/Backhoes	1	80	25%	80	76	70	73	0	1300	37	31	34	15
Graders	1	85	40%	80	81	77	80	0	1300	42	38	41	15
Forklifts	1	75	10%	80	71	61	64	0	1300	32	22	25	15
Air Compressor	1	78	50%	80	74	71	74	0	1300	35	32	35	15
Welders	1	74	40%	80	70	66	69	0	1300	31	27	30	15
Cranes	1	81	40%	80	77	73	76	0	1300	38	34	37	15
Rubber Tired Dozer	1	82	40%	80	78	74	77	0	1300	39	35	38	15
Demolish Buildings F-10, M01, T-1					**89**	***84***				**50**	***45***		
Excavators	1	81	40%	80	77	73	76	0	1300	38	34	37	15
Concrete/Industrial Saws	2	90	20%	80	89	82	85	0	1300	50	43	46	15
Rubber Tired Loader	1	79	50%	80	75	72	75	0	1300	36	33	36	15
Graders	1	85	40%	80	81	77	80	0	1300	42	38	41	15
Water Trucks	1	80	10%	80	76	66	69	0	1300	37	27	30	15
Tractors/Loaders/Backhoes	1	80	25%	80	76	70	73	0	1300	37	31	34	15
Building Construction					**81**	***80***				**42**	***41***		
Forklifts	1	75	10%	80	71	61	64	0	1300	32	22	25	15
Cranes	1	81	40%	80	77	73	76	0	1300	38	34	37	15
Tractors/Loaders/Backhoes	1	80	25%	80	76	70	73	0	1300	37	31	34	15
Welders	1	74	40%	80	70	66	69	0	1300	31	27	30	15
Graders	1	85	40%	80	81	77	80	0	1300	42	38	41	15
Air Compressor	1	78	50%	80	74	71	74	0	1300	35	32	35	15
Building Construction: SCE Service Yard					**89**	***84***				**50**	***45***		
Concrete/Industrial Saws	2	90	20%	80	89	82	85	0	1300	50	43	46	15
Water Trucks	1	80	10%	80	76	66	69	0	1300	37	27	30	15
Tractors/Loaders/Backhoes	1	80	25%	80	76	70	73	0	1300	37	31	34	15
Welders	1	74	40%	80	70	66	69	0	1300	31	27	30	15
Graders	1	85	40%	80	81	77	80	0	1300	42	38	41	15
Concrete Mixer Trucks	1	79	40%	80	75	71	74	0	1300	36	32	35	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase C: Central Plant ,Central IT building, and Surface Parking

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Utility Tunnel					**51**	***47***				**48**	***45***		
Concrete/Industrial Saws	2	90	20%	1100	51	44	47	15	1500	48	41	44	15
Excavators	1	81	40%	1100	39	35	38	15	1500	36	32	35	15
Rubber Tired Loader	1	79	50%	1100	37	34	37	15	1500	34	31	34	15
Water Trucks	1	80	10%	1100	38	28	31	15	1500	35	25	28	15
Tractors/Loaders/Backhoes	1	80	25%	1100	38	32	35	15	1500	35	29	32	15
Graders	1	85	40%	1100	43	39	42	15	1500	40	36	39	15
Forklifts	1	75	10%	1100	33	23	26	15	1500	30	20	23	15
Air Compressor	1	78	50%	1100	36	33	36	15	1500	33	30	33	15
Welders	1	74	40%	1100	32	28	31	15	1500	29	25	28	15
Cranes	1	81	40%	1100	39	35	38	15	1500	36	32	35	15
Rubber Tired Dozer	1	82	40%	1100	40	36	39	15	1500	37	33	36	15
Demolish Buildings F-10, M01, T-1					**51**	***46***				**48**	***44***		
Excavators	1	81	40%	1100	39	35	38	15	1500	36	32	35	15
Concrete/Industrial Saws	2	90	20%	1100	51	44	47	15	1500	48	41	44	15
Rubber Tired Loader	1	79	50%	1100	37	34	37	15	1500	34	31	34	15
Graders	1	85	40%	1100	43	39	42	15	1500	40	36	39	15
Water Trucks	1	80	10%	1100	38	28	31	15	1500	35	25	28	15
Tractors/Loaders/Backhoes	1	80	25%	1100	38	32	35	15	1500	35	29	32	15
Building Construction					**43**	***42***				**40**	***39***		
Forklifts	1	75	10%	1100	33	23	26	15	1500	30	20	23	15
Cranes	1	81	40%	1100	39	35	38	15	1500	36	32	35	15
Tractors/Loaders/Backhoes	1	80	25%	1100	38	32	35	15	1500	35	29	32	15
Welders	1	74	40%	1100	32	28	31	15	1500	29	25	28	15
Graders	1	85	40%	1100	43	39	42	15	1500	40	36	39	15
Air Compressor	1	78	50%	1100	36	33	36	15	1500	33	30	33	15
Building Construction: SCE Service Yard					**51**	***46***				**48**	***43***		
Concrete/Industrial Saws	2	90	20%	1100	51	44	47	15	1500	48	41	44	15
Water Trucks	1	80	10%	1100	38	28	31	15	1500	35	25	28	15
Tractors/Loaders/Backhoes	1	80	25%	1100	38	32	35	15	1500	35	29	32	15
Welders	1	74	40%	1100	32	28	31	15	1500	29	25	28	15
Graders	1	85	40%	1100	43	39	42	15	1500	40	36	39	15
Concrete Mixer Trucks	1	79	40%	1100	37	33	36	15	1500	34	30	33	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase 1: Public Parking Structure

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**49**	***44***				**71**	***66***		
Concrete/Industrial Saws	2	90	20%	750	49	42	45	20	350	71	64	67	5
Excavators	1	81	40%	750	37	33	36	20	350	59	55	58	5
Rubber Tired Loader	1	79	50%	750	35	32	35	20	350	57	54	57	5
Water Trucks	1	80	10%	750	36	26	29	20	350	58	48	51	5
Tractors/Loaders/Backhoes	1	80	25%	750	36	30	33	20	350	58	52	55	5
Rubber Tired Dozer	1	82	40%	750	38	34	37	20	350	60	56	59	5
Grading: Building Pad and Underground Utilities					**41**	***40***				**63**	***62***		
Tractors/Loaders/Backhoes	1	80	25%	750	36	30	33	20	350	58	52	55	5
Rubber Tired Dozer	1	82	40%	750	38	34	37	20	350	60	56	59	5
Water Trucks	1	80	10%	750	36	26	29	20	350	58	48	51	5
Graders	1	85	40%	750	41	37	40	20	350	63	59	62	5
Parking Structure					**37**	***35***				**59**	***56***		
Forklifts	1	75	10%	750	31	21	24	20	350	53	43	46	5
Cranes	1	81	40%	750	37	33	36	20	350	59	55	58	5
Welders	1	74	40%	750	30	26	29	20	350	52	48	51	5
Paving					**41**	***41***				**63**	***62***		
Tractors/Loaders/Backhoes	1	80	25%	750	36	30	33	20	350	58	52	55	5
Concrete Mixer Trucks	1	79	40%	750	35	31	34	20	350	57	53	56	5
Roller	1	80	20%	750	36	29	32	20	350	58	51	54	5
Paver	1	77	50%	750	33	30	33	20	350	55	52	55	5
Other Equipment (Trencher)	1	85	50%	750	41	38	41	20	350	63	60	63	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 1: Public Parking Structure

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**50**	***45***				**52**	***47***		
Concrete/Industrial Saws	2	90	20%	1200	50	43	46	15	1000	52	45	48	15
Excavators	1	81	40%	1200	38	34	37	15	1000	40	36	39	15
Rubber Tired Loader	1	79	50%	1200	36	33	36	15	1000	38	35	38	15
Water Trucks	1	80	10%	1200	37	27	30	15	1000	39	29	32	15
Tractors/Loaders/Backhoes	1	80	25%	1200	37	31	34	15	1000	39	33	36	15
Rubber Tired Dozer	1	82	40%	1200	39	35	38	15	1000	41	37	40	15
Grading: Building Pad and Underground Utilities					**42**	***41***				**44**	***42***		
Tractors/Loaders/Backhoes	1	80	25%	1200	37	31	34	15	1000	39	33	36	15
Rubber Tired Dozer	1	82	40%	1200	39	35	38	15	1000	41	37	40	15
Water Trucks	1	80	10%	1200	37	27	30	15	1000	39	29	32	15
Graders	1	85	40%	1200	42	38	41	15	1000	44	40	43	15
Parking Structure					**38**	***35***				**40**	***37***		
Forklifts	1	75	10%	1200	32	22	25	15	1000	34	24	27	15
Cranes	1	81	40%	1200	38	34	37	15	1000	40	36	39	15
Welders	1	74	40%	1200	31	27	30	15	1000	33	29	32	15
Paving					**42**	***42***				**44**	***43***		
Tractors/Loaders/Backhoes	1	80	25%	1200	37	31	34	15	1000	39	33	36	15
Concrete Mixer Trucks	1	79	40%	1200	36	32	35	15	1000	38	34	37	15
Roller	1	80	20%	1200	37	30	33	15	1000	39	32	35	15
Paver	1	77	50%	1200	34	31	34	15	1000	36	33	36	15
Other Equipment (Trencher)	1	85	50%	1200	42	39	42	15	1000	44	41	44	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase 2: Outpatient Building A, Mental Health Building, Bridge between Out Patient A & Mental Health

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**63**	***62***				**41**	***40***		
Rubber Tired Loader	1	79	50%	350	62	59	62	0	750	40	37	40	15
Tractors/Loaders/Backhoes	1	80	25%	350	63	57	60	0	750	41	35	38	15
Water Trucks	1	80	10%	350	63	53	56	0	750	41	31	34	15
Building Construction (3)					**59**	***59***				**42**	***43***		
Forklifts	1	75	10%	350	53	43	46	5	750	36	26	29	15
Welders	1	74	40%	350	52	48	51	5	750	35	31	34	15
Tractors/Loaders/Backhoes	1	80	25%	350	58	52	55	5	750	41	35	38	15
Air Compressor	1	78	50%	350	56	53	56	5	750	39	36	39	15
Water Trucks	1	80	10%	350	58	48	51	5	750	41	31	34	15
Cranes	1	81	40%	350	59	55	58	5	750	42	38	41	15
Building Construction (4)					**59**	***59***				**42**	***43***		
Forklifts	1	75	10%	350	53	43	46	5	750	36	26	29	15
Welders	1	74	40%	350	52	48	51	5	750	35	31	34	15
Tractors/Loaders/Backhoes	1	80	25%	350	58	52	55	5	750	41	35	38	15
Air Compressor	1	78	50%	350	56	53	56	5	750	39	36	39	15
Water Trucks	1	80	10%	350	58	48	51	5	750	41	31	34	15
Cranes	1	81	40%	350	59	55	58	5	750	42	38	41	15
Paving					**60**	***59***				**46**	***46***		
Tractors/Loaders/Backhoes	1	80	25%	500	55	49	52	5	750	41	35	38	15
Concrete Mixer Trucks	1	79	40%	500	54	50	53	5	750	40	36	39	15
Roller	1	80	20%	500	55	48	51	5	750	41	34	37	15
Paver	1	77	50%	500	52	49	52	5	750	38	35	38	15
Other Equipment (Trencher)	1	85	50%	500	60	57	60	5	750	46	43	46	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 2: Outpatient Building A, Mental Health Building, Bridge

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**58**	***57***				**27**	***26***		
Rubber Tired Loader	1	79	50%	345	57	54	57	5	2200	26	23	26	20
Tractors/Loaders/Backhoes	1	80	25%	345	58	52	55	5	2200	27	21	24	20
Water Trucks	1	80	10%	345	58	48	51	5	2200	27	17	20	20
Building Construction (3)					**59**	***59***				**28**	***28***		
Forklifts	1	75	10%	345	53	43	46	5	2200	22	12	15	20
Welders	1	74	40%	345	52	48	51	5	2200	21	17	20	20
Tractors/Loaders/Backhoes	1	80	25%	345	58	52	55	5	2200	27	21	24	20
Air Compressor	1	78	50%	345	56	53	56	5	2200	25	22	25	20
Water Trucks	1	80	10%	345	58	48	51	5	2200	27	17	20	20
Cranes	1	81	40%	345	59	55	58	5	2200	28	24	27	20
Building Construction (4)					**59**	***59***				**28**	***28***		
Forklifts	1	75	10%	345	53	43	46	5	2200	22	12	15	20
Welders	1	74	40%	345	52	48	51	5	2200	21	17	20	20
Tractors/Loaders/Backhoes	1	80	25%	345	58	52	55	5	2200	27	21	24	20
Air Compressor	1	78	50%	345	56	53	56	5	2200	25	22	25	20
Water Trucks	1	80	10%	345	58	48	51	5	2200	27	17	20	20
Cranes	1	81	40%	345	59	55	58	5	2200	28	24	27	20
Paving					**63**	***62***				**32**	***31***		
Tractors/Loaders/Backhoes	1	80	25%	345	58	52	55	5	2200	27	21	24	20
Concrete Mixer Trucks	1	79	40%	345	57	53	56	5	2200	26	22	25	20
Roller	1	80	20%	345	58	51	54	5	2200	27	20	23	20
Paver	1	77	50%	345	55	52	55	5	2200	24	21	24	20
Other Equipment (Trencher)	1	85	50%	345	63	60	63	5	2200	32	29	32	20

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase 3: Staff Parking Structure and Temporary Helipad

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**65**	***60***				**64**	***59***		
Concrete/Industrial Saws	2	90	20%	700	65	58	61	5	750	64	57	60	5
Excavators	1	81	40%	700	53	49	52	5	750	52	48	51	5
Rubber Tired Loader	1	79	50%	700	51	48	51	5	750	50	47	50	5
Water Trucks	1	80	10%	700	52	42	45	5	750	51	41	44	5
Tractors/Loaders/Backhoes	1	80	25%	700	52	46	49	5	750	51	45	48	5
Rubber Tired Dozer	1	82	40%	700	54	50	53	5	750	53	49	52	5
Grading: Building Pad and Underground Utilities					**67**	***66***				**56**	***55***		
Tractors/Loaders/Backhoes	1	80	25%	215	62	56	59	5	750	51	45	48	5
Rubber Tired Dozer	1	82	40%	215	64	60	63	5	750	53	49	52	5
Water Trucks	1	80	10%	215	62	52	55	5	750	51	41	44	5
Graders	1	85	40%	215	67	63	66	5	750	56	52	55	5
Building Construction					**63**	***60***				**52**	***50***		
Forklifts	1	75	10%	215	57	47	50	5	750	46	36	39	5
Cranes	1	81	40%	215	63	59	62	5	750	52	48	51	5
Welders	1	74	40%	215	56	52	55	5	750	45	41	44	5
Paving					**67**	***66***				**56**	***56***		
Tractors/Loaders/Backhoes	1	80	25%	215	62	56	59	5	750	51	45	48	5
Concrete Mixer Trucks	1	79	40%	215	61	57	60	5	750	50	46	49	5
Roller	1	80	20%	215	62	55	58	5	750	51	44	47	5
Paver	1	77	50%	215	59	56	59	5	750	48	45	48	5
Other Equipment (Trencher)	1	85	50%	215	67	64	67	5	750	56	53	56	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 3: Staff Parking Structure and Temporary Helipad

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**58**	***53***				**49**	***43***		
Concrete/Industrial Saws	2	90	20%	850	58	51	54	10	1450	49	42	45	15
Excavators	1	81	40%	850	46	42	45	10	1450	37	33	36	15
Rubber Tired Loader	1	79	50%	850	44	41	44	10	1450	35	32	35	15
Water Trucks	1	80	10%	850	45	35	38	10	1450	36	26	29	15
Tractors/Loaders/Backhoes	1	80	25%	850	45	39	42	10	1450	36	30	33	15
Rubber Tired Dozer	1	82	40%	850	47	43	46	10	1450	38	34	37	15
Grading: Building Pad and Underground Utilities					**50**	***49***				**41**	***39***		
Tractors/Loaders/Backhoes	1	80	25%	850	45	39	42	10	1450	36	30	33	15
Rubber Tired Dozer	1	82	40%	850	47	43	46	10	1450	38	34	37	15
Water Trucks	1	80	10%	850	45	35	38	10	1450	36	26	29	15
Graders	1	85	40%	850	50	46	49	10	1450	41	37	40	15
Building Construction					**46**	***43***				**37**	***34***		
Forklifts	1	75	10%	850	40	30	33	10	1450	31	21	24	15
Cranes	1	81	40%	850	46	42	45	10	1450	37	33	36	15
Welders	1	74	40%	850	39	35	38	10	1450	30	26	29	15
Paving					**50**	***50***				**41**	***40***		
Tractors/Loaders/Backhoes	1	80	25%	850	45	39	42	10	1450	36	30	33	15
Concrete Mixer Trucks	1	79	40%	850	44	40	43	10	1450	35	31	34	15
Roller	1	80	20%	850	45	38	41	10	1450	36	29	32	15
Paver	1	77	50%	850	42	39	42	10	1450	33	30	33	15
Other Equipment (Trencher)	1	85	50%	850	50	47	50	10	1450	41	38	41	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase 4: Patient Bed Tower and Diagnostic and Treatment Center

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**59**	***58***				**73**	***71***		
Rubber Tired Dozer	1	82	40%	560	56	52	55	5	200	70	66	69	0
Tractors/Loaders/Backhoes	1	80	25%	560	54	48	51	5	200	68	62	65	0
Graders	1	85	40%	560	59	55	58	5	200	73	69	72	0
Water Trucks	1	80	10%	560	54	44	47	5	200	68	58	61	0
Building Construction (2)					**55**	***56***				**69**	***70***		
Rubber Tired Loader	1	79	50%	560	53	50	53	5	200	67	64	67	0
Tractors/Loaders/Backhoes	1	80	25%	560	54	48	51	5	200	68	62	65	0
Forklifts	1	75	10%	560	49	39	42	5	200	63	53	56	0
Welders	1	74	40%	560	48	44	47	5	200	62	58	61	0
Air Compressor	1	78	50%	560	52	49	52	5	200	66	63	66	0
Cranes	1	81	40%	560	55	51	54	5	200	69	65	68	0
Building Construction (3)					**55**	***55***				**69**	***69***		
Tractors/Loaders/Backhoes	1	80	25%	560	54	48	51	5	200	68	62	65	0
Welders	1	74	40%	560	48	44	47	5	200	62	58	61	0
Air Compressor	1	78	50%	560	52	49	52	5	200	66	63	66	0
Cranes	1	81	40%	560	55	51	54	5	200	69	65	68	0
Paving					**59**	***58***				**73**	***72***		
Tractors/Loaders/Backhoes	1	80	25%	560	54	48	51	5	200	68	62	65	0
Concrete Mixer Trucks	1	79	40%	560	53	49	52	5	200	67	63	66	0
Roller	1	80	20%	560	54	47	50	5	200	68	61	64	0
Paver	1	77	50%	560	51	48	51	5	200	65	62	65	0
Other Equipment (Trencher)	1	85	50%	560	59	56	59	5	200	73	70	73	0

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 4: Patient Bed Tower and Diagnostic and Treatment Cent

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**75**	***73***				**38**	***36***		
Rubber Tired Dozer	1	82	40%	160	72	68	71	0	2000	35	31	34	15
Tractors/Loaders/Backhoes	1	80	25%	160	70	64	67	0	2000	33	27	30	15
Graders	1	85	40%	160	75	71	74	0	2000	38	34	37	15
Water Trucks	1	80	10%	160	70	60	63	0	2000	33	23	26	15
Building Construction (2)					**71**	***72***				**34**	***35***		
Rubber Tired Loader	1	79	50%	160	69	66	69	0	2000	32	29	32	15
Tractors/Loaders/Backhoes	1	80	25%	160	70	64	67	0	2000	33	27	30	15
Forklifts	1	75	10%	160	65	55	58	0	2000	28	18	21	15
Welders	1	74	40%	160	64	60	63	0	2000	27	23	26	15
Air Compressor	1	78	50%	160	68	65	68	0	2000	31	28	31	15
Cranes	1	81	40%	160	71	67	70	0	2000	34	30	33	15
Building Construction (3)					**71**	***71***				**34**	***34***		
Tractors/Loaders/Backhoes	1	80	25%	160	70	64	67	0	2000	33	27	30	15
Welders	1	74	40%	160	64	60	63	0	2000	27	23	26	15
Air Compressor	1	78	50%	160	68	65	68	0	2000	31	28	31	15
Cranes	1	81	40%	160	71	67	70	0	2000	34	30	33	15
Paving					**75**	***74***				**38**	***37***		
Tractors/Loaders/Backhoes	1	80	25%	160	70	64	67	0	2000	33	27	30	15
Concrete Mixer Trucks	1	79	40%	160	69	65	68	0	2000	32	28	31	15
Roller	1	80	20%	160	70	63	66	0	2000	33	26	29	15
Paver	1	77	50%	160	67	64	67	0	2000	30	27	30	15
Other Equipment (Trencher)	1	85	50%	160	75	72	75	0	2000	38	35	38	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 4: Patient Bed Tower and Diagnostic and Treatment Cent

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R2				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**53**	***51***		
Rubber Tired Dozer	1	82	40%	1180	50	46	49	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Graders	1	85	40%	1180	53	49	52	5
Water Trucks	1	80	10%	1180	48	38	41	5
Building Construction (2)					**49**	***50***		
Rubber Tired Loader	1	79	50%	1180	47	44	47	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Forklifts	1	75	10%	1180	43	33	36	5
Welders	1	74	40%	1180	42	38	41	5
Air Compressor	1	78	50%	1180	46	43	46	5
Cranes	1	81	40%	1180	49	45	48	5
Building Construction (3)					**49**	***48***		
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Welders	1	74	40%	1180	42	38	41	5
Air Compressor	1	78	50%	1180	46	43	46	5
Cranes	1	81	40%	1180	49	45	48	5
Paving					**53**	***42***		
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Concrete Mixer Trucks	1	79	40%	1180	47	43	46	5
Roller	1	80	20%	1180	48	41	44	5
Paver	1	77	50%	1180	45	42	45	5
Other Equipment (Trencher)	1	85	50%	1180	53	50	53	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase 5: Renovate Existing Hospital Tower, Public Parking Structure, Two Surface parking Lots, Retail Building

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading/Excavation					**80**	***81***				**49**	***50***		
Rubber Tired Loader	1	79	50%	55	78	75	78	0	600	47	44	47	10
Tractors/Loaders/Backhoes	1	80	25%	55	79	73	76	0	600	48	42	45	10
Excavators	1	81	40%	55	80	76	79	0	600	49	45	48	10
Air Compressor	1	78	50%	55	77	74	77	0	600	46	43	46	10
Water Trucks	1	80	10%	55	79	69	72	0	600	48	38	41	10
Building Construction					**80**	***79***				**49**	***48***		
Forklifts	1	75	10%	55	74	64	67	0	600	43	33	36	10
Welders	1	74	40%	55	73	69	72	0	600	42	38	41	10
Tractors/Loaders/Backhoes	1	80	25%	55	79	73	76	0	600	48	42	45	10
Cranes	1	81	40%	55	80	76	79	0	600	49	45	48	10
Building Construction (4)					**80**	***80***				**49**	***49***		
Rubber Tired Loader	1	79	50%	55	78	75	78	0	600	47	44	47	10
Tractors/Loaders/Backhoes	1	80	25%	55	79	73	76	0	600	48	42	45	10
Welders	1	74	40%	55	73	69	72	0	600	42	38	41	10
Cranes	1	81	40%	55	80	76	79	0	600	49	45	48	10
Forklifts	1	75	10%	55	74	64	67	0	600	43	33	36	10
Paving					**84**	***83***				**53**	***53***		
Tractors/Loaders/Backhoes	1	80	25%	55	79	73	76	0	600	48	42	45	10
Concrete Mixer Trucks	1	79	40%	55	78	74	77	0	600	47	43	46	10
Roller	1	80	20%	55	79	72	75	0	600	48	41	44	10
Paver	1	77	50%	55	76	73	76	0	600	45	42	45	10
Other Equipment (Trencher)	1	85	50%	55	84	81	84	0	600	53	50	53	10

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 5: Renovate Existing Hospital Tower, Public Parking Stru

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading/Excavation					**74**	***75***				**32**	***33***		
Rubber Tired Loader	1	79	50%	110	72	69	72	0	2500	30	27	30	15
Tractors/Loaders/Backhoes	1	80	25%	110	73	67	70	0	2500	31	25	28	15
Excavators	1	81	40%	110	74	70	73	0	2500	32	28	31	15
Air Compressor	1	78	50%	110	71	68	71	0	2500	29	26	29	15
Water Trucks	1	80	10%	110	73	63	66	0	2500	31	21	24	15
Building Construction					**74**	***73***				**32**	***30***		
Forklifts	1	75	10%	110	68	58	61	0	2500	26	16	19	15
Welders	1	74	40%	110	67	63	66	0	2500	25	21	24	15
Tractors/Loaders/Backhoes	1	80	25%	110	73	67	70	0	2500	31	25	28	15
Cranes	1	81	40%	110	74	70	73	0	2500	32	28	31	15
Building Construction (4)					**74**	***74***				**32**	***32***		
Rubber Tired Loader	1	79	50%	110	72	69	72	0	2500	30	27	30	15
Tractors/Loaders/Backhoes	1	80	25%	110	73	67	70	0	2500	31	25	28	15
Welders	1	74	40%	110	67	63	66	0	2500	25	21	24	15
Cranes	1	81	40%	110	74	70	73	0	2500	32	28	31	15
Forklifts	1	75	10%	110	68	58	61	0	2500	26	16	19	15
Paving					**78**	***77***				**36**	***35***		
Tractors/Loaders/Backhoes	1	80	25%	110	73	67	70	0	2500	31	25	28	15
Concrete Mixer Trucks	1	79	40%	110	72	68	71	0	2500	30	26	29	15
Roller	1	80	20%	110	73	66	69	0	2500	31	24	27	15
Paver	1	77	50%	110	70	67	70	0	2500	28	25	28	15
Other Equipment (Trencher)	1	85	50%	110	78	75	78	0	2500	36	33	36	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 5: Renovate Existing Hospital Tower, Public Parking Stru

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R2				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading/Excavation					**72**	***73***		
Rubber Tired Loader	1	79	50%	80	70	67	70	5
Tractors/Loaders/Backhoes	1	80	25%	80	71	65	68	5
Excavators	1	81	40%	80	72	68	71	5
Air Compressor	1	78	50%	80	69	66	69	5
Water Trucks	1	80	10%	80	71	61	64	5
Building Construction					**72**	***70***		
Forklifts	1	75	10%	80	66	56	59	5
Welders	1	74	40%	80	65	61	64	5
Tractors/Loaders/Backhoes	1	80	25%	80	71	65	68	5
Cranes	1	81	40%	80	72	68	71	5
Building Construction (4)					**72**	***72***		
Rubber Tired Loader	1	79	50%	80	70	67	70	5
Tractors/Loaders/Backhoes	1	80	25%	80	71	65	68	5
Welders	1	74	40%	80	65	61	64	5
Cranes	1	81	40%	80	72	68	71	5
Forklifts	1	75	10%	80	66	56	59	5
Paving					**76**	***65***		
Tractors/Loaders/Backhoes	1	80	25%	80	71	65	68	5
Concrete Mixer Trucks	1	79	40%	80	70	66	69	5
Roller	1	80	20%	80	71	64	67	5
Paver	1	77	50%	80	68	65	68	5
Other Equipment (Trencher)	1	85	50%	80	76	73	76	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase 6: Bioscience Building, Parking Structure, Outpatient Building B, Landscape and Hardscape, Street Improvements

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**87**	***83***				**67**	***63***		
Concrete/Industrial Saws	1	90	20%	70	87	80	83	0	400	67	60	63	5
Excavators	1	81	40%	70	78	74	77	0	400	58	54	57	5
Rubber Tired Loader	1	79	50%	70	76	73	76	0	400	56	53	56	5
Water Trucks	1	80	10%	70	77	67	70	0	400	57	47	50	5
Tractors/Loaders/Backhoes	1	80	25%	70	77	71	74	0	400	57	51	54	5
Rubber Tired Dozer	1	82	40%	70	79	75	78	0	400	59	55	58	5
Grading: Building Pad and Underground Utilities					**82**	***81***				**62**	***61***		
Rubber Tired Loader	1	79	50%	70	76	73	76	0	400	56	53	56	5
Graders	1	85	40%	70	82	78	81	0	400	62	58	61	5
Tractors/Loaders/Backhoes	1	80	25%	70	77	71	74	0	400	57	51	54	5
Air Compressor	1	78	50%	70	75	72	75	0	400	55	52	55	5
Water Trucks	1	80	10%	70	77	67	70	0	400	57	47	50	5
Building Construction					**78**	***78***				**58**	***58***		
Forklifts	1	75	10%	70	72	62	65	0	400	52	42	45	5
Tractors/Loaders/Backhoes	1	80	25%	70	77	71	74	0	400	57	51	54	5
Air Compressor	1	78	50%	70	75	72	75	0	400	55	52	55	5
Cranes	1	81	40%	70	78	74	77	0	400	58	54	57	5
Welders	1	74	40%	70	71	67	70	0	400	51	47	50	5
Paving					**82**	***81***				**62**	***61***		
Tractors/Loaders/Backhoes	1	80	25%	70	77	71	74	0	400	57	51	54	5
Roller	1	80	20%	70	77	70	73	0	400	57	50	53	5
Paver	1	77	50%	70	74	71	74	0	400	54	51	54	5
Other Equipment (Trencher)	1	85	50%	70	82	79	82	0	400	62	59	62	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 6: Bioscience Building, Parking Structure, Outpatient Bu

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**44**	***40***				**79**	***75***		
Concrete/Industrial Saws	1	90	20%	1700	44	37	40	15	170	79	72	75	0
Excavators	1	81	40%	1700	35	31	34	15	170	70	66	69	0
Rubber Tired Loader	1	79	50%	1700	33	30	33	15	170	68	65	68	0
Water Trucks	1	80	10%	1700	34	24	27	15	170	69	59	62	0
Tractors/Loaders/Backhoes	1	80	25%	1700	34	28	31	15	170	69	63	66	0
Rubber Tired Dozer	1	82	40%	1700	36	32	35	15	170	71	67	70	0
Grading: Building Pad and Underground Utilities					**39**	***38***				**74**	***73***		
Rubber Tired Loader	1	79	50%	1700	33	30	33	15	170	68	65	68	0
Graders	1	85	40%	1700	39	35	38	15	170	74	70	73	0
Tractors/Loaders/Backhoes	1	80	25%	1700	34	28	31	15	170	69	63	66	0
Air Compressor	1	78	50%	1700	32	29	32	15	170	67	64	67	0
Water Trucks	1	80	10%	1700	34	24	27	15	170	69	59	62	0
Building Construction					**35**	***35***				**70**	***70***		
Forklifts	1	75	10%	1700	29	19	22	15	170	64	54	57	0
Tractors/Loaders/Backhoes	1	80	25%	1700	34	28	31	15	170	69	63	66	0
Air Compressor	1	78	50%	1700	32	29	32	15	170	67	64	67	0
Cranes	1	81	40%	1700	35	31	34	15	170	70	66	69	0
Welders	1	74	40%	1700	28	24	27	15	170	63	59	62	0
Paving					**39**	***38***				**74**	***73***		
Tractors/Loaders/Backhoes	1	80	25%	1700	34	28	31	15	170	69	63	66	0
Roller	1	80	20%	1700	34	27	30	15	170	69	62	65	0
Paver	1	77	50%	1700	31	28	31	15	170	66	63	66	0
Other Equipment (Trencher)	1	85	50%	1700	39	36	39	15	170	74	71	74	0

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase 6: Bioscience Building, Parking Structure, Outpatient Bu

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R2				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Demolition Buildings					**58**	***53***		
Concrete/Industrial Saws	1	90	20%	1180	58	51	54	5
Excavators	1	81	40%	1180	49	45	48	5
Rubber Tired Loader	1	79	50%	1180	47	44	47	5
Water Trucks	1	80	10%	1180	48	38	41	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Rubber Tired Dozer	1	82	40%	1180	50	46	49	5
Grading: Building Pad and Underground Utilities					**53**	***51***		
Rubber Tired Loader	1	79	50%	1180	47	44	47	5
Graders	1	85	40%	1180	53	49	52	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Air Compressor	1	78	50%	1180	46	43	46	5
Water Trucks	1	80	10%	1180	48	38	41	5
Building Construction					**49**	***48***		
Forklifts	1	75	10%	1180	43	33	36	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Air Compressor	1	78	50%	1180	46	43	46	5
Cranes	1	81	40%	1180	49	45	48	5
Welders	1	74	40%	1180	42	38	41	5
Paving					**53**	***42***		
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Roller	1	80	20%	1180	48	41	44	5
Paver	1	77	50%	1180	45	42	45	5
Other Equipment (Trencher)	1	85	50%	1180	53	50	53	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master Plan

Construction Noise Impact on Sensitive Receptors

Phase: LA Biomed

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R3					R4				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**78**	***76***				**37**	***36***		
Rubber Tired Loader	1	79	50%	65	77	74	77	0	1200	36	33	36	15
Tractors/Loaders/Backhoes	1	80	25%	65	78	72	75	0	1200	37	31	34	15
Water Trucks	1	80	10%	65	78	68	71	0	1200	37	27	30	15
Building Construction (4)					**79**	***79***				**38**	***39***		
Forklifts	1	75	10%	65	73	63	66	0	1200	32	22	25	15
Welders	1	74	40%	65	72	68	71	0	1200	31	27	30	15
Tractors/Loaders/Backhoes	1	80	25%	65	78	72	75	0	1200	37	31	34	15
Air Compressor	1	78	50%	65	76	73	76	0	1200	35	32	35	15
Water Trucks	1	80	10%	65	78	68	71	0	1200	37	27	30	15
Cranes	1	81	40%	65	79	75	78	0	1200	38	34	37	15
Paving					**83**	***82***				**42**	***42***		
Tractors/Loaders/Backhoes	1	80	25%	65	78	72	75	0	1200	37	31	34	15
Concrete Mixer Trucks	1	79	40%	65	77	73	76	0	1200	36	32	35	15
Roller	1	80	20%	65	78	71	74	0	1200	37	30	33	15
Paver	1	77	50%	65	75	72	75	0	1200	34	31	34	15
Other Equipment (Trencher)	1	85	50%	65	83	80	83	0	1200	42	39	42	15

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase: LA Biomed

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R5					R6				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**36**	***35***				**48**	***47***		
Rubber Tired Loader	1	79	50%	1400	35	32	35	15	1100	47	44	47	5
Tractors/Loaders/Backhoes	1	80	25%	1400	36	30	33	15	1100	48	42	45	5
Water Trucks	1	80	10%	1400	36	26	29	15	1100	48	38	41	5
Building Construction (4)					**37**	***37***				**49**	***49***		
Forklifts	1	75	10%	1400	31	21	24	15	1100	43	33	36	5
Welders	1	74	40%	1400	30	26	29	15	1100	42	38	41	5
Tractors/Loaders/Backhoes	1	80	25%	1400	36	30	33	15	1100	48	42	45	5
Air Compressor	1	78	50%	1400	34	31	34	15	1100	46	43	46	5
Water Trucks	1	80	10%	1400	36	26	29	15	1100	48	38	41	5
Cranes	1	81	40%	1400	37	33	36	15	1100	49	45	48	5
Paving					**41**	***40***				**53**	***52***		
Tractors/Loaders/Backhoes	1	80	25%	1400	36	30	33	15	1100	48	42	45	5
Concrete Mixer Trucks	1	79	40%	1400	35	31	34	15	1100	47	43	46	5
Roller	1	80	20%	1400	36	29	32	15	1100	48	41	44	5
Paver	1	77	50%	1400	33	30	33	15	1100	45	42	45	5
Other Equipment (Trencher)	1	85	50%	1400	41	38	41	15	1100	53	50	53	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Project: Harbor UCLA Medical Center Campus Master

Construction Noise Impact on Sensitive Receptors

Phase: LA Biomed

Parameters

Construction Hours:	8	Daytime hours (7 am to 7 pm)
	0	Evening hours (7 pm to 10 pm)
	0	Nighttime hours (10 pm to 7 am)
Leq to L10 factor	3	

Calculation

				R2				
Construction Phase **Equipment Type**	**No. of Equip.**	**Reference Noise Level at 50ft, Lmax**	**Acoustical Usage Factor**	**Distance (ft)**	**Lmax**	**Leq**	**L10**	**Estimated Noise Shielding, dBA**
Grading					**48**	***46***		
Rubber Tired Loader	1	79	50%	1180	47	44	47	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Water Trucks	1	80	10%	1180	48	38	41	5
Building Construction (4)					**49**	***49***		
Forklifts	1	75	10%	1180	43	33	36	5
Welders	1	74	40%	1180	42	38	41	5
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Air Compressor	1	78	50%	1180	46	43	46	5
Water Trucks	1	80	10%	1180	48	38	41	5
Cranes	1	81	40%	1180	49	45	48	5
Paving					**53**	***42***		
Tractors/Loaders/Backhoes	1	80	25%	1180	48	42	45	5
Concrete Mixer Trucks	1	79	40%	1180	47	43	46	5
Roller	1	80	20%	1180	48	41	44	5
Paver	1	77	50%	1180	45	42	45	5
Other Equipment (Trencher)	1	85	50%	1180	53	50	53	5

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005

Appendix 3
Off-Site Construction Traffic Noise Calculations

Project: Harbor UCLA Medical Center Campus Master Plan

Off-site Construction Traffic Noise

Roadway/Segment	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
Carson Street			268	64.2	61.9	60.4	61.2	58.9	57.4
W 220th Street			268	65.8	62.8	61.0	62.7	59.8	58.0
Vermont Street			268	63.6	61.5	60.2	60.6	58.5	57.2
Figueroa Street			268	64.2	61.9	60.4	61.2	58.9	57.4
0			0	-	-	-	-	-	-

Roadway/Segment	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
Vine Street			200	62.9	60.7	59.2	59.9	57.6	56.2
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-

Roadway/Segment	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-
			0	-	-	-	-	-	-

CNEL

Summary Roadway/Segment	25 ft. from ROW Project Increment	25 ft. from ROW Cumulative Increment	At ROW Project Increment	At ROW Cumulative Increment
Carson Street	-	-	-	-
W 220th Street	-	-	-	-
Vermont Street	-	-	-	-
Figueroa Street	-	-	-	-
0	-	-	-	-

Appendix 4
Traffic Noise Model Calibration Results

Harbor-UCLA Medical Center Campus Master Plan

Traffic Noise Model Calibration

Existing

Roadway/Segment	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 10 Feet	Leq 25 Feet	CNEL ROW	CNEL 10 Feet	CNEL 25 Feet
Carson Street			23856	71.6	70.5	69.3	68.6	67.5	66.3
Normandie Avenue			10128	69.2	67.8	66.2	66.3	64.8	63.3
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

Future No Project

Roadway/Segment	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 10 Feet	Leq 25 Feet	CNEL ROW	CNEL 10 Feet	CNEL 25 Feet
Carson Street			0	-	-	-	-	-	-
Normandie Avenue			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

Future With Project

Roadway/Segment	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 10 Feet	Leq 25 Feet	CNEL ROW	CNEL 10 Feet	CNEL 25 Feet
Carson Street			0	-	-	-	-	-	-
Normandie Avenue			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-
0			0	-	-	-	-	-	-

CNEL

Summary Roadway/Segment	10 ft. from ROW Project Increment	10 ft. from ROW Cumulative Increment	At ROW Project Increment	At ROW Cumulative Increment
Carson Street	-	-	-	-
Normandie Avenue	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Appendix 5
Off-Site Traffic Noise Calculations

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Carson Street between Western Ave and Normandie Ave	40	2536	2617	0	71.7	69.4	67.9	72.9	70.6	69.1
Carson Street between Normandie Ave and Budlong Ave	40	2388	2589	0	71.6	69.4	67.9	72.8	70.6	69.1
Carson Street between Sudlong Ave and Berendo Ave	40	2348	2549	0	71.6	69.3	67.8	72.8	70.5	69.0
Carson Street between Berendo Ave and Medical Center Dr	40	2443	2623	0	71.7	69.4	67.9	72.9	70.6	69.1
Carson Street between Medical Center Dr and Vermont Ave	40	2708	2779	0	71.9	69.7	68.2	73.1	70.9	69.4
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Carson Street between Western Ave and Normandie Ave	40	3066	3390	0	72.8	70.5	69.0	74.0	71.7	70.3
Carson Street between Normandie Ave and Budlong Ave	40	3032	3425	0	72.8	70.6	69.1	74.1	71.8	70.3
Carson Street between Sudlong Ave and Berendo Ave	40	3129	3464	0	72.9	70.6	69.1	74.1	71.8	70.4
Carson Street between Berendo Ave and Medical Center Dr	40	3071	3442	0	72.9	70.6	69.1	74.1	71.8	70.3
Carson Street between Medical Center Dr and Vermont Ave	40	3085	3446	0	72.9	70.6	69.1	74.1	71.8	70.3
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Carson Street between Western Ave and Normandie Ave	40	3097	3438	0	72.9	70.6	69.1	74.1	71.8	70.3
Carson Street between Normandie Ave and Budlong Ave	40	3106	3526	0	73.0	70.7	69.2	74.2	71.9	70.4
Carson Street between Sudlong Ave and Berendo Ave	40	3210	3574	0	73.0	70.8	69.3	74.2	72.0	70.5
Carson Street between Berendo Ave and Medical Center Dr	40	3278	3695	0	73.2	70.9	69.4	74.4	72.1	70.6
Carson Street between Medical Center Dr and Vermont Ave	40	3291	3699	0	73.2	70.9	69.4	74.4	72.1	70.6

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Carson Street between Western Ave and Normandie Ave	0.1	1.2	0.1	1.2
Carson Street between Normandie Ave and Budlong Ave	0.1	1.3	0.1	1.4
Carson Street between Sudlong Ave and Berendo Ave	0.2	1.5	0.1	1.4
Carson Street between Berendo Ave and Medical Center Dr	0.3	1.5	0.3	1.5
Carson Street between Medical Center Dr and Vermont Ave	0.3	1.2	0.3	1.3

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
220th Street between Western Ave and Normandie Ave	35	290	240	0	62.3	59.3	57.6	63.5	60.6	58.8
220th Street between Normandie Ave and Myler St	35	471	369	0	64.4	61.5	59.7	65.6	62.7	60.9
220th Street between Myler St and Vermont Ave	35	592	488	0	65.4	62.4	60.7	66.6	63.7	61.9
220th St e/o Figueroa St	35	1376	1425	0	69.2	66.3	64.5	70.4	67.5	65.7
Figueroa Street s/o 220th St	40	1810	1676	0	70.5	68.0	66.5	71.7	69.3	67.7
Future No Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
220th Street between Western Ave and Normandie Ave	35	329	274	0	62.9	59.9	58.1	64.1	61.1	59.4
220th Street between Normandie Ave and Myler St	35	529	414	0	64.9	62.0	60.2	66.1	63.2	61.4
220th Street between Myler St and Vermont Ave	35	665	548	0	65.9	62.9	61.2	67.1	64.2	62.4
220th St e/o Figueroa St	35	1567	1642	0	69.8	66.9	65.1	71.1	68.1	66.3
Figueroa Street s/o 220th St	40	2096	2025	0	71.1	68.7	67.1	72.3	69.9	68.3
Future With Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
220th Street between Western Ave and Normandie Ave	35	354	301	0	63.2	60.2	58.5	64.4	61.4	59.7
220th Street between Normandie Ave and Myler St	35	587	481	0	65.4	62.4	60.7	66.6	63.6	61.9
220th Street between Myler St and Vermont Ave	35	768	667	0	66.5	63.6	61.8	67.8	64.8	63.0
220th St e/o Figueroa St	35	1656	1840	0	70.3	67.4	65.6	71.6	68.6	66.8
Figueroa Street s/o 220th St	40	2154	2177	0	71.3	68.8	67.3	72.5	70.1	68.5

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
Roadway/Segment	**Project Increment**	**Cumulative Increment**	**Project Increment**	**Cumulative Increment**
220th Street between Western Ave and Normandie Ave	0.3	0.8	0.3	0.9
220th Street between Normandie Ave and Myler St	0.4	0.9	0.5	1.0
220th Street between Myler St and Vermont Ave	0.6	1.1	0.7	1.2
220th St e/o Figueroa St	0.5	1.1	0.5	1.2
Figueroa Street s/o 220th St	0.2	0.8	0.2	0.8

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
223rd Street between Western Ave and Normandie Ave	40	1926	2092	0	70.7	68.4	66.9	71.9	69.6	68.2
223rd Street between Normandie Ave and Myler St	40	1972	2185	0	70.9	68.6	67.1	72.1	69.8	68.3
223rd Street between Myler St and Vermont Ave	40	1998	2128	0	70.8	68.5	67.0	72.0	69.7	68.2
223rd St between Vermont Ave and I-110 SB Ramps	40	2415	2626	0	71.7	69.4	67.9	72.9	70.6	69.1
223rd Street between I-110 SB Ramps and Figueroa St	40	2288	2553	0	71.6	69.3	67.8	72.8	70.5	69.0
Future No Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
223rd Street between Western Ave and Normandie Ave	40	2175	2374	0	71.3	69.0	67.5	72.5	70.2	68.7
223rd Street between Normandie Ave and Myler St	40	2238	2484	0	71.4	69.2	67.7	72.7	70.4	68.9
223rd Street between Myler St and Vermont Ave	40	2273	2425	0	71.3	69.1	67.6	72.6	70.3	68.8
223rd St between Vermont Ave and I-110 SB Ramps	40	2757	3028	0	72.3	70.0	68.6	73.5	71.2	69.8
223rd Street between I-110 SB Ramps and Figueroa St	40	2619	2955	0	72.2	69.9	68.4	73.4	71.1	69.7
Future With Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
223rd Street between Western Ave and Normandie Ave	40	1813	2389	0	71.3	69.0	67.5	72.5	70.2	68.7
223rd Street between Normandie Ave and Myler St	40	2398	2522	0	71.5	69.2	67.8	72.7	70.5	69.0
223rd Street between Myler St and Vermont Ave	40	2333	2478	0	71.4	69.2	67.7	72.7	70.4	68.9
223rd St between Vermont Ave and I-110 SB Ramps	40	2916	3196	0	72.5	70.3	68.8	73.8	71.5	70.0
223rd Street between I-110 SB Ramps and Figueroa St	40	2717	3078	0	72.4	70.1	68.6	73.6	71.3	69.8

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
Roadway/Segment	**Project Increment**	**Cumulative Increment**	**Project Increment**	**Cumulative Increment**
223rd Street between Western Ave and Normandie Ave	0.0	0.6	0.0	0.6
223rd Street between Normandie Ave and Myler St	0.1	0.7	0.0	0.6
223rd Street between Myler St and Vermont Ave	0.1	0.7	0.1	0.7
223rd St between Vermont Ave and I-110 SB Ramps	0.3	0.9	0.3	0.9
223rd Street between I-110 SB Ramps and Figueroa St	0.2	0.8	0.2	0.8

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Western Avenue between Carson St and 220th St	40	2296	2549	0	71.6	69.3	67.8	72.8	70.5	69.0
Western Avenue between 220th St and 223rd St	40	2524	2632	0	71.7	69.4	67.9	72.9	70.6	69.2
Western Avenue between 223rd St and Sepulveda Blvd	40	2693	2579	0	71.8	69.5	68.0	73.0	70.7	69.3
Myler Street between 220th St and 223rd St	35	294	161	0	62.4	59.4	57.6	63.6	60.6	58.9
0	40			0	-	-	-	-	-	-
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Western Avenue between Carson St and 220th St	40	2586	2883	0	72.1	69.8	68.3	73.3	71.0	69.6
Western Avenue between 220th St and 223rd St	40	2844	2977	0	72.2	70.0	68.5	73.4	71.2	69.7
Western Avenue between 223rd St and Sepulveda Blvd	40	3043	2927	0	72.3	70.1	68.6	73.5	71.3	69.8
Myler Street between 220th St and 223rd St	35	330	180	0	62.9	59.9	58.1	64.1	61.1	59.4
0	40			0	-	-	-	-	-	-
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Western Avenue between Carson St and 220th St	40	2610	2909	0	72.1	69.9	68.4	73.3	71.1	69.6
Western Avenue between 220th St and 223rd St	40	2845	2978	0	72.2	70.0	68.5	73.4	71.2	69.7
Western Avenue between 223rd St and Sepulveda Blvd	40	3049	2935	0	72.3	70.1	68.6	73.6	71.3	69.8
Myler Street between 220th St and 223rd St	35	371	229	0	63.4	60.4	58.7	64.6	61.6	59.9
0	40			0	-	-	-	-	-	-

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Western Avenue between Carson St and 220th St	0.1	0.6	0.0	0.5
Western Avenue between 220th St and 223rd St	0.0	0.6	0.0	0.5
Western Avenue between 223rd St and Sepulveda Blvd	0.0	0.6	0.1	0.6
Myler Street between 220th St and 223rd St	0.5	1.0	0.5	1.0
0	-	-	-	-

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Normandie Avenue between Torrance Blvd and Carson St	40	1533	1605	0	70.4	67.8	66.1	71.6	69.0	67.3
Normandie Avenue between Carson St and 220th St	40	1544	1533	0	70.2	67.6	66.0	71.5	68.8	67.2
Normandie Avenue between 220th St and 223rd St	40	1438	1414	0	69.9	67.3	65.7	71.1	68.5	66.9
Budlong Avenue n/o Carson St	35	82	107	0	58.0	55.0	53.3	59.2	56.2	54.5
Berendo Avenue n/o Carson St	35	102	136	0	59.0	56.1	54.3	60.2	57.3	55.5
Future No Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Normandie Avenue between Torrance Blvd and Carson St	40	1742	1828	0	71.0	68.3	66.7	72.2	69.5	67.9
Normandie Avenue between Carson St and 220th St	40	1750	1736	0	70.8	68.1	66.5	72.0	69.4	67.7
Normandie Avenue between 220th St and 223rd St	40	1636	1609	0	70.5	67.8	66.2	71.7	69.1	67.4
Budlong Avenue n/o Carson St	35	92	119	0	58.5	55.5	53.7	59.7	56.7	54.9
Berendo Avenue n/o Carson St	35	114	152	0	59.5	56.5	54.8	60.7	57.8	56.0
Future With Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Normandie Avenue between Torrance Blvd and Carson St	40	1825	1912	0	71.2	68.5	66.9	72.4	69.7	68.1
Normandie Avenue between Carson St and 220th St	40	1853	1857	0	71.0	68.4	66.8	72.3	69.6	68.0
Normandie Avenue between 220th St and 223rd St	40	1691	1653	0	70.6	68.0	66.4	71.8	69.2	67.6
Budlong Avenue n/o Carson St	35	92	119	0	58.5	55.5	53.7	59.7	56.7	54.9
Berendo Avenue n/o Carson St	35	114	152	0	59.5	56.5	54.8	60.7	57.8	56.0

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
Roadway/Segment	**Project Increment**	**Cumulative Increment**	**Project Increment**	**Cumulative Increment**
Normandie Avenue between Torrance Blvd and Carson St	0.2	0.7	0.2	0.8
Normandie Avenue between Carson St and 220th St	0.2	0.8	0.3	0.8
Normandie Avenue between 220th St and 223rd St	0.1	0.7	0.1	0.7
Budlong Avenue n/o Carson St	0.0	0.5	0.0	0.5
Berendo Avenue n/o Carson St	0.0	0.5	0.0	0.5

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Vermont Avenue between Torrance Blvd and Carson St	40	1910	1792	0	71.9	68.9	67.1	73.1	70.1	68.4
Vermont Avenue between Carson St and 220th St	40	2018	1854	0	72.1	69.1	67.4	73.3	70.4	68.6
Vermont Avenue between 220th St and 223rd St	40	1857	1695	0	71.8	68.8	67.0	73.0	70.0	68.2
Medical Center Drive n/o Carson St	35	104	78	0	57.9	54.9	53.1	59.1	56.1	54.4
0	35			0	-	-	-	-	-	-
Future No Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Vermont Avenue between Torrance Blvd and Carson St	40	2186	2077	0	72.5	69.5	67.7	73.7	70.7	68.9
Vermont Avenue between Carson St and 220th St	40	2302	2138	0	72.7	69.7	68.0	73.9	70.9	69.2
Vermont Avenue between 220th St and 223rd St	40	2122	1959	0	72.3	69.4	67.6	73.6	70.6	68.8
Medical Center Drive n/o Carson St	35	116	87	0	58.3	55.4	53.6	59.6	56.6	54.8
0	35			0	-	-	-	-	-	-
Future With Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Vermont Avenue between Torrance Blvd and Carson St	40	2240	2139	0	72.6	69.6	67.8	73.8	70.8	69.1
Vermont Avenue between Carson St and 220th St	40	2419	2270	0	72.9	69.9	68.2	74.1	71.1	69.4
Vermont Avenue between 220th St and 223rd St	40	2241	2101	0	72.6	69.6	67.8	73.8	70.8	69.1
Medical Center Drive n/o Carson St	35	116	87	0	58.3	55.4	53.6	59.6	56.6	54.8
0	35			0	-	-	-	-	-	-

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
	Project	**Cumulative**	**Project**	**Cumulative**
Roadway/Segment	**Increment**	**Increment**	**Increment**	**Increment**
Vermont Avenue between Torrance Blvd and Carson St	0.1	0.7	0.1	0.7
Vermont Avenue between Carson St and 220th St	0.2	0.7	0.2	0.8
Vermont Avenue between 220th St and 223rd St	0.2	0.8	0.2	0.8
Medical Center Drive n/o Carson St	0.0	0.5	0.0	0.5
0	-	-	-	-

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Carson Street between Western Ave and Normandie Ave	40	2536	2617	0	71.7	69.4	67.9	72.9	70.6	69.1
Carson Street between Normandie Ave and Budlong Ave	40	2388	2589	0	71.6	69.4	67.9	72.8	70.6	69.1
Carson Street between Budlong Ave and Berendo Ave	40	2348	2549	0	71.6	69.3	67.8	72.8	70.5	69.0
Carson Street between Berendo Ave and Medical Center Dr	40	2443	2623	0	71.7	69.4	67.9	72.9	70.6	69.1
Carson Street between Medical Center Dr and Vermont Ave	40	2708	2779	0	71.9	69.7	68.2	73.1	70.9	69.4
Existing Plus Project (Full Buildout 2030)										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Carson Street between Western Ave and Normandie Ave	40	2567	2665	0	71.8	69.5	68.0	73.0	70.7	69.2
Carson Street between Normandie Ave and Budlong Ave	40	2461	2690	0	71.8	69.5	68.0	73.0	70.7	69.3
Carson Street between Budlong Ave and Berendo Ave	40	2429	2658	0	71.7	69.5	68.0	73.0	70.7	69.2
Carson Street between Berendo Ave and Medical Center Dr	40	2650	2876	0	72.1	69.8	68.3	73.3	71.0	69.5
Carson Street between Medical Center Dr and Vermont Ave	40	2915	3032	0	72.3	70.0	68.6	73.5	71.3	69.8
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Carson Street between Western Ave and Normandie Ave	40			0	-	-	-	-	-	-
Carson Street between Normandie Ave and Budlong Ave	40			0	-	-	-	-	-	-
Carson Street between Budlong Ave and Berendo Ave	40			0	-	-	-	-	-	-
Carson Street between Berendo Ave and Medical Center Dr	40			0	-	-	-	-	-	-
Carson Street between Medical Center Dr and Vermont Ave	40			0	-	-	-	-	-	-

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
Roadway/Segment	**Project Increment**	**Cumulative Increment**	**Project Increment**	**Cumulative Increment**
Carson Street between Western Ave and Normandie Ave	0.1	-	0.1	-
Carson Street between Normandie Ave and Budlong Ave	0.1	-	0.2	-
Carson Street between Budlong Ave and Berendo Ave	0.2	-	0.2	-
Carson Street between Berendo Ave and Medical Center Dr	0.4	-	0.4	-
Carson Street between Medical Center Dr and Vermont Ave	0.4	-	0.4	-

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
220th Street between Western Ave and Normandie Ave	35	290	240	0	62.3	59.3	57.6	63.5	60.6	58.8
220th Street between Normandie Ave and Myler St	35	471	369	0	64.4	61.5	59.7	65.6	62.7	60.9
220th Street between Myler St and Vermont Ave	35	592	488	0	65.4	62.4	60.7	66.6	63.7	61.9
220th St e/o Figueroa St	35	1376	1425	0	69.2	66.3	64.5	70.4	67.5	65.7
Figueroa Street s/o 220th St	40	1810	1676	0	70.5	68.0	66.5	71.7	69.3	67.7
Existing Plus Project (Full Buildout 2030)										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
220th Street between Western Ave and Normandie Ave	35	315	267	0	62.7	59.7	57.9	63.9	60.9	59.2
220th Street between Normandie Ave and Myler St	35	530	436	0	64.9	62.0	60.2	66.1	63.2	61.4
220th Street between Myler St and Vermont Ave	35	695	607	0	66.1	63.1	61.4	67.3	64.4	62.6
220th St e/o Figueroa St	35	1465	1623	0	69.8	66.8	65.1	71.0	68.0	66.3
Figueroa Street s/o 220th St	40	1868	1828	0	70.6	68.2	66.6	71.8	69.4	67.8
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
220th Street between Western Ave and Normandie Ave	35			0	-	-	-	-	-	-
220th Street between Normandie Ave and Myler St	35			0	-	-	-	-	-	-
220th Street between Myler St and Vermont Ave	35			0	-	-	-	-	-	-
220th St e/o Figueroa St	35			0	-	-	-	-	-	-
Figueroa Street s/o 220th St	40			0	-	-	-	-	-	-

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
Roadway/Segment	**Project Increment**	**Cumulative Increment**	**Project Increment**	**Cumulative Increment**
220th Street between Western Ave and Normandie Ave	0.3	-	0.4	-
220th Street between Normandie Ave and Myler St	0.5	-	0.5	-
220th Street between Myler St and Vermont Ave	0.7	-	0.7	-
220th St e/o Figueroa St	0.5	-	0.6	-
Figueroa Street s/o 220th St	0.1	-	0.1	-

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
223rd Street between Western Ave and Normandie Ave	40	1926	2092	0	70.7	68.4	66.9	71.9	69.6	68.2
223rd Street between Normandie Ave and Myler St	40	1972	2185	0	70.9	68.6	67.1	72.1	69.8	68.3
223rd Street between Myler St and Vermont Ave	40	1998	2128	0	70.8	68.5	67.0	72.0	69.7	68.2
223rd St between Vermont Ave and I-110 SB Ramps	40	2415	2626	0	71.7	69.4	67.9	72.9	70.6	69.1
223rd Street between I-110 SB Ramps and Figueroa St	40	2288	2553	0	71.6	69.3	67.8	72.8	70.5	69.0
Existing Plus Project (Full Buildout 2030)										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
223rd Street between Western Ave and Normandie Ave	40	1938	2107	0	70.7	68.5	67.0	71.9	69.7	68.2
223rd Street between Normandie Ave and Myler St	40	2017	2223	0	71.0	68.7	67.2	72.2	69.9	68.4
223rd Street between Myler St and Vermont Ave	40	2057	2181	0	70.9	68.6	67.1	72.1	69.8	68.3
223rd St between Vermont Ave and I-110 SB Ramps	40	2574	2795	0	72.0	69.7	68.2	73.2	70.9	69.4
223rd Street between I-110 SB Ramps and Figueroa St	40	2386	2676	0	71.8	69.5	68.0	73.0	70.7	69.2
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
223rd Street between Western Ave and Normandie Ave	40			0	-	-	-	-	-	-
223rd Street between Normandie Ave and Myler St	40			0	-	-	-	-	-	-
223rd Street between Myler St and Vermont Ave	40			0	-	-	-	-	-	-
223rd St between Vermont Ave and I-110 SB Ramps	40			0	-	-	-	-	-	-
223rd Street between I-110 SB Ramps and Figueroa St	40			0	-	-	-	-	-	-

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
	Project	**Cumulative**	**Project**	**Cumulative**
Roadway/Segment	**Increment**	**Increment**	**Increment**	**Increment**
223rd Street between Western Ave and Normandie Ave	0.1	-	0.0	-
223rd Street between Normandie Ave and Myler St	0.1	-	0.1	-
223rd Street between Myler St and Vermont Ave	0.1	-	0.1	-
223rd St between Vermont Ave and I-110 SB Ramps	0.3	-	0.3	-
223rd Street between I-110 SB Ramps and Figueroa St	0.2	-	0.2	-

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing

Roadway/Segment	Speed MPH	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
Western Avenue between Carson St and 220th St	40	2296	2549	0	71.6	69.3	67.8	72.8	70.5	69.0
Western Avenue between 220th St and 223rd St	40	2524	2632	0	71.7	69.4	67.9	72.9	70.6	69.2
Western Avenue between 223rd St and Sepulveda Blvd	40	2693	2579	0	71.8	69.5	68.0	73.0	70.7	69.3
Myler Street between 220th St and 223rd St	35	294	161	0	62.4	59.4	57.6	63.6	60.6	58.9
0	40			0	-	-	-	-	-	-

Existing Plus Project (Full Buildout 2030)

Roadway/Segment	Speed MPH	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
Western Avenue between Carson St and 220th St	40	2320	2575	0	71.6	69.3	67.8	72.8	70.5	69.1
Western Avenue between 220th St and 223rd St	40	2525	2633	0	71.7	69.4	67.9	72.9	70.6	69.2
Western Avenue between 223rd St and Sepulveda Blvd	40	2699	2587	0	71.8	69.5	68.1	73.0	70.7	69.3
Myler Street between 220th St and 223rd St	35	335	210	0	62.9	60.0	58.2	64.2	61.2	59.4
0	40			0	-	-	-	-	-	-

Roadway/Segment	Speed MPH	Traffic Volumes AM	PM	ADT	Leq ROW	Leq 25 Feet	Leq 50 Feet	CNEL ROW	CNEL 25 Feet	CNEL 50 Feet
Western Avenue between Carson St and 220th St	40			0	-	-	-	-	-	-
Western Avenue between 220th St and 223rd St	40			0	-	-	-	-	-	-
Western Avenue between 223rd St and Sepulveda Blvd	40			0	-	-	-	-	-	-
Myler Street between 220th St and 223rd St	35			0	-	-	-	-	-	-
0	40			0	-	-	-	-	-	-

CNEL

Summary / Roadway/Segment	25 ft. from ROW Project Increment	25 ft. from ROW Cumulative Increment	At ROW Project Increment	At ROW Cumulative Increment
Western Avenue between Carson St and 220th St	0.0	-	0.0	-
Western Avenue between 220th St and 223rd St	0.0	-	0.0	-
Western Avenue between 223rd St and Sepulveda Blvd	0.0	-	0.0	-
Myler Street between 220th St and 223rd St	0.6	-	0.6	-
0	-	-	-	-

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Normandie Avenue between Torrance Blvd and Carson St	40	1533	1605	0	70.4	67.8	66.1	71.6	69.0	67.3
Normandie Avenue between Carson St and 220th St	40	1544	1533	0	70.2	67.6	66.0	71.5	68.8	67.2
Normandie Avenue between 220th St and 223rd St	40	1438	1414	0	69.9	67.3	65.7	71.1	68.5	66.9
Budlong Avenue n/o Carson St	35	82	107	0	58.0	55.0	53.3	59.2	56.2	54.5
Berendo Avenue n/o Carson St	35	102	136	0	59.0	56.1	54.3	60.2	57.3	55.5
Existing Plus Project (Full Buildout 2030)										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Normandie Avenue between Torrance Blvd and Carson St	40	1616	1689	0	70.6	68.0	66.4	71.8	69.2	67.6
Normandie Avenue between Carson St and 220th St	40	1648	1654	0	70.5	67.9	66.3	71.8	69.1	67.5
Normandie Avenue between 220th St and 223rd St	40	1493	1458	0	70.1	67.5	65.8	71.3	68.7	67.0
Budlong Avenue n/o Carson St	35	82	107	0	58.0	55.0	53.3	59.2	56.2	54.5
Berendo Avenue n/o Carson St	35	102	136	0	59.0	56.1	54.3	60.2	57.3	55.5
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Normandie Avenue between Torrance Blvd and Carson St	40			0	-	-	-	-	-	-
Normandie Avenue between Carson St and 220th St	40			0	-	-	-	-	-	-
Normandie Avenue between 220th St and 223rd St	40			0	-	-	-	-	-	-
Budlong Avenue n/o Carson St	35			0	-	-	-	-	-	-
Berendo Avenue n/o Carson St	35			0	-	-	-	-	-	-

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
	Project	**Cumulative**	**Project**	**Cumulative**
Roadway/Segment	**Increment**	**Increment**	**Increment**	**Increment**
Normandie Avenue between Torrance Blvd and Carson St	0.2	-	0.2	-
Normandie Avenue between Carson St and 220th St	0.3	-	0.3	-
Normandie Avenue between 220th St and 223rd St	0.2	-	0.2	-
Budlong Avenue n/o Carson St	0.0	-	0.0	-
Berendo Avenue n/o Carson St	0.0	-	0.0	-

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Harbor-UCLA Medical Center Campus Master Plan

Existing										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Vermont Avenue between Torrance Blvd and Carson St	40	1910	1792	0	71.9	68.9	67.1	73.1	70.1	68.4
Vermont Avenue between Carson St and 220th St	40	2018	1854	0	72.1	69.1	67.4	73.3	70.4	68.6
Vermont Avenue between 220th St and 223rd St	40	1857	1695	0	71.8	68.8	67.0	73.0	70.0	68.2
Medical Center Drive n/o Carson St	35	104	78	0	57.9	54.9	53.1	59.1	56.1	54.4
0	35			0	-	-	-	-	-	-
Existing Plus Project (Full Buildout 2030)										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Vermont Avenue between Torrance Blvd and Carson St	40	1964	1853	0	72.0	69.0	67.3	73.2	70.2	68.5
Vermont Avenue between Carson St and 220th St	40	2135	1987	0	72.4	69.4	67.6	73.6	70.6	68.8
Vermont Avenue between 220th St and 223rd St	40	1976	1837	0	72.0	69.0	67.3	73.3	70.3	68.5
Medical Center Drive n/o Carson St	35	104	78	0	57.9	54.9	53.1	59.1	56.1	54.4
0	35			0	-	-	-	-	-	-
Future With Project										
	Speed	**Traffic Volumes**			**Leq**			**CNEL**		
Roadway/Segment	**MPH**	**AM**	**PM**	**ADT**	**ROW**	**25 Feet**	**50 Feet**	**ROW**	**25 Feet**	**50 Feet**
Vermont Avenue between Torrance Blvd and Carson St	40			0	-	-	-	-	-	-
Vermont Avenue between Carson St and 220th St	40			0	-	-	-	-	-	-
Vermont Avenue between 220th St and 223rd St	40			0	-	-	-	-	-	-
Medical Center Drive n/o Carson St	35			0	-	-	-	-	-	-
0	35			0	-	-	-	-	-	-

CNEL

Summary	**25 ft. from ROW**		**At ROW**	
Roadway/Segment	**Project Increment**	**Cumulative Increment**	**Project Increment**	**Cumulative Increment**
Vermont Avenue between Torrance Blvd and Carson St	0.1	-	0.1	-
Vermont Avenue between Carson St and 220th St	0.2	-	0.3	-
Vermont Avenue between 220th St and 223rd St	0.3	-	0.3	-
Medical Center Drive n/o Carson St	0.0	-	0.0	-
0	-	-	-	-

	% of ADT			
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Helistop Relocation
Noise Impact Study

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN -
ENVIRONMENTAL IMPACT REPORT

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Appendix A – Ambient Noise Measurements Data
Appendix B – Helipad Operation Information
Appendix C – INM Noise Model Input Data

1 INTRODUCTION

This Noise Impact Study (Study) analyzes potential noise impacts associated with the proposed Helistop relocation at the Harbor-UCLA Medical Center (HUCLAMC), located in the County of Los Angeles, California (Project). The Project includes relocation of the existing Helistop, mounted on the roof of a single-story structure located on the eastern side of the HUCLAMC campus to an interim (temporary) location at the southwestern portion (near the Bio-Med building) of the campus; and to the final location, on the roof top of the future 9-story hospital building (near the existing Helistop, see Figure 2 on page 11). This noise assessment study addresses the potential noise impacts associated with the future helicopter operations on the nearby noise sensitive (i.e., residential and school) uses.

2 ENVIRONMENTAL SETTING

2.1 Noise Descriptors

Noise is usually defined as sound that is undesirable because it interferes with speech communication and hearing, or is otherwise annoying (unwanted sound). The decibel (dB) is a conventional unit for measuring the amplitude of sound because it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound amplitude.[1] The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human frequency-dependent response, the A-weighted filtering system is used to adjust measured sound levels (dBA). The term "A-weighted" refers to filtering the noise signal in a manner that corresponds to the way the human ear perceives sound. Examples of various sound levels in different environments are shown in Figure 1 on page 4.

People judge the relative magnitude of sound sensation by subjective terms such as "loudness" or "noisiness." To the normal hearing, a change (i.e., increase or decrease) in sound level of 3 dBA is considered "just perceptible," a change in sound level of 5 dBA is considered "clearly noticeable," and an increase of 10 dBA is recognized as "twice as loud."[2]

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider the total acoustical energy content, as well as the time and duration of occurrence. The most frequently used noise descriptors, including those used by the County of Los Angeles (where the Project is located), are summarized below:

---

[1] *All sound levels measured in decibel (dB) in this study are relative to $2x10^{-5}$ N/m^2.*

[2] *Engineering Noise Control, Bies & Hansen, 1988.*

Noise Level (dBA)	Common Indoor Noise Levels	Common Outdoor Noise Levels
110	Rock Band	
100	Inside Subway Train	Jet Flyover @ 1,000 feet Gas Lawn Mower @ 3 feet
90	Food Blender @ 3 feet	Diesel Truck @ 50 feet Noisy Urban Daytime
80	Garbage Disposal @ 3 feet Shouting @ 3 feet	
70	Vacuum Cleaner @ 10 feet	Gas Lawn Mower @ 100 feet Commercial Area
60	Normal Speech @ 3 feet Large Business Office	Heavy Traffic @ 300 feet
50	Dishwasher next room	Quiet Urban Daytime
40	Small Theater/Conference Room (background)	Quiet Urban Nighttime Quiet Suburban Daytime
30	Library Bedroom at Night	
20	Concert Hall (background) Broadcast & Recording Studio	Quiet Rural Nighttime
10		
0	Threshold of Hearing	

Source: Noise Element of the Los Angeles City General Plan, adopted February 3, 1999

Figure 1. Common Noise Levels

Maximum Sound Level (L_{max}). L_{max} represents the maximum A-weighted sound level measured during a defined measurement period. It is a measure of the highest sound level at a particular point in time.

Equivalent Sound Level (L_{eq}). L_{eq} is a measurement of the acoustic energy averaged or integrated over a specified time period. The L_{eq} of a time-varying sound and that of a steady sound are the same if they deliver the same amount of energy to the receptor's ear during exposure. L_{eq} can be measured for any time period, but is typically measured for an increment of no less than 15 minutes for environmental studies.

Sound Exposure Level (SEL). SEL is typically used to evaluate noise effects from the aircraft operation (including helicopter flight noise) on noise sensitive land uses such as residential. SEL is an energy-based sum of the noise experienced during a single noise event, normalized to one second duration. For example, a single noise event with a sound level of 70 dBA that lasted 10 seconds would have an SEL of 80 dBA.[3]

Statistical Sound Level (L_n). L_n is a statistical description of the sound level that is exceeded over some fraction of a given period of time. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. In other words, half of the time the noise level exceeds this level, and half of the time the noise level is less than this level. L_{50} is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_8 and L_{25} represent the noise levels that are exceeded 8 and 25 percent of the time, respectively, or for 5 and 15 minutes during a 1-hour period, respectively. The County of Los Angeles noise limits are provided in terms of statistical sound levels.

Community Noise Equivalent Level (CNEL). CNEL is the time average of all A-weighted sound levels for a 24-hour day period with a 10 dBA adjustment (increase) added to the sound levels which occur in the nighttime hours (10:00 p.m. to 7:00 a.m.), and a 5 dBA adjustment (increase) added to the sound levels which occur in the evening hours (7:00 p.m. to 10:00 p.m.). These penalties attempt to account for increased human sensitivity to noise during the quieter nighttime periods, when the ambient background noise is less and where sleep is the most probable activity. In general, and as relates to constant noise sources such as mechanical equipment, the 24-hour CNEL is approximately equal to L_{eq} plus 7 dBA. CNEL has been adopted by the State of California to define the community noise environment for development of the community Noise Element of a General Plan, and is also used by the City of Los Angeles for land use planning and to describe noise impacts in its *L.A. CEQA Thresholds Guide (2006).*[4]

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[3] *Sample of SEL calculation for a noise level of 70 dBA which lasted 10 seconds. SEL = 70 dBA + 10*log(10) = 80 dBA SEL*

[4] *State of California, General Plan Guidelines, 2006.*

Day-Night Average Level (L_{dn} or DNL). L_{dn}, like CNEL, is the weighted 24-hour average noise level in an environment which accounts for peoples increased annoyance to noise occurring in the nighttime hours. L_{dn} is the average equivalent A-weighted sound level during a 24-hour day, calculated after adding 10 dBA to sound levels which occur in the night after 10:00 p.m. and before 7:00 a.m. Typically, L_{dn} levels are within 1 dBA of CNEL levels.

2.2 Federal and State Noise Standards for Aircraft Operations

The Federal Aviation Administration (FAA) established the aircraft noise analysis methodology and significance threshold that are applicable to federally funded projects that have an aviation noise component.

Title 14 of the Code of Federal Regulations (CFR), and specifically Part 150, *Airport Noise Compatibility Planning*, provides guidelines for land use compatibility around airports. Part 150 states that in general, residential uses are not compatible within the 65 dBA L_{dn} contour or above, and that all types of land uses are compatible in areas below 65 dBA L_{dn} (65 dBA CNEL for projects in California). In addition, the FAA's Order 1050.1E, *Environmental Impacts: Policies and Procedures*, establishes a screening threshold of a 1.5 dBA L_{dn} (or 1.5 dBA CNEL for projects in California) increase in noise in any sensitive area located within the 65 dBA L_{dn} (or 65 dBA CNEL for projects in California) contour. In practice, it has been found that unless a proposed airport or heliport project will cause at least by a 1.5 dB increase within the 65 dBA CNEL or greater area, a 3 dB or greater (i.e., audible) increase in the 60-65 dBA CNEL area, impacts will not occur.[5]

The airport noise regulations found in CCR Title 21, Section 5000 et seq. are administered by the Division of Aeronautics within the California Department of Transportation (Caltrans). Under these regulations, civilian airports are required to ensure compatible land uses within the 65 dBA CNEL contour produced by their aircraft operations. Caltrans also has adopted the 65 dBA CNEL threshold as the maximum acceptable exterior noise exposure for residential land uses affected by noise generated at helistops.

Neither the FAA nor the State of California has established a standard compatibility criterion for the A-weighted single event noise metrics such as SEL or L_{max}. However, previous research performed by Federal Aviation Administration (FAA) and others, examines the correlation between single event noise levels and prediction of "annoyance" due to speech or sleep interference. The Federal Interagency Committee on Aircraft Noise (FICAN) *Effects of Aviation Noise on Awakenings from Sleep, June, 1997* analyzed several sleep studies regarding the relationship between the single event noise metric, Sound Exposure Level (SEL) and sleep disturbance as measured by the number of awakenings. According to the

[5] *Federal Agency Review of Selected Airport Noise Analysis Issues, Federal Interagency Committee on Noise, August 1992.*

FICAN reports, up to 10 percent of the people could experience sleep disturbance from aircraft noise when the indoor noise environment reaches a level of 81 dBA SEL.[6]

2.3 County of Los Angeles Standards and Guidelines

The Noise Control Ordinance of the County of Los Angeles (County Noise Ordinance) identifies exterior noise standards for any source of sound at any location within the unincorporated areas of the County, and specific noise restrictions, exemptions, and variances for exterior noise sources. Specifically, Section 12.08.010, et seq., of the County Code provides maximum exterior noise level standards for four general noise zones. These noise zones are:

1. Noise-Sensitive Areas: Noise-sensitive zones are designated by the County Health Officer.
2. Residential Properties: This category includes all types of residential developments and properties subject to residential zoning.
3. Commercial Properties: This category includes all types of commercial developments and properties subject to commercial zoning classifications.
4. Industrial Properties: This category includes all properties developed with manufacturing uses and properties subject to industrial zoning.

For each of these zones, the County Noise Ordinance states that exterior operational noise levels caused by project-related on-site fixed sources (i.e., point noise sources) shall not exceed the levels identified in Table 1 on page 8, or the ambient noise level, whichever is greater, when the ambient noise level is determined without the noise source operating.[7] These standards are based on the duration of the noise. Thus, the louder the noise, the shorter the duration that such noise can last. To define these specific durations of noise, the noise metrics used include L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, and L_{max}. These metrics are based upon a one-hour timeframe and indicate exceedances of 50, 25, 8.3, and 1.7 percent of the time, which are equivalent to 30 minutes, 15 minutes, 5 minutes, and 1 minute in an hour, respectively. In addition, L_{max} represents the maximum sound level during a time period.

The current County of Los Angeles General Plan, adopted in 1980, includes a Noise Element as a planning tool to develop strategies and action programs that address a multitude of noise sources and issues. The noise guidelines used by the County are based on the land use community compatibility guidelines established by the State of California, as provided in Table 2 on page 9. Specific regulations that implement these guidelines are set forth in the County Code, discussed below. Relevant policies in the Noise Element focus on minimizing transportation-related noise and promoting public awareness of noise effects.

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[6] *FICAN, "Effects of Aviation Noise on Awakening from Sleep", June 1997.*

[7] *Ambient noise level is the existing background noise level at the time of measurement or prediction.*

Table 1. County of Los Angeles Exterior Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level[a] dBA
I	Noise-Sensitive Area[b]	Anytime	45
II	Residential Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	45 50
III	Commercial Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	55 60
IV	Industrial Properties	Anytime	70

[a] *This Table is used by the County to develop noise standards based on the duration of the noise source. These standards are described below.*

Standard No. 1 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level; or, if the ambient L_{50} exceeds the forgoing level, then the ambient L_{50} becomes the exterior noise level for Standard No. 1.*

Standard No. 2 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from Standard 1 plus 5 dBA; or, if the ambient L_{25} exceeds the forgoing level, then the ambient L_{25} becomes the exterior noise level for Standard No. 2*

Standard No. 3 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from Standard 1 plus 10 dBA; or, if the ambient $L_{8.3}$ exceeds the forgoing level, then the ambient $L_{8.3}$ becomes the exterior noise level for Standard No. 3.*

Standard No. 4 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from Standard 1 plus 15 dBA, or, if the ambient $L_{1.7}$ exceeds the forgoing level, then the ambient $L_{1.7}$ becomes the exterior noise level for Standard No. 4.*

Standard No. 5 *shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 4 shall be the applicable noise level from Standard 1 plus 20 dBA; or, if the ambient L_0 exceeds the forgoing level, then the ambient L_0 becomes the exterior noise level for Standard No. 4.*

[b] *Not defined in the County Noise ordinance. To be designated by the County Health Officer.*

Source: Los Angeles County Code, Section 12.08.390.

Table 2. Land Use Compatibility for Community Noise Exposure

Land Uses	Community Noise Exposure CNEL, dBA			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Residential: Low-Density Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	Above 75
Residential: Multi-Family	50–65	60–70	70–75	Above 75
Transient Lodging: Motels, Hotels	50–65	60–70	70–80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50–75	—	Above 70
Playgrounds, Neighborhood Parks	50–70	—	67.5–75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	Above 80
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	Above 75	—

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and necessary noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Planning and Research, State of California General Plan Guidelines, Appendix C: Noise Element Guidelines, October 2003

2.4 Existing Noise Environment

The existing noise environment surrounding the Project site is comprised primarily of vehicle traffic on nearby streets. Ambient noise measurements were conducted at seven (7) off-site noise sensitive (residential and school uses) receptors in the vicinity of the Project site and the proposed helicopter flight paths, to quantify the existing noise environment. Figure 2 on page 11 shows the noise measurement locations in relation to the existing Helistop. At each of the measurement locations, two short-term (15-minute) noise readings were made, one during daytime period and one during nighttime period. The ambient noise measurements were

conducted on March 10 and May 25, 2016, between the hours of 11 a.m. and 2 p.m. (daytime period) and 10 p.m. and 12 a.m. (nighttime period).

Noise measurements were conducted using the Quest 2900 Integrated Sound Level Meter (SLM). The Quest 2900 SLM is a Type 2 standard instrument as defined in the American National Standard Institute (ANSI) S1.4 (all instruments were calibrated and operated according to the manufacturer's written specifications). The microphone was placed at a height of five feet above the local grade. Table 3 below presents the measured ambient noise levels in the vicinity and within the Project site. Detailed noise measurement data, including time of measurements, field notes, and approximate locations are provided in Appendix A. Based on field observation and measured sound data, the current ambient noise environment in the vicinity of the Project Site is controlled primarily by vehicular traffic on nearby local roadways, and to a lesser extent by occasional aircraft flyovers, and other typical urban noise.

Table 3. Measured Ambient Noise Levels

Location	Nearby Noise Sensitive Land Uses	Measured Noise Levels,[a] L_{eq} (dBA)		CNEL,[b] (dBA)
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
R1: Multi-family residential use at the northeast corner of Vermont Avenue and 219th Street	Residential	68.3	64.9	70.5
R2: Multi-family residential use on 220th Street, approximately 200 feet west of Vermont Avenue	Residential	66.2	57.2	65.6
R3: Single-family residential use on 220th Street, approximately 230 feet east of Mariposa Avenue	Residential	63.3	58.0	64.3
R4: Single-family residential use on east side of Normandie Avenue, approximately 150 feet south of 220th Street	Residential	70.5	63.5	70.7
R5: Single-family residential use on north side of 220th Street, approximately 230 feet west of Normandie Avenue.	Residential	51.4	47.3	53.1
R6: Single-family residential use on south side of 218th Street, approximately 90 feet west of Normandie Avenue	Residential	57.0	48.1	56.4
R7: Single-family residential use on east side of Normandie Avenue, just north of Ritner Street. This measurement location also represents the Halldale Elementary School located on the west side of Normandie Avenue	Residential/ School	64.8	56.9	64.6

[a] *Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix A*
[b] *Estimated based on the short-term measurements following the FTA guidelines*

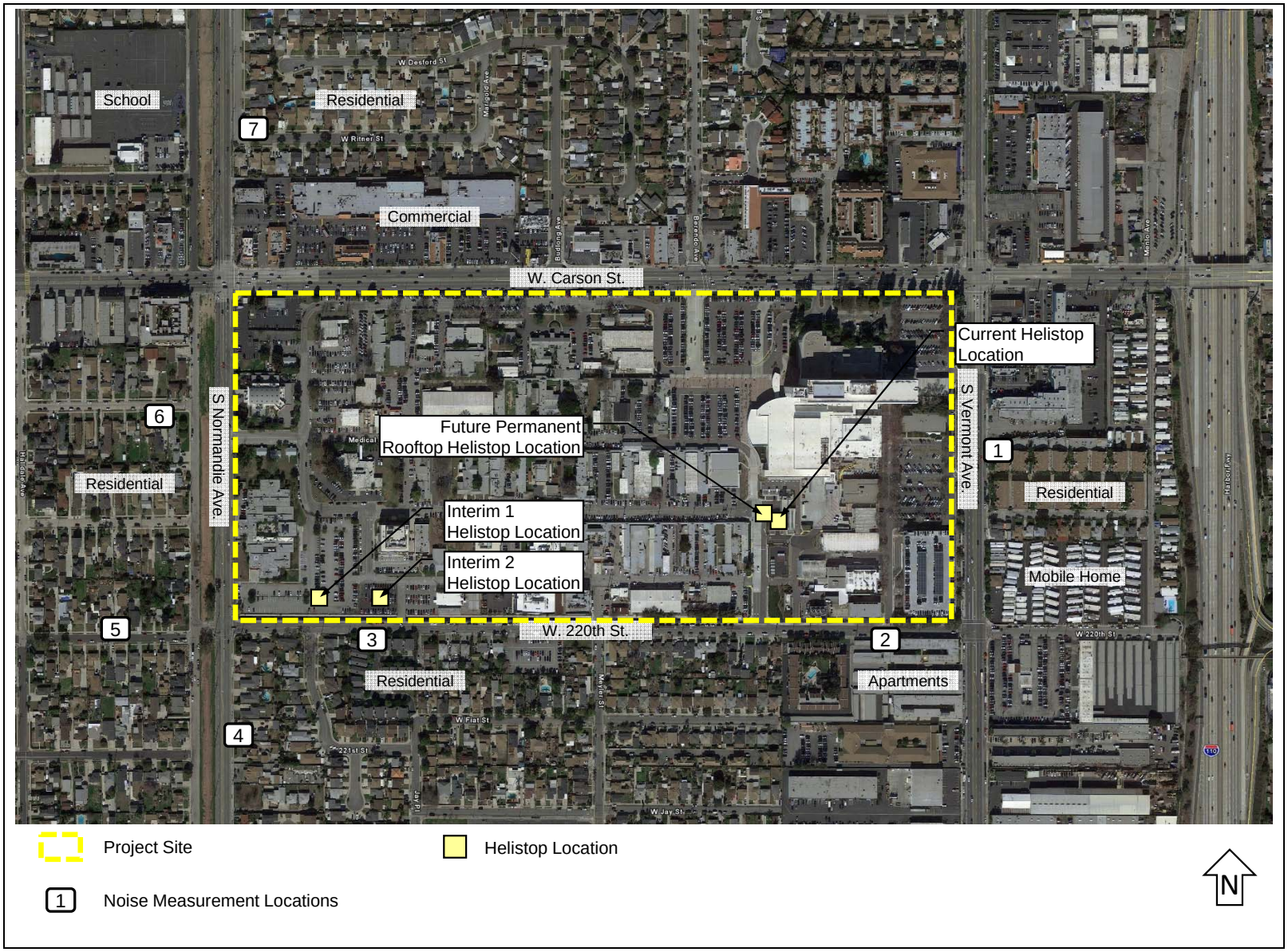


Figure 2. Project Site Showing Noise Measurement Locations

2.4.1 Existing Helicopter Noise

In addition to the ambient noise measurements, noise levels associated with the existing Helistop operations were calculated using information provided by the hospital's helicopter landing logs. Existing helicopter operation related noise contours were calculated using the FAA Integrated Noise Model (INM) Version 7.0d. The INM input information include: three dimensional flight tracks for departure and approach, helicopter flight procedures, number and type of helicopters, and daily operations (number of flights by hours). The INM noise model calculates helicopter operations related CNEL, L_{max} and SEL noise levels at a particular receptor location. Detail information for the helistop operations including: helicopter operations (i.e., numbers and types of helicopters), helicopter flight tracks, and helicopter flight procedures (i.e., speed, elevation, and distance) were provided by the Project Heliport Consultants (included in Appendix B).

The existing Helistop is located on the roof level of a single-story structure, approximately 15 feet above the local grade elevation (43 feet above mean sea level, MSL), within the HUCLAMC campus. There are four flight tracks/paths (under the current condition) that the helicopter would utilized for approach (to the hospital) and depart (from the hospital), as shown on Figure 3 on page 13. As indicated, two flight paths generally follow west (from the Helistop) and turn north and south follow Normandie Avenue and two flight paths to the northeast and southeast. The noise analysis assumed even distribution for helicopter operations for the four flight paths (i.e., one-fourth for each flight path), because the need for an air ambulance can arise from any direction.

Table 4 on page 14 presents the existing helicopter operations at the existing Helistop. Existing helicopter flights were from various public agencies and private providers including: Los Angeles City Fire Department (LAFD), Los Angeles County Fire Department (LACFD), Los Angeles County Sheriff Department (LACSD), U.S. Coast Guard (USCG), Air Methods/Mercy Air, Reach, Helinet, and Calstar/LifeFlight. There are seven main types of helicopter that utilized the Helistop as indicated in Table 4. The existing helicopter operations data are based on information collected from the previous eight years, from 2008 to 2015, compiled from data provided by the various helicopter operators landing logs. For aircraft noise analysis, the CNEL level is calculated based on the average annualized day. Therefore, the total number of flights for the eight years (96-month period count) was divided by 35,040 days (96 months multiply by 365 days) to determine the average number of flights per day.

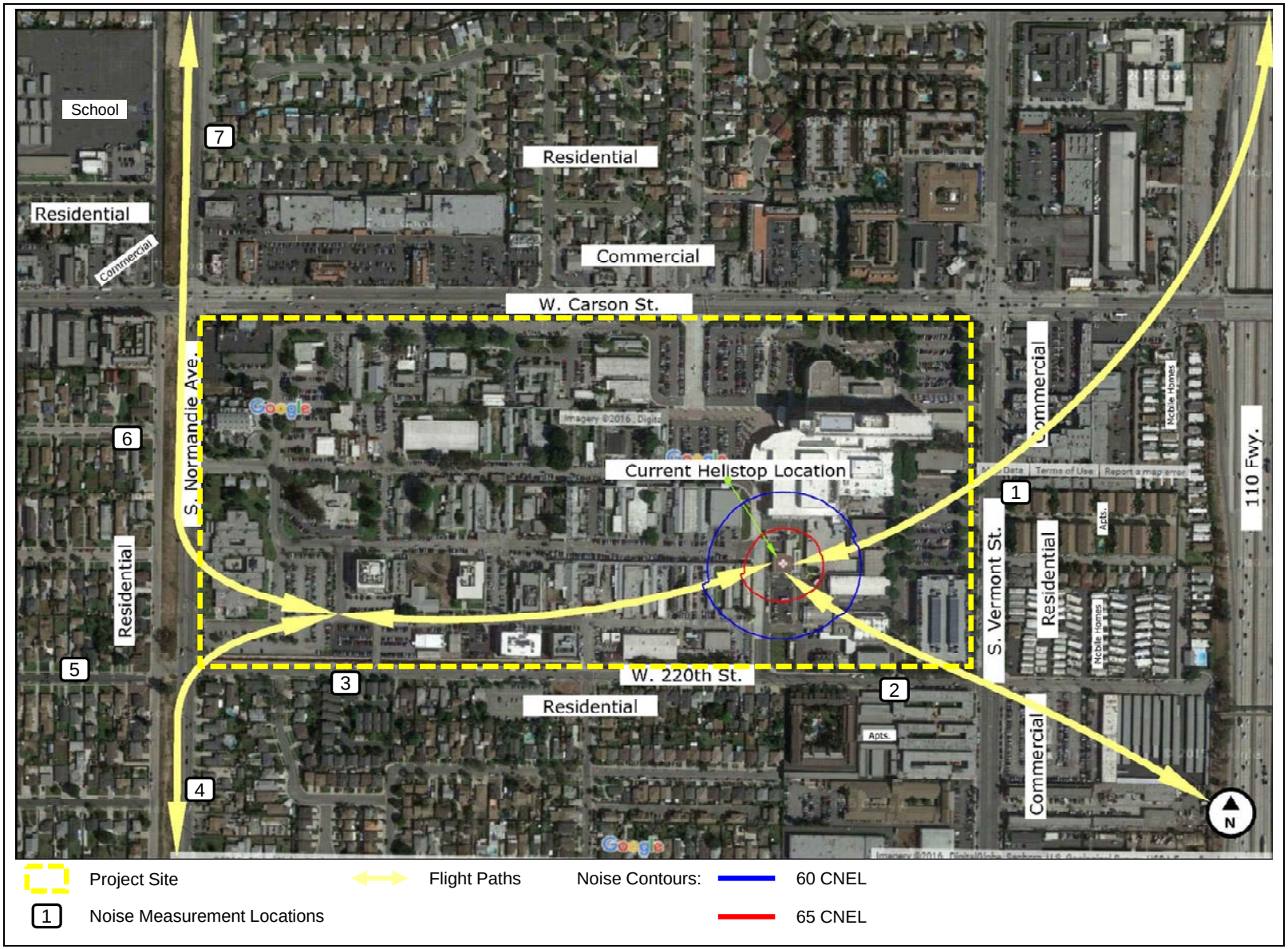


Figure 3. Helicopter Operations CNEL Noise Contour – Existing Helistop Location

Table 4. Existing Helicopter Operations Profiles Used to Compute CNEL

Helicopter Type	Flights[1]/ 96 Months	Flights[2]/ Year	Flights[3]/ Day	Flights/Day per Time Period[4]		
				Daytime (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Sikorsky S-70, Eurocopter AS332L1, Sikorsky H3	192	24.0	0.06575	0.02740	0.00753	0.03082
Sikorsky S-76, Bell 412, Eurocopter AS365	94	11.75	0.03219	0.01199	0.00582	0.01438
AgustaWestland AW139	46	5.75	0.01574	0.01027	0.00205	0.00342
Eurocopter AS350B2, Eurocopter AS355F2, Bell 407	38	4.75	0.01301	0.00719	0.00308	0.00274
Bell 222	108	13.50	0.03698	0.02705	0.00651	0.00342
Eurocopter EC145, MBB/Kawasaki BK117	36	4.50	0.01233	0.00890	0.00240	0.00103
Eurocopter EC135	28	3.50	0.00959	0.00479	0.00240	0.00240
Total Flights	542	67.75	0.18559	0.09759	0.02979	0.05821

[1] *A helicopter flight includes one departure and one arrival, two operations.*
[2] *Flights/Year = Flights/96 Months divided by 8 years*
[3] *Flights/Day = Flights/Year divided by 365 days*
[4] *Percentage of flights for the daytime, evening, and nighttime periods are based on the helicopter providers' operations logs*
Source: Heliport Consultants, 2016 using helicopter operators' landing logs for period of 2008 to 2015.

Figure 3 on page 13 shows the CNEL noise contours generated by the helicopter operations at the existing Helistop. As shown on Figure 3, the highest CNEL noise contour is CNEL 65 dBA which lies within the hospital campus. Table 5 on page 15 presents the predicted helicopter noise levels at the Project receptor locations in CNEL based on the existing helicopter operations. As indicated therein, the predicted helicopter noise levels in term of CNEL are significantly lower than that of the existing measured ambient noise levels (non-helicopter noise). Also, included in Table 5 (last column) are the existing ambient noise levels plus the estimated noise levels from the helicopter operations. The results show that the existing helicopter noise has no impacts (as measured in CNEL) on the current ambient sound environment at the off-site noise sensitive uses.

In addition to the CNEL noise analysis, the INM model calculates the single event (single helicopter) noise level in terms of sound exposure level (SEL) and maximum noise level (L_{max}). The single event noise analysis provides the maximum noise level that would be generated by a single helicopter arriving or departing on the identified flight paths, regardless of the number of flights per day. The twin engine Sikorsky S-70 helicopter represents the majority of the current helicopter landings, approximately 39 percent of the total operations, and also generates the highest sound level. Therefore, the Sikorsky S-70 helicopter noise signature was used for the single event noise analysis.

Table 6 on page 16 presents the predicted SEL and L_{max} levels from the Sikorsky S-70 at the Project's offsite noise receptor locations. These are the maximum noise levels at the exterior environment at the noted receptor locations. As indicated in Table 6, the predicted noise levels ranged from 79.5 dBA L_{max} (88.1 dBA SEL) at receptor R7 to 86.5 dBA L_{max} (102.9 dBA SEL) at receptor R2. As previously described, the SEL level represents the total sound energy during a single noise event normalized to a 1 second period. Therefore, SEL levels are generally higher than the L_{max} noise levels.

Table 5. Summary of Helistop Noise Analysis – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[1] Feet	Predicted Existing Helicopter Noise Levels,[2] CNEL (dBA) "A"	Measured Ambient Noise Levels without Helicopter (from Table 3) Operations,[3] CNEL (dBA) "B"	Ambient Noise Levels + Helicopter Noise Levels,[4] CNEL (dBA) "C=A+B"
R1	Residential	800	47.6	70.5	70.5
R2	Residential	570	50.0	65.6	65.7
R3	Residential	1480	41.3	64.3	64.3
R4	Residential	2100	38.0	70.7	70.7
R5	Residential	2380	35.8	53.1	53.2
R6	Residential	2230	35.4	56.4	56.4
R7	Residential/ School[5]	2380	33.5	64.6	64.6

Notes:

1 *Estimated diagonal distances using Google Earth Map. Distances are estimated from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

2 *Due to helicopter operations only.*

3 *Measured ambient noise levels without helicopter operations.*

4 *Calculation Methodologies are provided in Appendix C.*

5 *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, 2016

Table 6. Helicopter Single-Event Noise Levels – Existing Helistop Conditions

Location	Land Use Descriptions	Diagonal Distance from Helistop,[1] Feet	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)
R1	Residential	800	100.8/85.4
R2	Residential	570	102.9/86.5
R3	Residential	1480	96.9/84.1
R4	Residential	2100	94.2/82.7
R5	Residential	2380	91.9/81.8
R6	Residential	2230	90.7/81.8
R7	Residential/School[2]	2380	88.1/79.5

Notes:

[1] *Diagonal distances using Google Earth Map. Distances are from the center of the existing Helistop to the sidewalk adjoining the receptor locations.*

[2] *Halldale Elementary School located on the west side of Normandie Avenue and north of 216th Street.*

Source: Acoustical Engineering Services, 2016

3 IMPACT ANALYSIS

3.1 Significance Thresholds

The significance threshold for the helicopter operations related noise impact is based on projected changes in noise levels (increases) from existing to the future conditions, with consideration of existing ambient noise environments and the regulatory framework described above. The applicable significance threshold with respect to helicopter operation per FAA and Caltrans is provided in terms of CNEL levels. In addition to the CNEL threshold, a single event noise level significance threshold is recommended in terms of maximum noise level, L_{max}. As discussed above with respect to the community noise assessment, changes in noise levels less than 3 dBA are generally not discernable to most people, while changes greater than 5 dBA L_{max} are readily noticeable and would be considered a significant increase.[8] Therefore, the significance threshold for the single-event noise level (L_{max}) is utilized by evaluating the incremental change from the existing with that of the future helicopter operations.

Therefore, the Project would result in a significant noise impacts if:

- Helicopter operations will generate noise levels which exceed 65 dBA CNEL at a sensitive land use and the Project increases ambient noise levels by 1.5 dBA CNEL or greater; or,

[8] *Engineering Noise Control, Bies & Hansen, 1988*

- The maximum noise levels from a single helicopter operation will cause an incremental noise increase of 5 dBA L_{max} or greater as compared to the existing helicopter operations at a sensitive land use.

3.2 Helicopter Noise – Interim Conditions

As part of the hospital's Master Plan, the existing Helistop would be relocated to the roof level of the future hospital building. However, during the construction of the future hospital and future Helistop, the existing Helistop would temporarily be relocated. There are two proposed locations to be used as an interim location for the Helistop, Interim 1 or Interim 2. The Interim 1 Helistop would be located at the Professional building parking lot (near the southwest corner of the HUCLAMC campus) and Interim 2 Helistop would be located at the BioMed parking (approximately 230 feet east of the Interim 1 location). Both helipads would be raised approximately 10 feet above the local grade. The helicopter flight paths for the Interim 1 and Interim 2 Helistop locations are illustrated on Figure 4 (on page 19) and Figure 5 (on page 20), respectively. The noise analysis assumed that the future helicopter operation specifics, as provided by Heliport Consultant, would be similar to the existing conditions.

Figure 4 shows the calculated CNEL noise contours generated by the helicopter operations at the Interim 1 Helistop location. As shown on Figure 4, the 65 CNEL noise contour would extend just outside of the medical center campus, south property line. Table 7 on page 21 presents the predicted helicopter noise levels in CNEL with the helicopter operations at the Interim 1 Helistop location. The predicted CNEL levels due to the helicopter operations at the Interim 1 Helistop location ranged from 37.0 dBA CNEL at receptors R1 and R2 to 58.6 dBA CNEL at receptor R3. Compared with the current Helistop, the predicted Interim 1 Helistop helicopter noise levels in term of CNEL would result in a higher noise level at receptors (R3 through R7). Also included in Table 7 are the ambient noise levels with helicopter operations under both existing and future conditions (with the helicopter operation at the Interim 1 Helistop location). As indicated therein, the future helicopter operations would result in a maximum increase of 0.1 dBA CNEL at receptor R4 to 1.0 dBA CNEL at receptor R3 (no increase in helicopter noise levels at receptors R1, R2 and R7). The estimated increase would be below the Project's significance threshold of 1.5 dBA CNEL.

The calculated CNEL noise contours generated by the helicopter operations at the proposed Interim 2 Helistop location are provided on Figure 5 on page 20. As shown on Figure 5, the 65 CNEL noise contour would extend just outside of the medical center campus (south property line). Table 8 on page 21 presents the predicted helicopter noise levels in CNEL with the helicopter operations at the Interim 2 Helistop location. The predicted CNEL levels due to the helicopter operations at the Interim 2 Helistop location ranged from 35.6 dBA CNEL at receptor R7 to 63.7 dBA CNEL at receptor R3. Similar to the Interim 1 Helistop location, the predicted helicopter operation noise levels (from the Interim 2 Helistop location) would result in a higher noise level at receptors (R3 through R7). When considering the existing ambient noise levels, the helicopter operations under both existing and future

conditions (with the future helicopter operation at the Interim 2 Helistop location), the future helicopter operations would result in a maximum increase of 0.2 dBA CNEL at receptor R6 to 2.7 dBA CNEL at receptor R3 (no increase in helicopter noise levels at receptors R1, R2, R4 and R7). The estimated increase of 2.7 dBA CNEL would exceed the Project's significance threshold of 1.5 dBA CNEL at receptor R3.

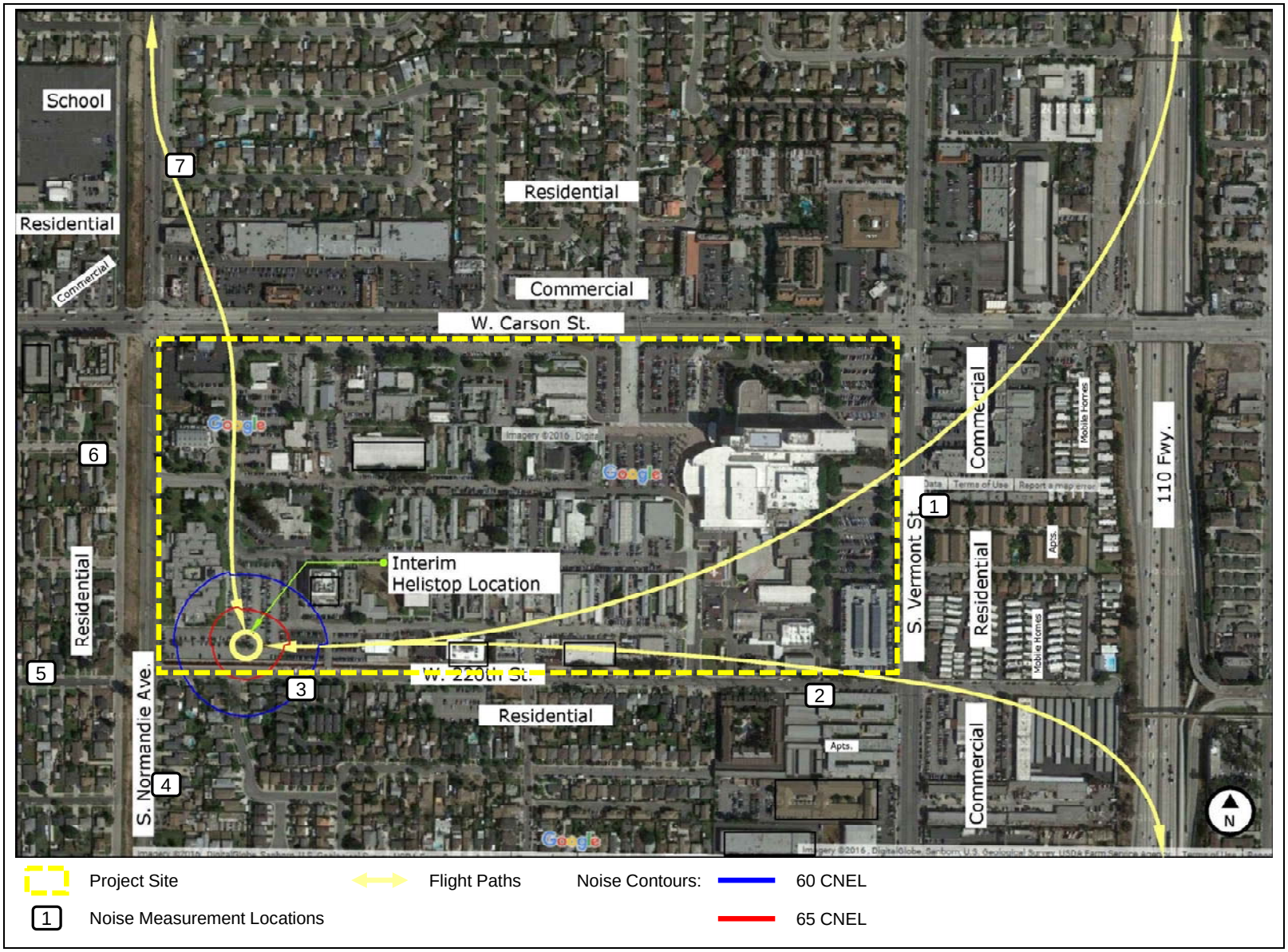


Figure 4. Helistop Operation CNEL Noise Contour – Interim 1 Helistop Location

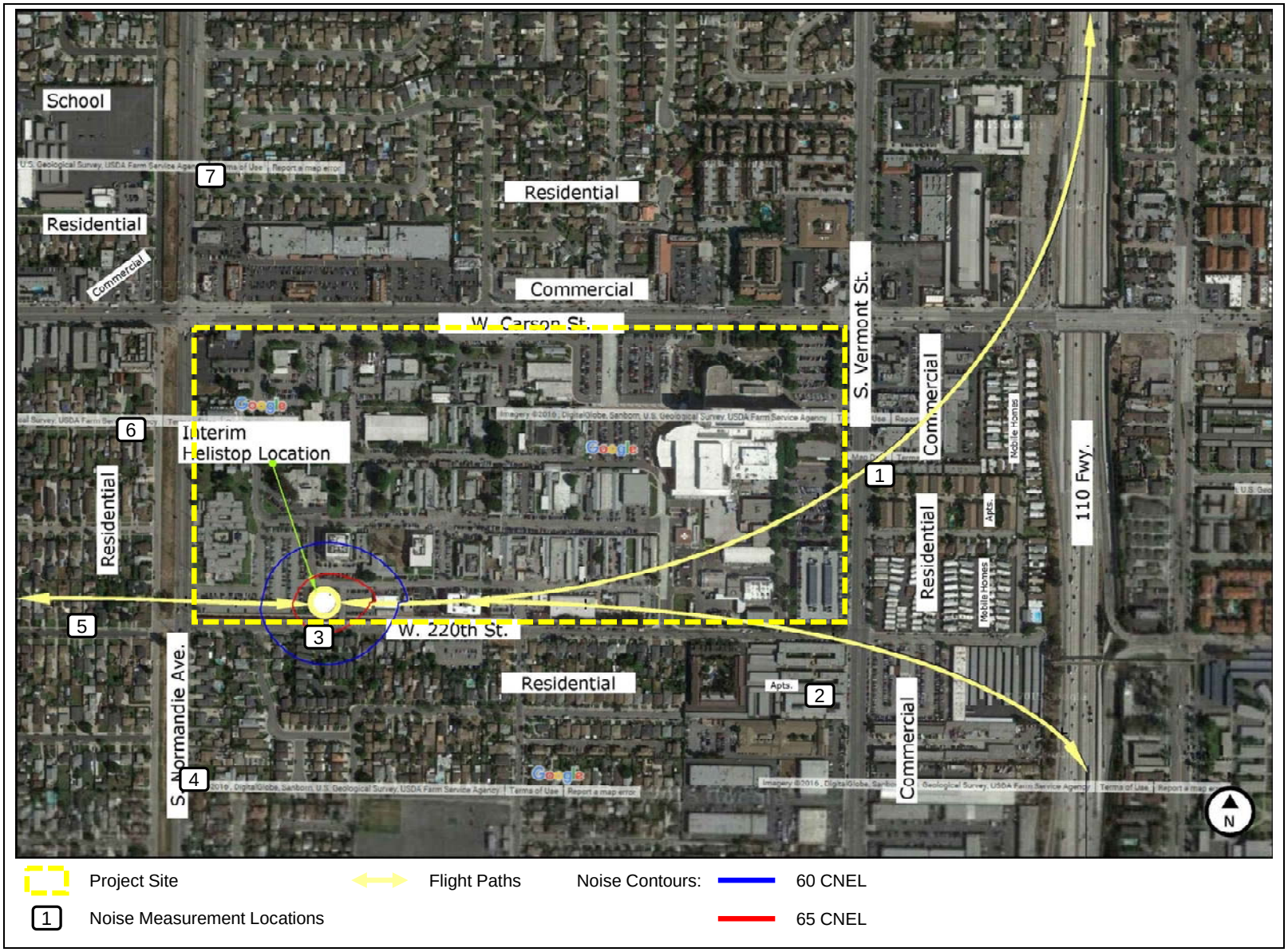


Figure 5. Helistop Operation CNEL Noise Contour – Interim 2 Helistop Location

Table 7. Helicopter Noise Analysis – Interim 1 Helistop Location

Location	Longitudinal Distance from Interim 1 Helistop,[1] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E–C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation, CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2470	70.5	47.6	70.5	37.0	70.5	0.0
R2	2040	65.6	50.0	65.7	37.0	65.6	-0.1
R3	260	64.3	41.3	64.3	58.6	65.3	1.0
R4	580	70.7	38.0	70.7	53.6	70.8	0.1
R5	700	53.1	35.8	53.2	47.1	54.1	0.9
R6	870	56.4	35.4	56.4	46.6	56.8	0.4
R7	1710	64.6	33.5	64.6	38.8	64.6	0.0

Notes:
[1] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*
Source: Acoustical Engineering Services, 2016

Table 8. Helicopter Noise Analysis – Interim 2 Helistop Location

Location	Longitudinal Distance from Interim 2 Helistop,[1] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E–C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Helicopter Operation, CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	2250	70.5	47.6	70.5	38.0	70.5	0.0
R2	1820	65.6	50.0	65.7	38.3	65.6	-0.1
R3	130	64.3	41.3	64.3	63.7	67.0	2.7
R4	720	70.7	38.0	70.7	50.2	70.7	0.0
R5	930	53.1	35.8	53.2	45.3	53.8	0.6
R6	1030	56.4	35.4	56.4	43.3	56.6	0.2
R7	1765	64.6	33.5	64.6	35.6	64.6	0.0

Notes:
[1] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*
Source: Acoustical Engineering Services, 2016

As described above, the Sikorsky S-70 helicopter has higher noise signature than that of the other helicopter types. Therefore, the Sikorsky S-70 helicopter is used for the single-event

noise assessment. Table 9 below presents the predicted helicopter single-event noise levels at R1 through R7 under the existing and the Interim 1 Helistop location in SEL and L_{max} levels. L_{max} levels represent the maximum sound level from the helicopter operation and the SEL levels represent the total sound energy normalized (squeezed) into a one second period. SEL levels are provided for informational purpose only, as the County does not have criteria as relates to SEL levels. The individual helicopter operation would generate noise levels at receptors in the vicinity of the Helistop, which could results in awakening based on the 1997 FICAN study. However, helicopter nighttime operations would be minimal, approximately 1.8 events per month (see Table 4).[9] As indicated in Table 9, the predicted L_{max} due to the helicopter (Sikorsky S-70) operation at the Interim 1 Helistop location would result in an increase of 2.7 dBA L_{max} (at receptor R4) to 5.6 dBA L_{max} (at receptor R3), as compared with the existing conditions. The estimated increase in terms of maximum noise level (L_{max}) would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts associated with the relocation of the existing Helistop to the Interim 1 Helistop location would result in a significant impact. The significant noise impact, however, would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building.

Table 9. Helicopter Single-Event Noise Impacts – Interim 1 Helistop

Location	Longitudinal Distance from Interim 1 Helistop,[1] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 1 Helistop	
R1	2470	Residential	100.8/85.4	92.1/81.4	-8.7/-4.0
R2	2040	Residential	102.9/86.5	90.6/81.2	-12.3/-5.3
R3	260	Residential	96.9/84.1	112.4/89.7	15.5/5.6
R4	580	Residential	94.2/82.7	107.0/85.4	12.8/2.7
R5	700	Residential	91.9/81.8	100.3/81.6	8.4/-0.2
R6	870	Residential	90.7/81.8	101.4/85.5	10.7/3.7
R7	1710	Residential/ School	88.1/79.5	93.9/83.7	5.8/4.2

Notes:
[1] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 1 Helistop to the sidewalk adjoining the receptor locations.*
Source: Acoustical Engineering Services, 2016.

Table 10 on page 23 presents the predicted helicopter single-event noise levels under the existing and the Interim 2 Helistop location. As described above, SEL levels are provided for informational purpose only, as the County does not have criteria as relates to SEL levels. As indicated in Table 10, the predicted L_{max} due to the helicopter (Sikorsky S-70) operation at

[9] *Estimated monthly nighttime operations, 1.75 = 0.05821 nighttime operations/day multiply by 30 days.*

the Interim 2 Helistop location would result in an increase of 0.3 dBA L_{max} (at receptors R4 and R5) to 15.4 dBA L_{max} (at receptor R3, which is located directly south of the Interim 2 Helistop), as compared to the existing conditions. The estimated increase in terms of maximum noise level (L_{max}) would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts associated with the relocation to the existing Helistop to the Interim 2 Helistop location would result in a significant impact. The significant noise impact, however, would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building.

Table 10. Helicopter Single-Event Noise Impacts – Interim 2 Helistop

Location	Longitudinal Distance from Interim 2 Helistop,[1] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, SEL/L_{max} (dBA)		Increase in Noise Levels from Existing to Future Conditions, SEL/L_{max} (dBA)
			Existing Helistop	Interim 2 Helistop	
R1	2250	Residential	100.8/85.4	93.0/83.4	-7.8/-2.0
R2	1820	Residential	102.9/86.5	91.7/83.9	-11.2/-2.6
R3	130	Residential	96.9/84.1	117.7/99.5	20.8/15.4
R4	720	Residential	94.2/82.7	105.0/83.0	10.8/0.3
R5	930	Residential	91.9/81.8	101.2/82.1	9.3/0.3
R6	1030	Residential	90.7/81.8	96.0/79.2	5.3/-2.6
R7	1765	Residential/ School	88.1/79.5	88.2/79.3	0.1/-0.2

Notes:
[1] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the Interim 2 Helistop to the sidewalk adjoining the receptor locations.*
Source: Acoustical Engineering Services, 2016.

3.3 Helicopter Noise – Future (Permanent) Helistop Location

The permanent Helistop would be located at the roof level of the future hospital building, approximately 133 feet above local grade. Figure 6 on page 25 shows the helicopter flight paths with the future permanent helistop. The future helicopter operations (i.e., number of flights per day) are assumed to be similar to the existing conditions. The calculated CNEL noise contours generated by the future helicopter operations are illustrated on Figure 6. As shown on Figure 6, the 60 and 65 dBA CNEL noise contour falls within the medical campus. Table 11 on page 26 presents the predicted helicopter noise levels in CNEL with the helicopter operations at the future permanent helistop location. The predicted CNEL levels due to the helicopter operations ranged from 35.1 dBA CNEL at receptor R7 to 49.8 dBA CNEL at receptor R2. Similar to the existing conditions, the future predicted helicopter noise levels in term of CNEL would be lower than that of the existing measured ambient noise levels (non-helicopter noise). Included in Table 11 are the ambient noise levels plus helicopter operations under both existing and future conditions. As indicated therein, the

future helicopter operations would not result in an increase (in terms of CNEL), as compared to the existing conditions.

Table 12 on page 26 presents the predicted helicopter single-event noise levels under the existing and the future permanent location. As described above, SEL levels are provided for informational purpose, as the County does not have criteria as relates to SEL levels. As indicated in Table 12, the predicted L_{max} due to the helicopter (Sikorsky S-70) under the future conditions would result in a lower noise level, as compared with the existing conditions. As such, noise impacts associated with the proposed helicopter relocation to the future location (roof top of the future hospital building) would be less than significant.

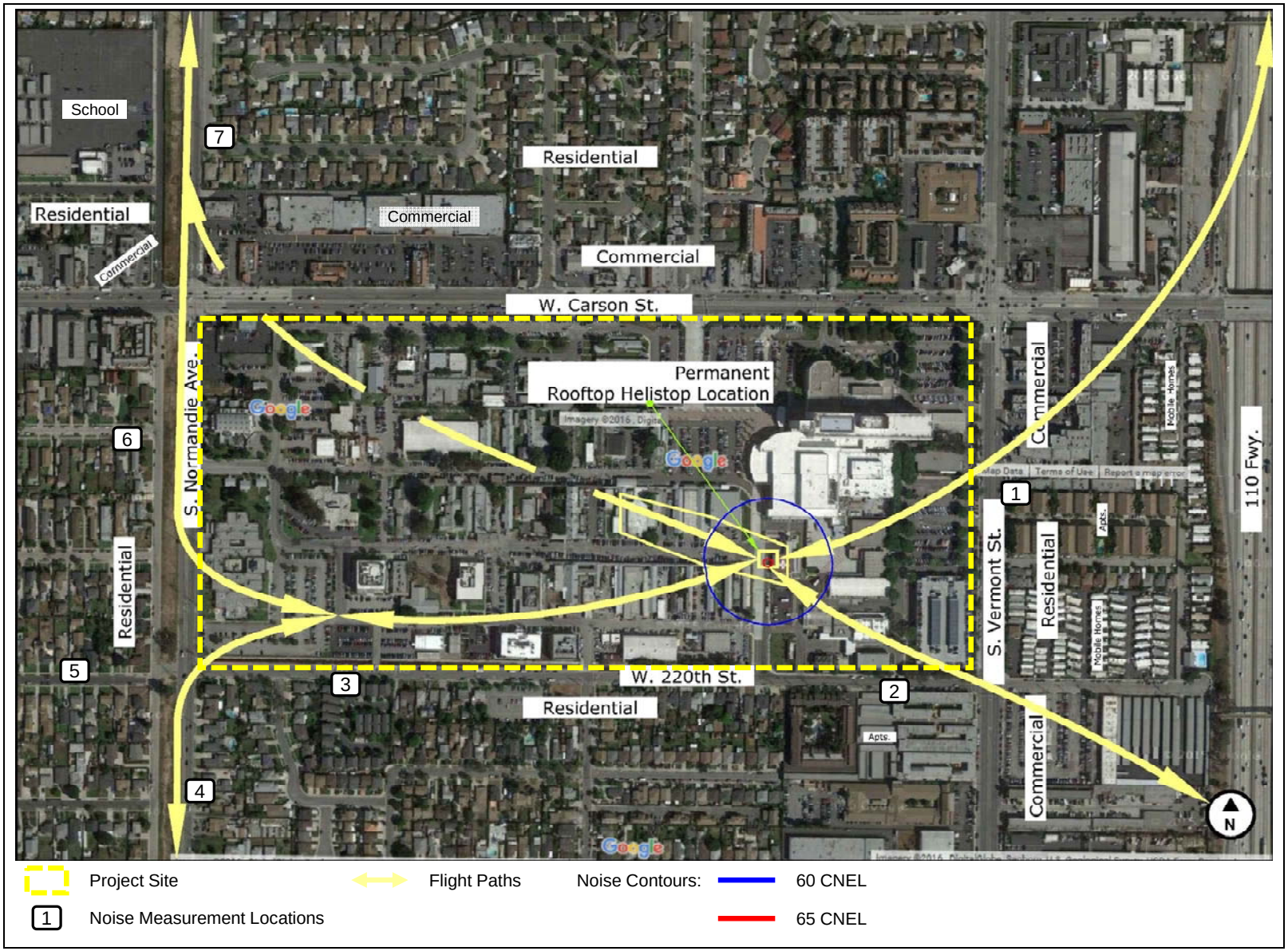


Figure 6. Helistop Operation Noise Contour – Permanent Rooftop Helistop

Table 11. Helicopter Noise Analysis – Permanent Rooftop Helistop

Location	Longitudinal Distance from Permanent Roof Top Helistop,[1] Feet	Existing Conditions			Future Conditions		Increase in Ambient Noise Levels due to Future Helicopter Operations (dBA) "F=E–C"
		Existing Measured Ambient Noise Levels, CNEL (dBA) "A"	Existing Ambient Without Helicopter Operation, CNEL (dBA) "B"	Existing Ambient With Existing Helicopter Operation, CNEL (dBA) "C=A+B"	Future Helicopter Operations Noise Levels, CNEL (dBA) "D"	Ambient With Future Helicopter Operations, CNEL (dBA) "E=A+D"	
R1	850	70.5	47.6	70.5	47.4	70.5	0.0
R2	620	65.6	50.0	65.7	49.8	65.7	0.0
R3	1440	64.3	41.3	64.3	41.9	64.3	0.0
R4	2060	70.7	38.0	70.7	38.3	70.7	0.0
R5	2340	53.1	35.8	53.2	36.1	53.2	0.0
R6	2185	56.4	35.4	56.4	36.8	56.4	0.0
R7	2330	64.6	33.5	64.6	35.1	64.6	0.0

Notes:
[1] *Estimated diagonal distances using Google Earth Map. Distances are from the nearest edge of the permanent Helistop to the sidewalk adjoining the receptor locations.*
Source: Acoustical Engineering Services, 2016

Table 12. Helicopter Single-Event Noise Impacts – Permanent Rooftop Helistop

Location	Longitudinal Distance from Permanent Rooftop Helistop,[1] Feet	Land Use Descriptions	Predicted Helicopter (S-70) Single-Event Levels, L_{max} (dBA)		Increase in Noise Levels from Existing to Future Permanent Conditions, L_{max} (dBA)
			Existing Helistop	Permanent Rooftop Helistop	
R1	850	Residential	100.8/85.4	101.0/83.8	0.2/-1.6
R2	620	Residential	102.9/86.5	103.0/84.2	0.1/-2.3
R3	1440	Residential	96.9/84.1	97.4/82.9	0.5/-1.2
R4	2060	Residential	94.2/82.7	94.3/81.5	0.1/-1.2
R5	2340	Residential	91.9/81.8	90.5/80.8	-1.4/-1.0
R6	2185	Residential	90.7/81.8	93.3/80.8	2.6/-1.0
R7	2330	Residential/ School	88.1/79.5	89.0/79.0	0.9/-0.5

Notes:
[1] *Estimated diagonal distances using Google Earth Map. Distances are from the center of the permanent Helistop to the sidewalk adjoining the receptor locations.*
Source: Acoustical Engineering Services, 2016.

4 CONCLUSIONS

Based on the noise analysis presented above, the following conclusions can be made:

Interim 1 Helistop Location:

The future helicopter operations on the Interim 1 Helistop, located in the parking lot southeast of the Professional building, when compared with the helicopter operations at the existing Helistop, would result in an increase of 0.1 dBA CNEL at receptor R4 to 1.0 dBA CNEL at receptor R3 and no increase in helicopter noise levels at receptors R1 and R7 (see Table 7). The estimated increase would be below the Project's significance threshold of 1.5 dBA CNEL.

The helicopter single event operations (Sikorsky S-70) at the Interim 1 Helistop would result in a maximum increase of 2.7 dBA L_{max} at receptor R4 to 5.6 dBA L_{max} at receptor R3, over the existing single event noise level generated at the existing Helistop (see Table 9). There would be no increase in helicopter noise levels at receptors R1, R2, and R5. The estimated increase in terms of maximum noise level (L_{max}) would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts associated with the relocation of the existing Helistop to the Interim 1 Helistop location would result in a significant impact. The significant impact, however, would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building.

Interim 2 Helistop Location:

The future helicopter operations on the Interim 2 Helistop, located south of the BioMed building in the parking lot, when compared with the existing helicopter operations, would result in an increase of 0.2 dBA CNEL at receptor R6 to 2.7 dBA CNEL at receptor R3 with no increase in helicopter noise levels at receptors R1, R2, R4 and R7 (see Table 8). The estimated increase would exceed the Project's significance threshold of 1.5 dBA CNEL at receptor R3.

In addition, the helicopter single event operation at the Interim 2 Helistop would result in a maximum increase of 0.3 dBA L_{max} at receptors R4 and R5 to 15.4 dBA L_{max} at receptor R3, over the existing single event noise level generated at the existing Helistop at the off-site noise receptors (see Table 10). There is no increase in helicopter noise levels at receptors R1, R2, R6 and R7. The estimated increase in terms of maximum noise level (L_{max}) would exceed the Project's significance threshold of 5.0 dBA L_{max} at receptor R3. Therefore, noise impacts associated with the relocation of the existing Helistop to the Interim 2 Helistop location would result in a significant impact. The significant impact, however, would be temporary while the permanent Helistop is constructed at the roof level of the future hospital building.

Future Permanent Rooftop Helistop Location:

The helicopter operations at the new permanent Helistop located at the roof level of future hospital building, when compared with the existing helicopter operations, would result in a lower noise level and would not increase the existing ambient noise levels (in terms of both CNEL and L_{max}) at the off-site noise sensitive receptors. As such, noise impacts associated with the proposed helicopter relocation to the future location would be less than significant.

Appendix A

Ambient Noise Data

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R1
Date: 3/10/2016

Time	Overload	Leq	Lmax	L10	L90
11:12:22 AM	No	65.4	72.6	68.3	58.1
11:13:22 AM	No	69.1	79.1	72.3	61.2
11:14:22 AM	No	66.5	72.4	70.2	61.3
11:15:22 AM	No	67.1	76.5	70.7	59.5
11:16:22 AM	No	66.4	73	70.8	57.1
11:17:22 AM	No	69.6	84.9	71.7	60.8
11:18:22 AM	No	70.4	85	72.2	55.3
11:19:22 AM	No	67.8	75.2	73.1	57.3
11:20:22 AM	No	67.7	74.8	71.8	61.4
11:21:22 AM	No	68	74.6	71.6	62.1
11:22:22 AM	No	67	73.5	69.6	63
11:23:22 AM	No	68	74.2	72.4	59.8
11:24:22 AM	No	67.6	75.5	70.2	61.7
11:25:22 AM	No	71.1	79.6	75.5	63.1
11:26:22 AM	No	68	76.9	70.9	60.8
		68.3			

Time	Overload	Leq	Lmax	L10	L90
10:00:35 PM	No	65.8	73.3	70.1	55.2
10:01:35 PM	No	65.1	73.6	69.8	54.3
10:02:35 PM	No	66.2	74.7	71.7	52.3
10:03:35 PM	No	61.6	71.5	64.8	54.3
10:04:35 PM	No	60.4	69.4	63.5	53.1
10:05:35 PM	No	62.4	73.3	66.8	52.8
10:06:35 PM	No	64.9	73.8	69.7	52
10:07:35 PM	No	66	75.1	69.9	58.9
10:08:35 PM	No	65.6	75.8	69	54.9
10:09:35 PM	No	61	72.6	63.7	51.6
10:10:35 PM	No	65.7	72.6	70	56.5
10:11:35 PM	No	65.8	73.1	70.1	59.8
10:12:35 PM	No	64.6	73.1	70.2	54
10:13:35 PM	No	66.2	80.9	68.2	53.9
10:14:35 PM	No	66.7	78.8	71.4	52.2
		64.9			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R2
Date: 3/10/2016

Time	Overload	Leq	Lmax	L10	L90
11:35:32 AM	No	62.7	69.4	66.9	55.9
11:36:32 AM	No	61.7	70.9	64.6	55.9
11:37:32 AM	No	62.2	68.6	66.1	56.2
11:38:32 AM	No	60.5	68.9	65.9	55.7
11:39:32 AM	No	61.2	68.6	63.7	57.6
11:40:32 AM	No	61.9	74	64.8	55.9
11:41:32 AM	No	71.1	81.8	74.8	60.3
11:42:32 AM	No	72.4	84.6	77.8	54.5
11:43:32 AM	No	70.7	82.1	75	52.8
11:44:32 AM	No	65.4	75.7	69.4	55.9
11:45:32 AM	No	63.1	73.6	65.7	57.4
11:46:32 AM	No	60.3	66.4	64.3	53.3
11:47:32 AM	No	64.6	76.9	67.5	54.6
11:48:32 AM	No	62	71.4	64.8	57.1
11:49:32 AM	No	60.2	69.2	63.7	51.5
		66.2			

Time	Overload	Leq	Lmax	L10	L90
10:20:50 PM	No	53.9	62.1	58.4	47.9
10:21:50 PM	No	60	70.9	64.8	48
10:22:50 PM	No	58	67.6	61.9	49.8
10:23:50 PM	No	55.5	64.2	60.2	49.4
10:24:50 PM	No	58.9	70.1	63.7	49
10:25:50 PM	No	54.9	65.4	58.8	48.5
10:26:50 PM	No	53.1	59.2	56.7	47.9
10:27:50 PM	No	55.5	68.4	56.9	49.1
10:28:50 PM	No	58.4	68.4	62.3	50.3
10:29:50 PM	No	58.8	68	63.1	48.9
10:30:50 PM	No	53.4	62.2	55.8	50
10:31:50 PM	No	59.9	70.5	63.9	50.7
10:32:50 PM	No	57.1	67.4	62.1	48.5
10:33:50 PM	No	54.2	63.8	58.4	47.7
10:34:50 PM	No	57.3	66.8	61.9	47.7
		57.2			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R3
Date: 3/10/2016

Time	Overload	Leq	Lmax	L10	L90
11:55:46 AM	No	62.2	74.7	67.4	46.4
11:56:46 AM	No	58.7	66.4	63.9	46.3
11:57:46 AM	No	60.6	69.9	65.8	47.6
11:58:46 AM	No	65.5	76	69.2	46.5
11:59:46 AM	No	65.4	75.7	70.9	47
12:00:46 PM	No	64.4	74.9	69.1	47.4
12:01:46 PM	No	61.6	71.2	67.1	47
12:02:46 PM	No	65.2	75.1	69.7	48.4
12:03:46 PM	No	59.2	72.2	62.1	46.2
12:04:46 PM	No	58.2	71.1	60.9	47.2
12:05:46 PM	No	59.6	70.2	64.5	49.5
12:06:46 PM	No	64.6	74.9	69	48.9
12:07:46 PM	No	62.8	72	68.3	46
12:08:46 PM	No	68.2	78.6	72.5	49.5
12:09:46 PM	No	56.7	69.2	59.4	47.9
		63.3			

Time	Overload	Leq	Lmax	L10	L90
10:40:52 PM	No	48.8	52.6	49.6	48
10:41:52 PM	No	54.6	66.1	56.7	48.9
10:42:52 PM	No	49.1	51	49.4	48.6
10:43:52 PM	No	56.5	68	59.4	48.5
10:44:52 PM	No	62.2	72.8	68.5	49
10:45:52 PM	No	50.5	54.9	52.3	48.9
10:46:52 PM	No	58.4	68.6	63.5	48.5
10:47:52 PM	No	62.6	72.6	67.8	48.4
10:48:52 PM	No	48.6	51.2	49.1	48.1
10:49:52 PM	No	48.8	50	49.2	48.4
10:50:52 PM	No	50.9	59.1	52.3	49.1
10:51:52 PM	No	60.2	68.6	65.7	50
10:52:52 PM	No	54.7	64.9	58	48.6
10:53:52 PM	No	61	73.7	62	48.6
10:54:52 PM	No	61.6	75	63.3	49.5
		58.0			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R4
Date: 3/10/2016

Time	Overload	Leq	Lmax	L10	L90
12:19:01 PM	No	73.4	82	76.3	60.2
12:20:01 PM	No	70.8	77.5	74.5	60.7
12:21:01 PM	No	71.1	79	74.5	62.3
12:22:01 PM	No	69	77.3	73.1	53.3
12:23:01 PM	No	70.9	77.9	74.6	61.2
12:24:01 PM	No	68.3	73.9	72	56.2
12:25:01 PM	No	72	78.6	76.7	63.3
12:26:01 PM	No	67.5	74.3	71.5	53.2
12:27:01 PM	No	70.1	78.8	72.9	54
12:28:01 PM	No	69.3	76.6	72.5	60.6
12:29:01 PM	No	72.7	82.6	75.5	63.3
12:30:01 PM	No	70.5	75.6	73.9	59
12:31:01 PM	No	68.4	76.5	72.9	49.7
12:32:01 PM	No	66.7	74.3	70.3	55.7
12:33:01 PM	No	71.3	78.2	74.8	64.7
		70.5			

Time	Overload	Leq	Lmax	L10	L90
11:00:14 PM	No	61.6	69.8	66.7	46.5
11:01:14 PM	No	61.6	70.6	66.2	52.5
11:02:14 PM	No	66.9	75.3	71.6	53.4
11:03:14 PM	No	65.6	75.8	69.8	54.2
11:04:14 PM	No	63.1	72.4	68.4	48.6
11:05:14 PM	No	61.8	72.7	67	49
11:06:14 PM	No	65.9	75	70.9	51.7
11:07:14 PM	No	63.5	74.4	67.7	49.3
11:08:14 PM	No	64	74.4	68.8	54.5
11:09:14 PM	No	67.9	76	71.9	56.2
11:10:14 PM	No	52.8	64.2	55.8	44.7
11:11:14 PM	No	64.9	74.2	71.2	49.5
11:12:14 PM	No	55.4	70.3	56.4	44.8
11:13:14 PM	No	46.9	50.7	49.6	44.4
11:14:14 PM	No	56.9	67.2	61.5	42.7
		63.5			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R5
Date: 5/25/2016

Time	Overload	Leq	Lmax	L10	L90
11:28:10 AM	No	50.6	57.1	54.9	47.2
11:29:10 AM	No	49.7	54	51.5	46.9
11:30:10 AM	No	53.8	62.2	58.7	44.7
11:31:10 AM	No	48.3	54	50.4	45.3
11:32:10 AM	No	51.5	60.8	55	46.4
11:33:10 AM	No	50.1	60	53.2	42
11:34:10 AM	No	50.9	62.3	55.1	42
11:35:10 AM	No	55.8	64.5	60.7	47.6
11:36:10 AM	No	52.7	64.6	55.5	45.5
11:37:10 AM	No	46.6	50.4	48.4	43.5
11:38:10 AM	No	50.2	59.6	52.5	46.3
11:39:10 AM	No	48.9	56.4	52	44.6
11:40:10 AM	No	49.3	56.7	52.1	45.7
11:41:10 AM	No	54	61.3	58.4	46.6
11:42:10 AM	No	48.7	53.3	50.5	46.2
		51.4			

Time	Overload	Leq	Lmax	L10	L90
10:02:55 PM	No	43.6	52.2	47.2	38
10:03:55 PM	No	44.4	51.1	47.2	39.4
10:04:55 PM	No	43.8	56.2	45.9	39.3
10:05:55 PM	No	50.5	60.6	54.9	40.4
10:06:55 PM	No	44.1	49.2	47.4	40.9
10:07:55 PM	No	44.3	51.6	47.5	39.7
10:08:55 PM	No	44	52.3	46.3	39.3
10:09:55 PM	No	46.2	52.9	51.1	38
10:10:55 PM	No	46.1	49.5	48.4	42.6
10:11:55 PM	No	48.1	56.3	51.8	42.2
10:12:55 PM	No	42.6	49.9	45.2	38
10:13:55 PM	No	50.7	63.2	53.3	40.5
10:14:55 PM	No	51	61.8	53.8	43.9
10:15:55 PM	No	44.4	50.4	46.8	40.5
10:16:55 PM	No	50.1	61.3	54.9	39.3
		47.3			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R6
Date: 3/10/2016

Time	Overload	Leq	Lmax	L10	L90
12:39:03 PM	No	54.1	62.7	56.5	49.5
12:40:03 PM	No	57.7	68.1	62.4	50.7
12:41:03 PM	No	53.5	60.4	54.9	50.9
12:42:03 PM	No	56.2	68.9	57.7	48
12:43:03 PM	No	58.3	69.7	61.9	48.7
12:44:03 PM	No	58.6	65.5	63.2	48.3
12:45:03 PM	No	60.8	68.8	65.5	52.1
12:46:03 PM	No	58	65.6	64.7	50.2
12:47:03 PM	No	62.5	73.9	67.4	48.5
12:48:03 PM	No	54.2	65.7	56.5	47.4
12:49:03 PM	No	49.6	52.3	51.5	47.7
12:50:03 PM	No	50.4	58.8	52.6	47
12:51:03 PM	No	52.3	59.4	53.9	48.5
12:52:03 PM	No	50.3	58.5	52.2	47
12:53:03 PM	No	53.3	59.4	57.1	47.9
		57.0			

Time	Overload	Leq	Lmax	L10	L90
11:19:26 PM	No	50.1	58.8	53.4	45
11:20:26 PM	No	48.2	54.7	51.4	44.3
11:21:26 PM	No	46.7	53.4	49.4	43.7
11:22:26 PM	No	44.9	47.8	46.7	43.8
11:23:26 PM	No	54.1	66.2	57.9	42.2
11:24:26 PM	No	46.3	50.5	48.4	43.8
11:25:26 PM	No	46.7	49.6	48.7	44.7
11:26:26 PM	No	45.3	48.9	47.7	42.5
11:27:26 PM	No	46.3	51.1	49.2	42.4
11:28:26 PM	No	50.7	61.3	55.2	43.3
11:29:26 PM	No	46.5	50.8	49.3	42.2
11:30:26 PM	No	47.4	52.1	50.7	42.5
11:31:26 PM	No	44.5	46.9	46.1	42.4
11:32:26 PM	No	45.3	50	47.7	42.3
11:33:26 PM	No	45	50.5	47.3	43
		48.1			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R7
Date: 3/10/2016

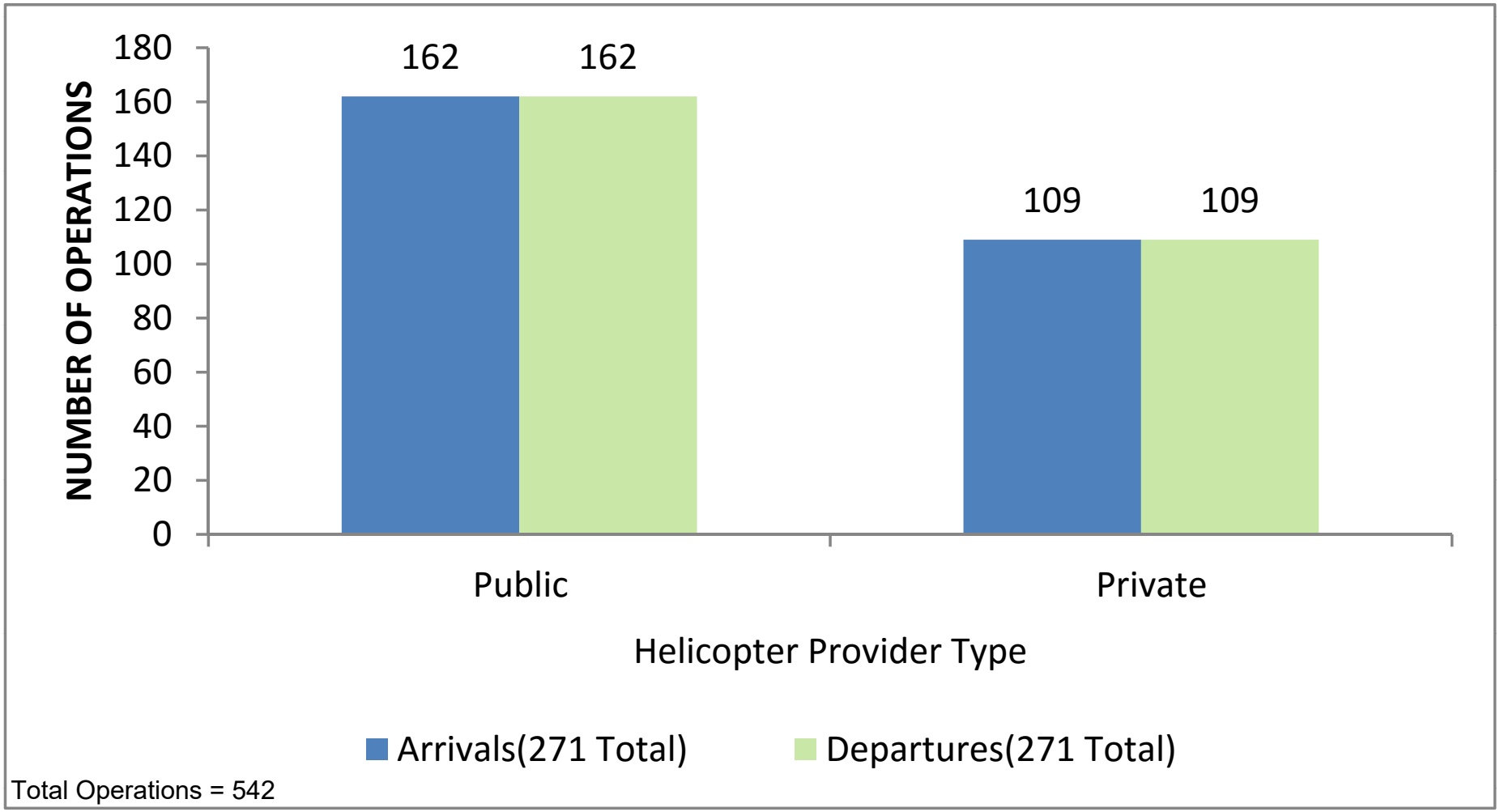
Time	Overload	Leq	Lmax	L10	L90
12:59:41 PM	No	63.4	68.1	67.1	54.6
1:00:41 PM	No	60.2	68	63.5	48.6
1:01:41 PM	No	63	66.6	64.8	59
1:02:41 PM	No	60.6	66.7	65.3	51.9
1:03:41 PM	No	66.6	75.1	69.5	57.5
1:04:41 PM	No	62.6	68.3	67.1	55.1
1:05:41 PM	No	64.7	74.1	67.1	55.5
1:06:41 PM	No	63.2	68.1	66.9	57
1:07:41 PM	No	67.2	75.9	71.6	59.2
1:08:41 PM	No	63.8	68	66.8	57.7
1:09:41 PM	No	60.3	66.2	64.4	53.4
1:10:41 PM	No	69.9	80.4	74.3	58.6
1:11:41 PM	No	60	64.5	62.9	55
1:12:41 PM	No	66.6	74.2	69.6	59.6
1:13:41 PM	No	64.7	74.1	69	56
		64.8			

Time	Overload	Leq	Lmax	L10	L90
11:41:21 PM	No	52.6	62.6	57.3	43.9
11:42:21 PM	No	52.7	61.4	59.3	43.1
11:43:21 PM	No	56	63.2	61.4	43.7
11:44:21 PM	No	52.8	62.1	57.2	44.6
11:45:21 PM	No	50.6	58	54.5	44.8
11:46:21 PM	No	50.7	60	54.8	44.2
11:47:21 PM	No	56.1	62.2	60.3	44.9
11:48:21 PM	No	44.7	46.8	45.9	43.8
11:49:21 PM	No	56	65.7	61.9	45.5
11:50:21 PM	No	54.3	65.5	59.1	43.8
11:51:21 PM	No	52.9	62.6	58.7	43.6
11:52:21 PM	No	54.2	61.1	59.7	45.7
11:53:21 PM	No	63.1	78.6	59.6	44
11:54:21 PM	No	63.8	76.7	65.7	50.3
11:55:21 PM	No	52.2	60.1	56	44.3
		56.9			

Appendix B

Helicopter Operations Information Provided by Heliport Consultants

FIGURE: NUMBER OF HELICOPTER OPERATIONS BY PROVIDER TYPE

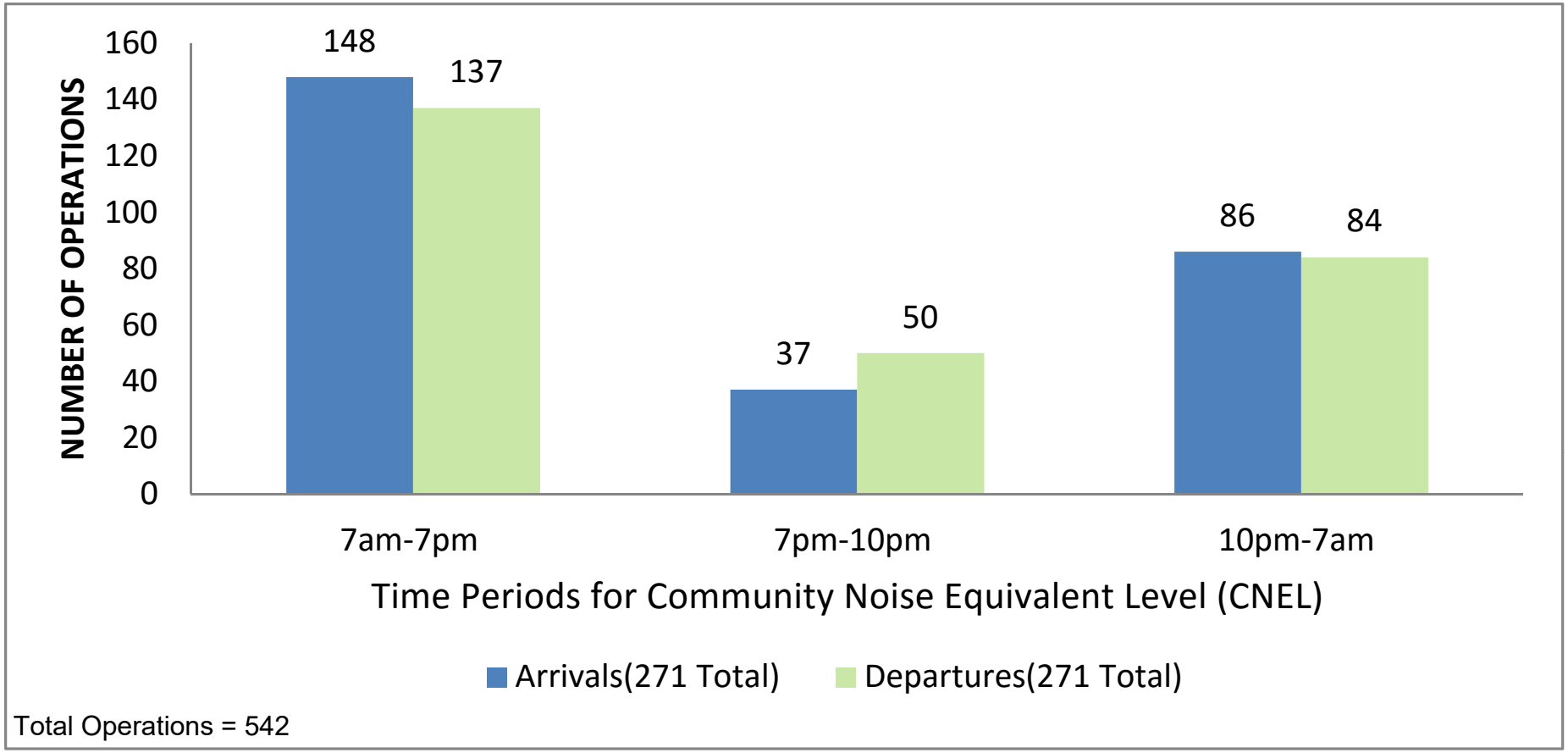


Total Operations = 542

Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

FIGURE: NUMBER OF HELICOPTER OPERATIONS WITHIN CNEL TIME PERIODS

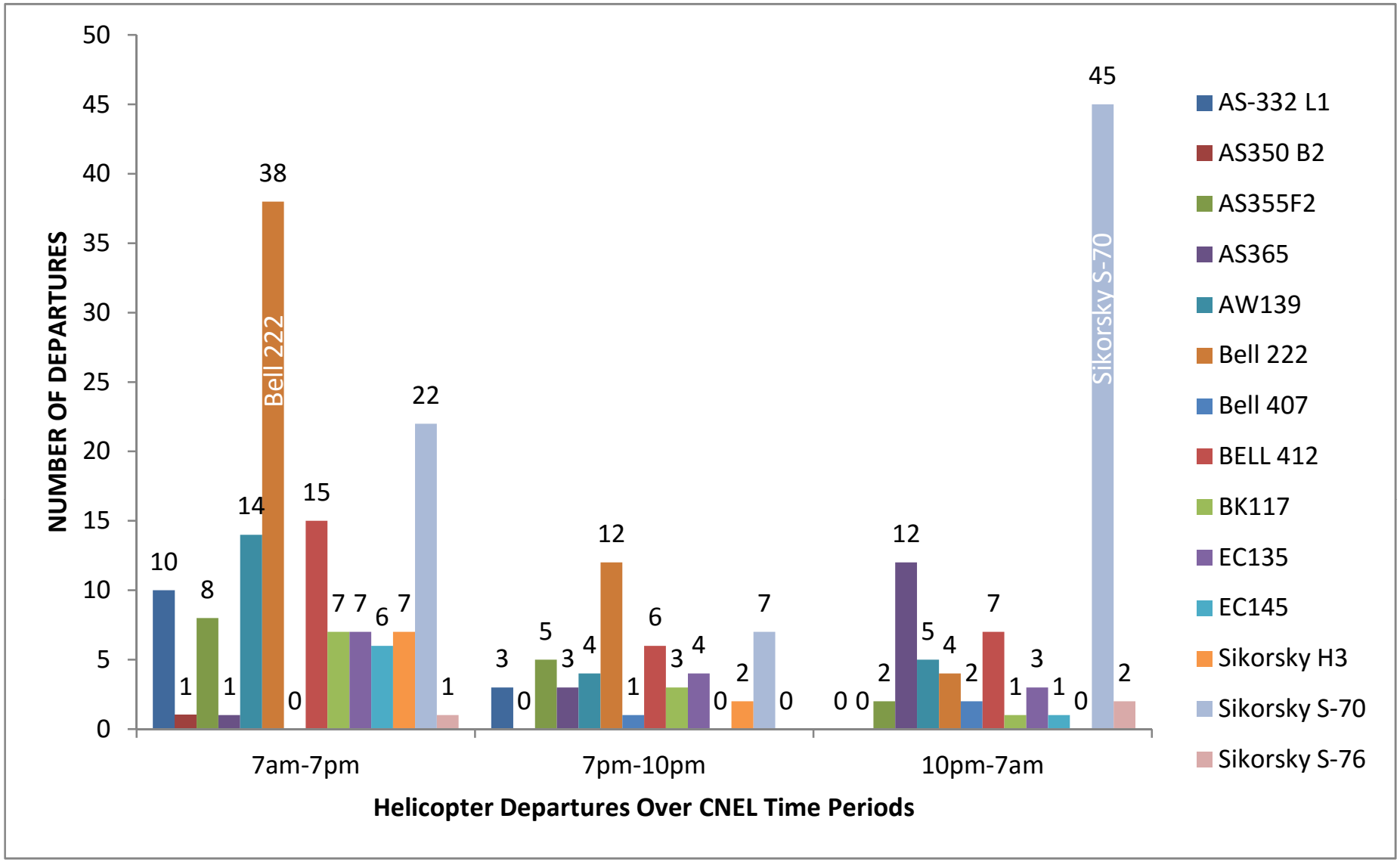


Total Operations = 542

Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

FIGURE: NUMBER OF HELICOPTER DEPARTURES BY MODEL WITHIN CNEL TIME PERIODS



Date Range: January 9, 2008 - December 8, 2015

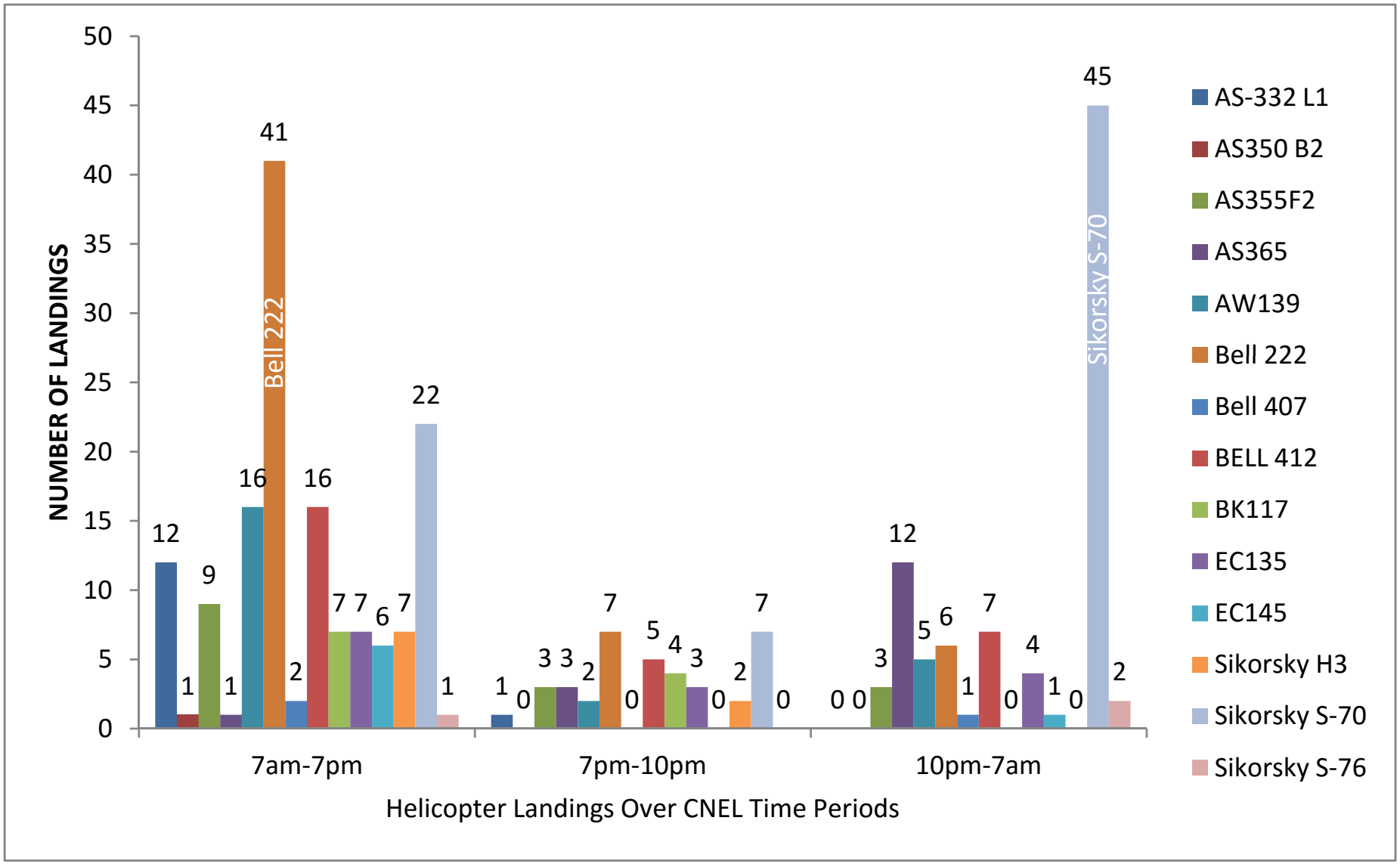
*416 Weeks of Data = 96 Months

Total Departures (271)

Heliport Consultants

06/27/16

FIGURE: NUMBER OF HELICOPTER LANDINGS BY MODEL WITHIN CNEL TIME PERIODS



Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

Total Landings (271)

Heliport Consultants

06/24/16

Appendix C

INM Computer Noise Model – Input Data

INM 7.0d SCENARIO RUN INPUT REPORT 29-Jun-16 13:19

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: CNEL-Existing
   Created   : 02-May-16 12:07
   Description : Existing Pad
   Last Run   : 28-Jun-16 14:30
   Run Duration : 000:00:15

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Existing
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Existing
      RwyWind   : 8.0 kt

CASENAME: Existing
      RwyWind   : 8.0 kt

CASENAME: Existing
      RwyWind   : 8.0 kt

CASENAME: Existing
      RwyWind   : 8.0 kt

CASENAME: Existing
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

```
      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
```

```
    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

------------------------------------------------------------------------

STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

------------------------------------------------------------------------

STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

				report		
1	Ground Idle	30.0	0.0	0.0	0.0	
2	Flight Idle	30.0	0.0	0.0	0.0	
3	Dep Vertical	10.0	0.0	200.0	0.0	
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0	
5	Dep Climb Accel	0.0	1000.0	367.0	65.0	
6	Dep Const Speed	0.0	5000.0	1200.0	0.0	
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0	
8	Level Fly	0.0	21400.0	0.0	0.0	

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Existing]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
B222	APP	USER	1	EXISTING1		0	---	0.0035	0.0006	0.0005
B222	APP	USER	1	EXISTING2		0	---	0.0035	0.0006	0.0005
B222	APP	USER	1	EXISTING3		0	---	0.0035	0.0006	0.0005
B222	APP	USER	1	EXISTING4		0	---	0.0035	0.0006	0.0005
B222	DEP	USER	1	EXISTING1		0	---	0.0033	0.0010	0.0003
B222	DEP	USER	1	EXISTING2		0	---	0.0033	0.0010	0.0003
B222	DEP	USER	1	EXISTING3		0	---	0.0033	0.0010	0.0003
B222	DEP	USER	1	EXISTING4		0	---	0.0033	0.0010	0.0003
B429	APP	USER	1	EXISTING1		0	---	0.0011	0.0003	0.0001
B429	APP	USER	1	EXISTING2		0	---	0.0011	0.0003	0.0001
B429	APP	USER	1	EXISTING3		0	---	0.0011	0.0003	0.0001
B429	APP	USER	1	EXISTING4		0	---	0.0011	0.0003	0.0001
B429	DEP	USER	1	EXISTING1		0	---	0.0011	0.0003	0.0002
B429	DEP	USER	1	EXISTING2		0	---	0.0011	0.0003	0.0002
B429	DEP	USER	1	EXISTING3		0	---	0.0011	0.0003	0.0002
B429	DEP	USER	1	EXISTING4		0	---	0.0011	0.0003	0.0002
EC130	APP	USER	1	EXISTING1		0	---	0.0006	0.0003	0.0003
EC130	APP	USER	1	EXISTING2		0	---	0.0006	0.0003	0.0003
EC130	APP	USER	1	EXISTING3		0	---	0.0006	0.0003	0.0003
EC130	APP	USER	1	EXISTING4		0	---	0.0006	0.0003	0.0003
EC130	DEP	USER	1	EXISTING1		0	---	0.0006	0.0003	0.0003
EC130	DEP	USER	1	EXISTING2		0	---	0.0006	0.0003	0.0003
EC130	DEP	USER	1	EXISTING3		0	---	0.0006	0.0003	0.0003
EC130	DEP	USER	1	EXISTING4		0	---	0.0006	0.0003	0.0003
S70	APP	USER	1	EXISTING1		0	---	0.0035	0.0009	0.0038
S70	APP	USER	1	EXISTING2		0	---	0.0035	0.0009	0.0038
S70	APP	USER	1	EXISTING3		0	---	0.0035	0.0009	0.0038
S70	APP	USER	1	EXISTING4		0	---	0.0035	0.0009	0.0038
S70	DEP	USER	1	EXISTING1		0	---	0.0033	0.0010	0.0038
S70	DEP	USER	1	EXISTING2		0	---	0.0033	0.0010	0.0038
S70	DEP	USER	1	EXISTING3		0	---	0.0033	0.0010	0.0038
S70	DEP	USER	1	EXISTING4		0	---	0.0033	0.0010	0.0038
S76	APP	USER	1	EXISTING1		0	---	0.0015	0.0007	0.0018
S76	APP	USER	1	EXISTING2		0	---	0.0015	0.0007	0.0018
S76	APP	USER	1	EXISTING3		0	---	0.0015	0.0007	0.0018
S76	APP	USER	1	EXISTING4		0	---	0.0015	0.0007	0.0018
S76	DEP	USER	1	EXISTING1		0	---	0.0015	0.0008	0.0018
S76	DEP	USER	1	EXISTING2		0	---	0.0015	0.0008	0.0018
S76	DEP	USER	1	EXISTING3		0	---	0.0015	0.0008	0.0018
S76	DEP	USER	1	EXISTING4		0	---	0.0015	0.0008	0.0018
SA330J	APP	USER	1	EXISTING1		0	---	0.0014	0.0002	0.0004
SA330J	APP	USER	1	EXISTING2		0	---	0.0014	0.0002	0.0004
SA330J	APP	USER	1	EXISTING3		0	---	0.0014	0.0002	0.0004
SA330J	APP	USER	1	EXISTING4		0	---	0.0014	0.0002	0.0004
SA330J	DEP	USER	1	EXISTING1		0	---	0.0012	0.0003	0.0004
SA330J	DEP	USER	1	EXISTING2		0	---	0.0012	0.0003	0.0004
SA330J	DEP	USER	1	EXISTING3		0	---	0.0012	0.0003	0.0004
SA330J	DEP	USER	1	EXISTING4		0	---	0.0012	0.0003	0.0004
SA355F	APP	USER	1	EXISTING1		0	---	0.0010	0.0003	0.0003
SA355F	APP	USER	1	EXISTING2		0	---	0.0010	0.0003	0.0003
SA355F	APP	USER	1	EXISTING3		0	---	0.0010	0.0003	0.0003
SA355F	APP	USER	1	EXISTING4		0	---	0.0010	0.0003	0.0003
SA355F	DEP	USER	1	EXISTING1		0	---	0.0008	0.0005	0.0003
SA355F	DEP	USER	1	EXISTING2		0	---	0.0008	0.0005	0.0003
SA355F	DEP	USER	1	EXISTING3		0	---	0.0008	0.0005	0.0003
SA355F	DEP	USER	1	EXISTING4		0	---	0.0008	0.0005	0.0003

CASE RUNUP OPERATIONS - [Existing]

SCENARIO RUN OPTIONS
   Run Type   : Single-Metric
   NoiseMetric   : CNEL
   Do Terrain   : No Terrain
   Do Contour   : Recursive Grid
   Refinement   : 14
   Tolerance   : 0.25
   Low Cutoff   : 45.0
   High Cutoff   : 85.0
   Ground Type   : All-Soft-Ground
   Do Population : No
   Do Locations : Yes
   Do Standard   : No
   Do Detailed   : No
   Compute System Metrics:
      DNL   : No
      CNEL   : No
      LAEQ   : Yes
      LAEQD : No
      LAEQN : No
      SEL   : Yes
      LAMAX : Yes
      TALA   : No
      NEF   : No
      WECPNL : No
      EPNL   : No
      PNLTM : No
      TAPNL : No
      CEXP   : No
      LCMAX : No
      TALC   : No

SCENARIO GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	(hr)
CONTOUR	Contour	-1.0000	-1.0000	0.0	2.0000	2.0001	2	2	85.0	0.0	0.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0001	1	1	85.0	0.0	0.00

POINT	METRIC
R1	47.6
R2	50.0
R3	41.3
R4	38.0
R5	35.8
R6	35.4
R7	33.5
R8	33.1

INM 7.0d SCENARIO RUN INPUT REPORT 29-Jun-16 13:19

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: CNEL-Interim_1
   Created   : 25-May-16 13:56
   Description : Interim_1-CNEL
   Last Run   : 28-Jun-16 14:30
   Run Duration : 000:00:09

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Interim_1
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Interim_1
      RwyWind   : 8.0 kt

CASENAME: Interim_1
      RwyWind   : 8.0 kt

CASENAME: Interim_1
      RwyWind   : 8.0 kt

CASENAME: Interim_1
      RwyWind   : 8.0 kt

CASENAME: Interim_1
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

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      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
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    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

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STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

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STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

			report		
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Interim_1]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
B222	APP	USER	1	INT-1	1	0	---	0.0047	0.0008	0.0007
B222	APP	USER	1	INT-1	2	0	---	0.0047	0.0008	0.0007
B222	APP	USER	1	INT-1	3	0	---	0.0047	0.0008	0.0007
B222	DEP	USER	1	INT-1	1	0	---	0.0043	0.0014	0.0005
B222	DEP	USER	1	INT-1	2	0	---	0.0043	0.0014	0.0005
B222	DEP	USER	1	INT-1	3	0	---	0.0043	0.0014	0.0005
B429	APP	USER	1	INT-1	1	0	---	0.0015	0.0005	0.0001
B429	APP	USER	1	INT-1	2	0	---	0.0015	0.0005	0.0001
B429	APP	USER	1	INT-1	3	0	---	0.0015	0.0005	0.0001
B429	DEP	USER	1	INT-1	1	0	---	0.0015	0.0003	0.0002
B429	DEP	USER	1	INT-1	2	0	---	0.0015	0.0003	0.0002
B429	DEP	USER	1	INT-1	3	0	---	0.0015	0.0003	0.0002
EC130	APP	USER	1	INT-1	1	0	---	0.0008	0.0003	0.0005
EC130	APP	USER	1	INT-1	2	0	---	0.0008	0.0003	0.0005
EC130	APP	USER	1	INT-1	3	0	---	0.0008	0.0003	0.0005
EC130	DEP	USER	1	INT-1	1	0	---	0.0008	0.0005	0.0003
EC130	DEP	USER	1	INT-1	2	0	---	0.0008	0.0005	0.0003
EC130	DEP	USER	1	INT-1	3	0	---	0.0008	0.0005	0.0003
S70	APP	USER	1	INT-1	1	0	---	0.0047	0.0011	0.0051
S70	APP	USER	1	INT-1	2	0	---	0.0047	0.0011	0.0051
S70	APP	USER	1	INT-1	3	0	---	0.0047	0.0011	0.0051
S70	DEP	USER	1	INT-1	1	0	---	0.0044	0.0014	0.0051
S70	DEP	USER	1	INT-1	2	0	---	0.0044	0.0014	0.0051
S70	DEP	USER	1	INT-1	3	0	---	0.0044	0.0014	0.0051
S76	APP	USER	1	INT-1	1	0	---	0.0021	0.0009	0.0024
S76	APP	USER	1	INT-1	2	0	---	0.0021	0.0009	0.0024
S76	APP	USER	1	INT-1	3	0	---	0.0021	0.0009	0.0024
S76	DEP	USER	1	INT-1	1	0	---	0.0019	0.0010	0.0024
S76	DEP	USER	1	INT-1	2	0	---	0.0019	0.0010	0.0024
S76	DEP	USER	1	INT-1	3	0	---	0.0019	0.0010	0.0024
SA330J	APP	USER	1	INT-1	1	0	---	0.0018	0.0002	0.0006
SA330J	APP	USER	1	INT-1	2	0	---	0.0018	0.0002	0.0006
SA330J	APP	USER	1	INT-1	3	0	---	0.0018	0.0002	0.0006
SA330J	DEP	USER	1	INT-1	1	0	---	0.0016	0.0005	0.0006
SA330J	DEP	USER	1	INT-1	2	0	---	0.0016	0.0005	0.0006
SA330J	DEP	USER	1	INT-1	3	0	---	0.0016	0.0005	0.0006
SA355F	APP	USER	1	INT-1	1	0	---	0.0014	0.0003	0.0005
SA355F	APP	USER	1	INT-1	2	0	---	0.0014	0.0003	0.0005
SA355F	APP	USER	1	INT-1	3	0	---	0.0014	0.0003	0.0005
SA355F	DEP	USER	1	INT-1	1	0	---	0.0010	0.0007	0.0005
SA355F	DEP	USER	1	INT-1	2	0	---	0.0010	0.0007	0.0005
SA355F	DEP	USER	1	INT-1	3	0	---	0.0010	0.0007	0.0005

CASE RUNUP OPERATIONS - [Interim_1]

SCENARIO RUN OPTIONS
- Run Type : Single-Metric
- NoiseMetric : CNEL
- Do Terrain : No Terrain
- Do Contour : Recursive Grid
- Refinement : 14
- Tolerance : 0.25
- Low Cutoff : 45.0
- High Cutoff : 85.0

```
   Ground Type   : All-Soft-Ground
   Do Population : No
   Do Locations  : Yes
   Do Standard   : No
   Do Detailed   : No
   Compute System Metrics:
      DNL    : No
      CNEL   : No
      LAEQ   : No
      LAEQD  : No
      LAEQN  : No
      SEL    : No
      LAMAX  : No
      TALA   : No
      NEF    : No
      WECPNL : No
      EPNL   : No
      PNLTM  : No
      TAPNL  : No
      CEXP   : No
      LCMAX  : No
      TALC   : No

SCENARIO GRID DEFINITIONS
   Name      Type         X(nmi)     Y(nmi) Ang(deg) DisI(nmi) DisJ(nmi) NI NJ Thrsh dAmb   (hr)
   CONTOUR   Contour     -1.0000    -1.0000      0.0    2.0000    2.0000  2  2  85.0  0.0   0.00
   LOCATION  Location     0.0000     0.0000      0.0    0.0000    0.0001  1  1  85.0  0.0   0.00

------------------------------------------------------------------------
```

POINT	METRIC
R1	37.0
R2	37.0
R3	58.6
R4	53.6
R5	47.1
R6	46.6
R7	38.8
R8	38.9

POINT	METRIC
R1	38.0
R2	38.3
R3	63.7
R4	50.2
R5	45.3
R6	43.3
R7	35.6
R8	35.4

POINT	METRIC
R1	38.0
R2	38.3
R3	63.7
R4	50.2
R5	45.3
R6	43.3
R7	35.6
R8	35.4

INM 7.0d SCENARIO RUN INPUT REPORT 29-Jun-16 13:19

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: CNEL-Future
   Created   : 02-May-16 16:00
   Description : Future Pad
   Last Run   : 28-Jun-16 14:30
   Run Duration : 000:00:08

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Future
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Future
      RwyWind   : 8.0 kt

CASENAME: Future
      RwyWind   : 8.0 kt

CASENAME: Future
      RwyWind   : 8.0 kt

CASENAME: Future
      RwyWind   : 8.0 kt

CASENAME: Future
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

```
      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
```

```
    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

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STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

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STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

			report		
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Future]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
B222	APP	USER	1	FUTURE	1	0	---	0.0028	0.0005	0.0004
B222	APP	USER	1	FUTURE	2	0	---	0.0028	0.0005	0.0004
B222	APP	USER	1	FUTURE	3	0	---	0.0028	0.0005	0.0004
B222	APP	USER	1	FUTURE	4	0	---	0.0028	0.0005	0.0004
B222	APP	USER	1	FUTURE	5	0	---	0.0028	0.0005	0.0004
B222	DEP	USER	1	FUTURE	1	0	---	0.0026	0.0008	0.0003
B222	DEP	USER	1	FUTURE	2	0	---	0.0026	0.0008	0.0003
B222	DEP	USER	1	FUTURE	3	0	---	0.0026	0.0008	0.0003
B222	DEP	USER	1	FUTURE	4	0	---	0.0026	0.0008	0.0003
B222	DEP	USER	1	FUTURE	5	0	---	0.0026	0.0008	0.0003
B429	APP	USER	1	FUTURE	1	0	---	0.0009	0.0003	0.0001
B429	APP	USER	1	FUTURE	2	0	---	0.0009	0.0003	0.0001
B429	APP	USER	1	FUTURE	3	0	---	0.0009	0.0003	0.0001
B429	APP	USER	1	FUTURE	4	0	---	0.0009	0.0003	0.0001
B429	APP	USER	1	FUTURE	5	0	---	0.0009	0.0003	0.0001
B429	DEP	USER	1	FUTURE	1	0	---	0.0009	0.0002	0.0001
B429	DEP	USER	1	FUTURE	2	0	---	0.0009	0.0002	0.0001
B429	DEP	USER	1	FUTURE	3	0	---	0.0009	0.0002	0.0001
B429	DEP	USER	1	FUTURE	4	0	---	0.0009	0.0002	0.0001
B429	DEP	USER	1	FUTURE	5	0	---	0.0009	0.0002	0.0001
EC130	APP	USER	1	FUTURE	1	0	---	0.0005	0.0002	0.0003
EC130	APP	USER	1	FUTURE	2	0	---	0.0005	0.0002	0.0003
EC130	APP	USER	1	FUTURE	3	0	---	0.0005	0.0002	0.0003
EC130	APP	USER	1	FUTURE	4	0	---	0.0005	0.0002	0.0003
EC130	APP	USER	1	FUTURE	5	0	---	0.0005	0.0002	0.0003
EC130	DEP	USER	1	FUTURE	1	0	---	0.0005	0.0003	0.0002
EC130	DEP	USER	1	FUTURE	2	0	---	0.0005	0.0003	0.0002
EC130	DEP	USER	1	FUTURE	3	0	---	0.0005	0.0003	0.0002
EC130	DEP	USER	1	FUTURE	4	0	---	0.0005	0.0003	0.0002
EC130	DEP	USER	1	FUTURE	5	0	---	0.0005	0.0003	0.0002
S70	APP	USER	1	FUTURE	1	0	---	0.0028	0.0007	0.0031
S70	APP	USER	1	FUTURE	2	0	---	0.0028	0.0007	0.0031
S70	APP	USER	1	FUTURE	3	0	---	0.0028	0.0007	0.0031
S70	APP	USER	1	FUTURE	4	0	---	0.0028	0.0007	0.0031
S70	APP	USER	1	FUTURE	5	0	---	0.0028	0.0007	0.0031
S70	DEP	USER	1	FUTURE	1	0	---	0.0027	0.0008	0.0031
S70	DEP	USER	1	FUTURE	2	0	---	0.0027	0.0008	0.0031
S70	DEP	USER	1	FUTURE	3	0	---	0.0027	0.0008	0.0031
S70	DEP	USER	1	FUTURE	4	0	---	0.0027	0.0008	0.0031
S70	DEP	USER	1	FUTURE	5	0	---	0.0027	0.0008	0.0031
S76	APP	USER	1	FUTURE	1	0	---	0.0012	0.0005	0.0014
S76	APP	USER	1	FUTURE	2	0	---	0.0012	0.0005	0.0014
S76	APP	USER	1	FUTURE	3	0	---	0.0012	0.0005	0.0014
S76	APP	USER	1	FUTURE	4	0	---	0.0012	0.0005	0.0014
S76	APP	USER	1	FUTURE	5	0	---	0.0012	0.0005	0.0014
S76	DEP	USER	1	FUTURE	1	0	---	0.0012	0.0006	0.0014
S76	DEP	USER	1	FUTURE	2	0	---	0.0012	0.0006	0.0014
S76	DEP	USER	1	FUTURE	3	0	---	0.0012	0.0006	0.0014
S76	DEP	USER	1	FUTURE	4	0	---	0.0012	0.0006	0.0014
S76	DEP	USER	1	FUTURE	5	0	---	0.0012	0.0006	0.0014
SA330J	APP	USER	1	FUTURE	1	0	---	0.0011	0.0001	0.0003
SA330J	APP	USER	1	FUTURE	2	0	---	0.0011	0.0001	0.0003
SA330J	APP	USER	1	FUTURE	3	0	---	0.0011	0.0001	0.0003
SA330J	APP	USER	1	FUTURE	4	0	---	0.0011	0.0001	0.0003
SA330J	APP	USER	1	FUTURE	5	0	---	0.0011	0.0001	0.0003
SA330J	DEP	USER	1	FUTURE	1	0	---	0.0010	0.0003	0.0003

						report				
SA330J	DEP	USER	1	FUTURE	2	0	---	0.0010	0.0003	0.0003
SA330J	DEP	USER	1	FUTURE	3	0	---	0.0010	0.0003	0.0003
SA330J	DEP	USER	1	FUTURE	4	0	---	0.0010	0.0003	0.0003
SA330J	DEP	USER	1	FUTURE	5	0	---	0.0010	0.0003	0.0003
SA355F	APP	USER	1	FUTURE	1	0	---	0.0008	0.0002	0.0003
SA355F	APP	USER	1	FUTURE	2	0	---	0.0008	0.0002	0.0003
SA355F	APP	USER	1	FUTURE	3	0	---	0.0008	0.0002	0.0003
SA355F	APP	USER	1	FUTURE	4	0	---	0.0008	0.0002	0.0003
SA355F	APP	USER	1	FUTURE	5	0	---	0.0008	0.0002	0.0003
SA355F	DEP	USER	1	FUTURE	1	0	---	0.0006	0.0004	0.0003
SA355F	DEP	USER	1	FUTURE	2	0	---	0.0006	0.0004	0.0003
SA355F	DEP	USER	1	FUTURE	3	0	---	0.0006	0.0004	0.0003
SA355F	DEP	USER	1	FUTURE	4	0	---	0.0006	0.0004	0.0003
SA355F	DEP	USER	1	FUTURE	5	0	---	0.0006	0.0004	0.0003

CASE RUNUP OPERATIONS - [Future]

SCENARIO RUN OPTIONS
- Run Type : Single-Metric
- NoiseMetric : CNEL
- Do Terrain : No Terrain
- Do Contour : Recursive Grid
- Refinement : 14
- Tolerance : 0.25
- Low Cutoff : 45.0
- High Cutoff : 85.0
- Ground Type : All-Soft-Ground
- Do Population : No
- Do Locations : Yes
- Do Standard : No
- Do Detailed : No
- Compute System Metrics:
  - DNL : No
  - CNEL : No
  - LAEQ : No
  - LAEQD : No
  - LAEQN : No
  - SEL : Yes
  - LAMAX : Yes
  - TALA : No
  - NEF : No
  - WECPNL : No
  - EPNL : No
  - PNLTM : No
  - TAPNL : No
  - CEXP : No
  - LCMAX : No
  - TALC : No

SCENARIO GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	(hr)
CONTOUR	Contour	-1.0000	-1.0000	0.0	2.0000	2.0000	2	2	85.0	0.0	0.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0001	1	1	85.0	0.0	0.00

POINT	METRIC
R1	47.4
R2	49.8
R3	41.9
R4	38.3
R5	36.1
R6	36.8
R7	35.1
R8	34.7

INM 7.0d SCENARIO RUN INPUT REPORT 15-Jun-16 15:27

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: Lmax-Existing
   Created   : 16-May-16 14:58
   Description : Existing-Lmax
   Last Run   : 27-May-16 09:41
   Run Duration : 000:00:00

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Existing-Lmax-S70
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Existing-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Existing-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Existing-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Existing-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Existing-Lmax-S70
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

```
      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
```

```
    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

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STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

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STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

				report		
1	Ground Idle	30.0	0.0	0.0	0.0	
2	Flight Idle	30.0	0.0	0.0	0.0	
3	Dep Vertical	10.0	0.0	200.0	0.0	
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0	
5	Dep Climb Accel	0.0	1000.0	367.0	65.0	
6	Dep Const Speed	0.0	5000.0	1200.0	0.0	
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0	
8	Level Fly	0.0	21400.0	0.0	0.0	

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Existing-Lmax-S70]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
S70	APP	USER	1	EXISTING1		0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	EXISTING2		0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	EXISTING3		0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	EXISTING4		0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	EXISTING1		0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	EXISTING2		0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	EXISTING3		0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	EXISTING4		0	---	1.0000	0.0000	0.0000

CASE RUNUP OPERATIONS - [Existing-Lmax-S70]

SCENARIO RUN OPTIONS
- Run Type : Single-Metric
- NoiseMetric : LAMAX
- Do Terrain : No Terrain
- Do Contour : Recursive Grid
- Refinement : 8
- Tolerance : 0.25
- Low Cutoff : 75.0
- High Cutoff : 105.0
- Ground Type : All-Soft-Ground
- Do Population : No
- Do Locations : Yes
- Do Standard : No
- Do Detailed : No
- Compute System Metrics:
  - DNL : No
  - CNEL : No
  - LAEQ : No
  - LAEQD : No
  - LAEQN : No
  - SEL : No
  - LAMAX : No
  - TALA : No
  - NEF : No
  - WECPNL : No
  - EPNL : No
  - PNLTM : No
  - TAPNL : No
  - CEXP : No
  - LCMAX : No
  - TALC : No

SCENARIO GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	(hr)
CONTOUR	Contour	-1.0000	-1.0000	0.0	2.0000	2.0000	2	2	85.0	0.0	0.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0001	1	1	85.0	0.0	0.00

POINT_ID	METRIC
"R1 "	85.4
"R2 "	86.5
"R3 "	84.1
"R4 "	82.7
"R5 "	81.8
"R6 "	81.8
"R7 "	79.5
"R8 "	79.3

INM 7.0d SCENARIO RUN INPUT REPORT 15-Jun-16 15:27

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: Lmax-Interim_1
   Created   : 26-May-16 16:00
   Description : Interim_1-Lmax-S70
   Last Run   : 30-May-16 14:38
   Run Duration : 000:00:03

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Interim_1-Lmax-S70
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Interim_1-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_1-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_1-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_1-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_1-Lmax-S70
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

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      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
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    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

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STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

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STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

			report		
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Interim_1-Lmax-S70]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
S70	APP	USER	1	INT-1	1	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	INT-1	2	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	INT-1	3	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	INT-1	1	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	INT-1	2	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	INT-1	3	0	---	1.0000	0.0000	0.0000

CASE RUNUP OPERATIONS - [Interim_1-Lmax-S70]

SCENARIO RUN OPTIONS
- Run Type : Single-Metric
- NoiseMetric : LAMAX
- Do Terrain : No Terrain
- Do Contour : Recursive Grid
- Refinement : 14
- Tolerance : 0.25
- Low Cutoff : 75.0
- High Cutoff : 105.0
- Ground Type : All-Soft-Ground
- Do Population : No
- Do Locations : Yes
- Do Standard : No
- Do Detailed : No
- Compute System Metrics:
  - DNL : No
  - CNEL : No
  - LAEQ : No
  - LAEQD : No
  - LAEQN : No
  - SEL : No
  - LAMAX : No
  - TALA : No
  - NEF : No
  - WECPNL : No
  - EPNL : No
  - PNLTM : No
  - TAPNL : No
  - CEXP : No
  - LCMAX : No
  - TALC : No

SCENARIO GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	(hr)
CONTOUR	Contour	-1.0000	-1.0000	0.0	2.0000	2.0000	2	2	85.0	0.0	0.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0001	1	1	85.0	0.0	0.00

POINT_ID	METRIC
"R1 "	83.4
"R2 "	83.9
"R3 "	99.5
"R4 "	83.0
"R5 "	82.1
"R6 "	79.2
"R7 "	79.3
"R8 "	78.0

INM 7.0d SCENARIO RUN INPUT REPORT 15-Jun-16 15:27

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: Lmax-Interim_2
   Created   : 26-May-16 16:00
   Description : Interim_2-Lmax-S70
   Last Run   : 30-May-16 14:38
   Run Duration : 000:00:02

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Interim_2-Lmax-S70
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Interim_2-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_2-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_2-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_2-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Interim_2-Lmax-S70
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

```
      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
```

```
    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

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STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

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STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

				report	
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Interim_2-Lmax-S70]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
S70	APP	USER	1	INT-2	1	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	INT-2	2	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	INT-2	3	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	INT-2	1	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	INT-2	2	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	INT-2	3	0	---	1.0000	0.0000	0.0000

CASE RUNUP OPERATIONS - [Interim_2-Lmax-S70]

SCENARIO RUN OPTIONS
- Run Type : Single-Metric
- NoiseMetric : LCMAX
- Do Terrain : No Terrain
- Do Contour : Recursive Grid
- Refinement : 14
- Tolerance : 0.25
- Low Cutoff : 75.0
- High Cutoff : 105.0
- Ground Type : All-Soft-Ground
- Do Population : No
- Do Locations : Yes
- Do Standard : No
- Do Detailed : No
- Compute System Metrics:
  - DNL : No
  - CNEL : No
  - LAEQ : No
  - LAEQD : No
  - LAEQN : No
  - SEL : No
  - LAMAX : No
  - TALA : No
  - NEF : No
  - WECPNL : No
  - EPNL : No
  - PNLTM : No
  - TAPNL : No
  - CEXP : No
  - LCMAX : No
  - TALC : No

SCENARIO GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	(hr)
CONTOUR	Contour	-1.0000	-1.0000	0.0	2.0000	2.0000	2	2	85.0	0.0	0.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0001	1	1	85.0	0.0	0.00

POINT_ID	METRIC
"R1 "	81.4
"R2 "	81.2
"R3 "	89.7
"R4 "	85.4
"R5 "	81.6
"R6 "	85.5
"R7 "	83.7
"R8 "	83.1

INM 7.0d SCENARIO RUN INPUT REPORT 15-Jun-16 15:27

STUDY: C:\USERS\SEAN\DROPBOX\AES\HELICOPTER\
   Created   : 21-Apr-16 15:03
   Units   : English
   Airport   : UCLA
   Description :
      HUCLA

SCENARIO: Lmax-Future
   Created   : 16-May-16 15:07
   Description : Future-Lmax
   Last Run   : 27-May-16 09:41
   Run Duration : 000:00:01

STUDY AIRPORT
   Latitude   : 0.000000 deg
   Longitude   : 0.000000 deg
   Elevation   : 0.0 ft

CASES RUN:

CASENAME: Future-Lmax-S70
   Temperature : 59.0 F
   Pressure   : 29.92 in-Hg
   AverageWind : 8.0 kt
   ChangeNPD   : No

STUDY RUNWAYS

CASENAME: Future-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Future-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Future-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Future-Lmax-S70
      RwyWind   : 8.0 kt

CASENAME: Future-Lmax-S70
      RwyWind   : 8.0 kt

STUDY HELIPADS
   EXISTING
      Latitude : 0.000000 deg
      Longitude : 0.000000 deg
      Xcoord   : 0.0000 nmi
      Ycoord   : 0.0000 nmi
   FUTURE
      Latitude : 0.000047 deg
      Longitude : -0.000136 deg
      Xcoord   : -0.0082 nmi
      Ycoord   : 0.0028 nmi
   INT-1
      Latitude : -0.000700 deg
      Longitude : -0.004499 deg
      Xcoord   : -0.2704 nmi
      Ycoord   : -0.0418 nmi
   INT-2
      Latitude : -0.000717 deg
      Longitude : -0.003898 deg
      Xcoord   : -0.2343 nmi
      Ycoord   : -0.0428 nmi
   INTERIM
      Latitude : -0.000714 deg
      Longitude : -0.004380 deg
      Xcoord   : -0.2633 nmi
      Ycoord   : -0.0426 nmi

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
EXISTING-APP-1	0	100.00	Vectors	257.6
EXISTING-APP-2	0	100.00	Vectors	70.8
EXISTING-APP-3	0	100.00	Vectors	70.8
EXISTING-APP-4	0	100.00	Vectors	317.0
EXISTING-DEP-1	0	100.00	Vectors	77.7
EXISTING-DEP-2	0	100.00	Vectors	250.8
EXISTING-DEP-3	0	100.00	Vectors	250.8
EXISTING-DEP-4	0	100.00	Vectors	137.0
FUTURE-APP-1	0	100.00	Vectors	260.6
FUTURE-APP-2	0	100.00	Vectors	67.8
FUTURE-APP-3	0	100.00	Vectors	67.8
FUTURE-APP-4	0	100.00	Vectors	312.5
FUTURE-APP-5	0	100.00	Vectors	111.7
FUTURE-DEP-1	0	100.00	Vectors	80.6
FUTURE-DEP-2	0	100.00	Vectors	247.8
FUTURE-DEP-3	0	100.00	Vectors	247.8
FUTURE-DEP-4	0	100.00	Vectors	132.5
FUTURE-DEP-5	0	100.00	Vectors	291.7
INT-1-APP-1	0	100.00	Vectors	270.0
INT-1-APP-2	0	100.00	Vectors	270.0
INT-1-APP-3	0	100.00	Vectors	165.0
INT-1-DEP-1	0	100.00	Vectors	90.0
INT-1-DEP-2	0	100.00	Vectors	90.0
INT-1-DEP-3	0	100.00	Vectors	345.0
INT-2-APP-1	0	100.00	Vectors	270.0
INT-2-APP-2	0	100.00	Vectors	270.0
INT-2-APP-3	0	100.00	Vectors	90.0
INT-2-DEP-1	0	100.00	Vectors	90.0
INT-2-DEP-2	0	100.00	Vectors	90.0
INT-2-DEP-3	0	100.00	Vectors	270.0
INTERIM-APP-1	0	100.00	Vectors	274.0
INTERIM-APP-2	0	100.00	Vectors	86.5
INTERIM-APP-3	0	100.00	Vectors	171.3
INTERIM-DEP-1				

```
      0   100.00   Vectors        94.0
   INTERIM-DEP-2
      0   100.00   Vectors       266.5
   INTERIM-DEP-3
      0   100.00   Vectors       351.3

STUDY TRACK DETAIL
   RwyId-OpType-TrkId-SubTrk
       #  SegType       Dist/Angle      Radius(nmi)
   EXISTING-APP-1-0
       1  Straight         2.0000 nmi
       2  Right-Turn      77.7000 deg       0.3285
   EXISTING-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       63.5000 deg       0.0411
       3  Left-Turn       21.7000 deg       0.1800
       4  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      63.5000 deg       0.0411
       3  Right-Turn      21.3000 deg       0.1800
       4  Right-Turn      10.0000 deg       0.0100
       5  Left-Turn       24.0000 deg       0.5904
   EXISTING-APP-4-0
       1  Straight         4.0000 nmi
       2  Right-Turn       3.5000 deg       0.1000
       3  Left-Turn       13.0000 deg       0.8300
       4  Right-Turn      26.6000 deg       0.2128
   EXISTING-DEP-1-0
       1  Left-Turn       77.7000 deg       0.3285
       2  Straight         4.0000 nmi
   EXISTING-DEP-2-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Right-Turn      21.7000 deg       0.1800
       3  Right-Turn      63.5000 deg       0.0411
       4  Straight         4.0000 nmi
   EXISTING-DEP-3-0
       1  Right-Turn      24.0000 deg       0.5904
       2  Left-Turn       10.0000 deg       0.0100
       3  Left-Turn       21.3000 deg       0.1800
       4  Left-Turn       63.5000 deg       0.0411
       5  Straight         4.0000 nmi
   EXISTING-DEP-4-0
       1  Left-Turn       26.6000 deg       0.2128
       2  Right-Turn      13.0000 deg       0.8300
       3  Left-Turn        3.5000 deg       0.1000
       4  Straight         4.0000 nmi
   FUTURE-APP-1-0
       1  Straight         5.0000 nmi
       2  Right-Turn      80.6000 deg       0.3185
   FUTURE-APP-2-0
       1  Straight         4.0000 nmi
       2  Left-Turn       62.3000 deg       0.0412
       3  Left-Turn        3.5000 deg       0.0010
       4  Left-Turn       17.9000 deg       0.2198
       5  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-3-0
       1  Straight         4.0000 nmi
       2  Right-Turn      62.3000 deg       0.0412
       3  Right-Turn       3.1000 deg       0.0010
       4  Right-Turn      17.9000 deg       0.2198
       5  Right-Turn      13.0000 deg       0.0010
       6  Left-Turn       28.5000 deg       0.4823
   FUTURE-APP-4-0
       1  Straight         4.0000 nmi
       2  Left-Turn       12.3000 deg       0.9136
       3  Right-Turn       1.5000 deg       0.0010
       4  Right-Turn      20.2000 deg       0.3026
   FUTURE-APP-5-0
       1  Straight         5.0000 nmi
       2  Left-Turn       11.2000 deg       0.0010
       3  Left-Turn       60.6000 deg       0.2064
       4  Right-Turn       3.5000 deg       0.0010
```

```
    5  Straight          0.1991 nmi
FUTURE-DEP-1-0
    1  Left-Turn        80.6000 deg       0.3185
    2  Straight          5.0000 nmi
FUTURE-DEP-2-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Right-Turn       17.9000 deg       0.2198
    3  Right-Turn        3.5000 deg       0.0010
    4  Right-Turn       62.3000 deg       0.0412
    5  Straight          5.0000 nmi
FUTURE-DEP-3-0
    1  Right-Turn       28.5000 deg       0.4823
    2  Left-Turn        13.0000 deg       0.0010
    3  Left-Turn        17.9000 deg       0.2198
    4  Left-Turn         3.1000 deg       0.0010
    5  Left-Turn        62.3000 deg       0.0412
    6  Straight          5.0000 nmi
FUTURE-DEP-4-0
    1  Left-Turn        20.2000 deg       0.3026
    2  Left-Turn         1.5000 deg       0.0010
    3  Right-Turn       12.3000 deg       0.9136
    4  Straight          4.0000 nmi
FUTURE-DEP-5-0
    1  Straight          0.1991 nmi
    2  Left-Turn         3.5000 deg       0.0010
    3  Right-Turn       60.6000 deg       0.2064
    4  Right-Turn       11.2000 deg       0.0010
    5  Straight          5.0000 nmi
INT-1-APP-1-0
    1  Straight          3.0000 nmi
    2  Right-Turn        4.9000 deg       0.0100
    3  Right-Turn       46.9000 deg       0.3347
    4  Left-Turn         1.0000 deg       0.0100
    5  Right-Turn       36.0000 deg       0.5886
    6  Right-Turn        3.2000 deg       0.0100
    7  Straight          0.0727 nmi
INT-1-APP-2-0
    1  Straight          3.0000 nmi
    2  Left-Turn         2.6000 deg       0.0100
    3  Left-Turn        47.8000 deg       0.0795
    4  Left-Turn         0.8000 deg       0.0100
    5  Left-Turn        23.2000 deg       0.1594
    6  Right-Turn        0.6000 deg       0.0100
    7  Left-Turn         9.1000 deg       0.5155
    8  Right-Turn        1.5000 deg       0.0100
    9  Left-Turn         7.8000 deg       1.6562
   10  Left-Turn         0.8000 deg       0.0100
   11  Straight          0.1392 nmi
INT-1-APP-3-0
    1  Straight          3.0000 nmi
    2  Right-Turn        0.8000 deg       0.0100
    3  Left-Turn         6.7000 deg       0.3228
    4  Right-Turn        2.2000 deg       0.0100
    5  Left-Turn        14.8000 deg       0.0554
    6  Left-Turn         1.0000 deg       0.0100
    7  Straight          0.0982 nmi
    8  Left-Turn         1.0000 deg       0.0100
    9  Right-Turn       20.5000 deg       0.1612
   10  Right-Turn        1.2000 deg       0.0100
   11  Straight          0.0863 nmi
   12  Left-Turn         2.7000 deg       0.0100
   13  Left-Turn        13.5000 deg       0.2536
INT-1-DEP-1-0
    1  Straight          0.0728 nmi
    2  Left-Turn         3.2000 deg       0.0100
    3  Left-Turn        36.0000 deg       0.5886
    4  Right-Turn        1.0000 deg       0.0100
    5  Left-Turn        46.9000 deg       0.3347
    6  Left-Turn         4.9000 deg       0.0100
    7  Straight          3.0000 nmi
INT-1-DEP-2-0
    1  Straight          0.1392 nmi
    2  Right-Turn        0.8000 deg       0.0100
```

	3	Right-Turn	7.8000 deg	1.6562
	4	Left-Turn	1.5000 deg	0.0100
	5	Right-Turn	9.1000 deg	0.5155
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	23.2000 deg	0.1594
	8	Right-Turn	1.6000 deg	0.0100
	9	Right-Turn	47.8000 deg	0.0795
	10	Right-Turn	1.8000 deg	0.0100
	11	Straight	3.0000 nmi	
INT-1-DEP-3-0				
	1	Right-Turn	13.5000 deg	0.2536
	2	Right-Turn	2.7000 deg	0.0100
	3	Straight	0.0863 nmi	
	4	Left-Turn	1.2000 deg	0.0100
	5	Left-Turn	20.5000 deg	0.1612
	6	Right-Turn	1.0000 deg	0.0100
	7	Straight	0.0982 nmi	
	8	Right-Turn	1.0000 deg	0.0100
	9	Right-Turn	14.8000 deg	0.0554
	10	Left-Turn	2.2000 deg	0.0100
	11	Right-Turn	6.7000 deg	0.3228
	12	Left-Turn	0.8000 deg	0.0100
	13	Straight	3.0000 nmi	
INT-2-APP-1-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	2.7000 deg	0.0100
	3	Right-Turn	60.1000 deg	0.3440
	4	Right-Turn	0.1000 deg	0.0100
	5	Right-Turn	30.0000 deg	0.5046
	6	Right-Turn	2.5000 deg	0.0100
	7	Straight	0.0888 nmi	
INT-2-APP-2-0				
	1	Straight	3.0000 nmi	
	2	Left-Turn	5.0000 deg	0.0100
	3	Left-Turn	51.5000 deg	0.0523
	4	Right-Turn	0.6000 deg	0.0100
	5	Left-Turn	21.4000 deg	0.3618
	6	Right-Turn	0.6000 deg	0.0100
	7	Left-Turn	14.2000 deg	1.0551
	8	Right-Turn	0.9000 deg	0.0100
	9	Straight	0.0888 nmi	
INT-2-APP-3-0				
	1	Straight	5.0000 nmi	
INT-2-DEP-1-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	2.5000 deg	0.0100
	3	Left-Turn	30.0000 deg	0.5046
	4	Left-Turn	0.1000 deg	0.0100
	5	Left-Turn	60.1000 deg	0.3440
	6	Right-Turn	2.7000 deg	0.0100
	7	Straight	3.0000 nmi	
INT-2-DEP-2-0				
	1	Straight	0.0888 nmi	
	2	Left-Turn	0.9000 deg	0.0100
	3	Right-Turn	14.2000 deg	1.0551
	4	Left-Turn	0.6000 deg	0.0100
	5	Right-Turn	21.4000 deg	0.3618
	6	Left-Turn	0.6000 deg	0.0100
	7	Right-Turn	51.5000 deg	0.0523
	8	Right-Turn	5.0000 deg	0.0100
	9	Straight	3.0000 nmi	
INT-2-DEP-3-0				
	1	Straight	5.0000 nmi	
INTERIM-APP-1-0				
	1	Straight	4.0000 nmi	
	2	Right-Turn	60.0000 deg	0.3350
	3	Right-Turn	34.2000 deg	0.6226
INTERIM-APP-2-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	93.5000 deg	0.0642
INTERIM-APP-3-0				
	1	Straight	5.0000 nmi	
	2	Left-Turn	20.5000 deg	0.0100

```
      3  Right-Turn       11.8000 deg       1.2938
   INTERIM-DEP-1-0
      1  Left-Turn        34.2000 deg       0.6226
      2  Left-Turn        60.0000 deg       0.3350
      3  Straight          4.0000 nmi
   INTERIM-DEP-2-0
      1  Right-Turn       93.5000 deg       0.0642
      2  Straight          5.0000 nmi
   INTERIM-DEP-3-0
      1  Left-Turn        11.8000 deg       1.2938
      2  Right-Turn       20.5000 deg       0.0100
      3  Straight          5.0000 nmi

AIRCRAFT GROUP ASSIGNMENTS

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STUDY AIRPLANES

STUDY SUBSTITUTION AIRPLANES

USER-DEFINED NOISE CURVES

USER-DEFINED METRICS

USER-DEFINED PROFILE IDENTIFIERS

USER-DEFINED PROCEDURAL PROFILES

USER-DEFINED FIXED-POINT PROFILES

USER-DEFINED FLAP COEFFICIENTS

USER-DEFINED JET THRUST COEFFICIENTS

USER-DEFINED PROP THRUST COEFFICIENTS

USER-DEFINED GENERAL THRUST COEFFICIENTS

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STUDY MILITARY AIRPLANES

USER-DEFINED MILITARY NOISE CURVES

USER-DEFINED MILITARY PROFILE IDENTIFIERS

USER-DEFINED MILITARY FIXED-POINT PROFILES

------------------------------------------------------------------------

STUDY HELICOPTERS
   B222          Standard data
   B429          Standard data
   EC130         Standard data
   S70           Standard data
   S76           Standard data
   SA330J        Standard data
   SA355F        Standard data

USER-DEFINED HELICOPTER PROFILE IDENTIFIERS
      Op   Profile Stg  Weight(lb)
   B222
      APP  USER      1        7800
      DEP  USER      1        7800
   B429
      APP  USER      1        7000
      DEP  USER      1        7000
   EC130
      APP  USER      1        5290
      DEP  USER      1        5290
   S70
      APP  USER      1       18000
```

DEP	USER	1	18000
S76			
APP	USER	1	10000
DEP	USER	1	10000
SA330J			
APP	USER	1	15432
DEP	USER	1	15432
SA355F			
APP	USER	1	5070
DEP	USER	1	5070

USER-DEFINED HELICOPTER PROCEDURAL PROFILES

#	StepType	Duration(sec)	Distance(ft)	Altitude(ft)	Speed(kt)
B222-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B222-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
B429-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
B429-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
EC130-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
EC130-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
S70-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	26400.0	0.0	0.0

3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S70-APP-USER-1					
1	Ground Idle	60.0	0.0	0.0	0.0
2	Flight Idle	120.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	45.0
5	Dep Climb Accel	0.0	200.0	100.0	55.0
6	Dep Climb Accel	0.0	300.0	200.0	65.0
7	Dep Climb Accel	0.0	900.0	400.0	80.0
8	Dep Const Speed	0.0	1500.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	120.0
10	Level Fly	0.0	26400.0	0.0	0.0
S76-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	110.0
2	Level Fly	0.0	26400.0	0.0	0.0
3	App Horiz Decel	0.0	2000.0	0.0	80.0
4	App Desc Decel	0.0	1000.0	700.0	60.0
5	App Desc Decel	0.0	1000.0	500.0	40.0
6	App Desc Decel	0.0	500.0	300.0	35.0
7	App Desc Decel	0.0	200.0	150.0	25.0
8	App Desc Decel	0.0	150.0	75.0	0.0
9	App Desc Decel	0.0	150.0	0.0	0.0
10	Flight Idle	60.0	0.0	0.0	0.0
11	Ground Idle	30.0	0.0	0.0	0.0
S76-APP-USER-1					
1	Ground Idle	180.0	0.0	0.0	0.0
2	Flight Idle	270.0	0.0	0.0	0.0
3	Dep Vertical	3.0	0.0	50.0	0.0
4	Dep Climb Accel	0.0	100.0	75.0	40.0
5	Dep Climb Accel	0.0	150.0	100.0	50.0
6	Dep Climb Accel	0.0	300.0	300.0	70.0
7	Dep Climb Accel	0.0	350.0	500.0	80.0
8	Dep Const Speed	0.0	1000.0	1000.0	0.0
9	Dep Horiz Accel	0.0	2000.0	0.0	110.0
10	Level Fly	0.0	27500.0	0.0	0.0
SA330J-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA330J-APP-USER-1					
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0
SA355F-DEP-USER-1					
1	Start Altitude	0.0	0.0	1000.0	120.0
2	Level Fly	0.0	19400.0	0.0	0.0
3	App Desc Decel	0.0	9000.0	500.0	60.0
4	App Desc Decel	0.0	2000.0	300.0	40.0
5	App Desc Decel	0.0	500.0	200.0	30.0
6	App Desc Decel	0.0	300.0	100.0	20.0
7	App Desc Decel	0.0	200.0	0.0	0.0
8	Flight Idle	60.0	0.0	0.0	0.0
9	Ground Idle	30.0	0.0	0.0	0.0
SA355F-APP-USER-1					

			report		
1	Ground Idle	30.0	0.0	0.0	0.0
2	Flight Idle	30.0	0.0	0.0	0.0
3	Dep Vertical	10.0	0.0	200.0	0.0
4	Dep Horiz Accel	0.0	1000.0	0.0	40.0
5	Dep Climb Accel	0.0	1000.0	367.0	65.0
6	Dep Const Speed	0.0	5000.0	1200.0	0.0
7	Dep Horiz Accel	0.0	3000.0	0.0	120.0
8	Level Fly	0.0	21400.0	0.0	0.0

USER-DEFINED HELICOPTER NOISE CURVES

USER-DEFINED HELICOPTER DIRECTIVITY

CASE FLIGHT OPERATIONS - [Future-Lmax-S70]

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Evening	Night
S70	APP	USER	1	FUTURE	1	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	FUTURE	2	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	FUTURE	3	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	FUTURE	4	0	---	1.0000	0.0000	0.0000
S70	APP	USER	1	FUTURE	5	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	FUTURE	1	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	FUTURE	2	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	FUTURE	3	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	FUTURE	4	0	---	1.0000	0.0000	0.0000
S70	DEP	USER	1	FUTURE	5	0	---	1.0000	0.0000	0.0000

CASE RUNUP OPERATIONS - [Future-Lmax-S70]

SCENARIO RUN OPTIONS
- Run Type : Single-Metric
- NoiseMetric : LAMAX
- Do Terrain : No Terrain
- Do Contour : Recursive Grid
- Refinement : 8
- Tolerance : 0.25
- Low Cutoff : 75.0
- High Cutoff : 105.0
- Ground Type : All-Soft-Ground
- Do Population : No
- Do Locations : Yes
- Do Standard : No
- Do Detailed : No
- Compute System Metrics:
  - DNL : No
  - CNEL : No
  - LAEQ : No
  - LAEQD : No
  - LAEQN : No
  - SEL : No
  - LAMAX : No
  - TALA : No
  - NEF : No
  - WECPNL : No
  - EPNL : No
  - PNLTM : No
  - TAPNL : No
  - CEXP : No
  - LCMAX : No
  - TALC : No

SCENARIO GRID DEFINITIONS

Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)	NI	NJ	Thrsh	dAmb	(hr)
CONTOUR	Contour	-1.0000	-1.0000	0.0	2.0000	2.0000	2	2	85.0	0.0	0.00
LOCATION	Location	0.0000	0.0000	0.0	0.0000	0.0001	1	1	85.0	0.0	0.00

POINT_ID	METRIC
"R1 "	83.8
"R2 "	84.2
"R3 "	82.9
"R4 "	81.5
"R5 "	80.8
"R6 "	80.8
"R7 "	79.0
"R8 "	80.6

Helistop Relocation
Helistop Relocation & Operations Study

HARBOR-UCLA MEDICAL CENTER CAMPUS MASTER PLAN - ENVIRONMENTAL IMPACT REPORT

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June 2016

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HC-2013132

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

Harbor-UCLA Medical Center (HUCLAMC) is classified as a Level I Trauma Center and as such is an integral part of the County of Los Angeles' healthcare system. The trauma hospitals in the County have helistops on campus because they utilize Helicopter Emergency Medical Services (HEMS) for patient transport from accident scenes, or for inter-facility transfers.

Harbor-UCLA Medical Center (HUCLAMC) currently has a helistop on a one-story structure to the south of the Emergency Department (see **Figure 1, Figure 3**). However, the existing helistop will need to be relocated to another site temporarily in order to construct a new Hospital Tower with a rooftop helistop which is part of the Master Plan. The construction of the future 9 story Hospital Tower building will overlap the site of the current one-story helistop thereby destroying its use. The relocation of the helicopter operations to another helistop site will change the current flight paths and thus the helicopter noise exposure.

This Helicopter and Helistop Study (Study) reviewed the recommended relocation sites, the associated flight paths, and analyzed the helicopter landings and takeoffs which in turn provided the data base for the Noise Impact Study.

1.2 Background and Site Description

The Harbor-UCLA Medical Center is a 72 acre County facility located in an unincorporated portion of Los Angeles County near the City of Torrance. The hospital campus is bounded by Carson Street to the north, West 220th Street to the south, South Vermont Avenue to the east and South Normandie Avenue to the west.

As shown in **Figure 1**, the Medical Center is located within an urban area that is developed with medical, commercial and residential uses. There are single family residential uses located to the south of the site across West 220th Street, further to the west across Normandie Avenue and further to the north across West Carson Street behind the commercial strip mall. Multi-family residential uses are also located north of Carson Street, east of South Vermont Avenue, south of West 220th Street and west of Normandie Avenue. There are trailer parks mixed in with commercial properties along the east side of Vermont Avenue.

1.2.1 Historical Background

There has been a long history of helicopter usage at HUCLAMC. Three FAA approved helistops have existed over the years on the hospital campus. They were a ground level helistop, a temporary raised metal helistop, and currently a 14 ft raised helistop on a one story building. The ground level and the one story helistop were practically constructed in the same place at the intersection of Central Drive and Medical Center Drive.

1.2.1.a Ground Level Helistop

There was a ground level helistop(pre-1994), southeast of the intersection of Central Drive and Medical Center Drive, which was approximately 400 ft north of the nearest multi-family apartment house. This was in use for many years, but as the needs of the hospital increased, the area around the ground level helipad became more crowded with vehicle traffic, lamp poles and other built obstacles. An addition was made to the Ambulatory/ Emergency Department building which impacted the continued use of the ground level helistop.

1.2.1.b Temporary Raised Metal Helistop

The original ground level helistop was eventually demolished to make room for a new 14 ft. high helipad which was 45 ft to the north of the ground level helipad more in the center of the campus. During the construction of the 14 ft. raised helipad, the helicopters landed on the first temporary helipad replacement. This was a metal framed raised (approximately 10 ft) helipad structure designed to be temporary and thus, like Legos, could be taken apart (see **Figure 2**). The temporary helipad was located in the southwest quadrant of the Campus and erected in the parking lot, 167 ft. behind the St. John's Cardio Vascular Research Center (now referenced as the L.A. BioMed Project area) and just north of West 220th Street and the townhouses on the south side of West 220th Street. This temporary helistop was raised approximately10 ft above ground to allow the flight paths to clear the various obstacles in the vicinity such as the driveways and the cars in the area. Operations from this helipad began sometime in 2008 and continued during the Ambulatory/Emergency Department (ED) remodel and the construction of a third helistop on the roof of a one-story structure located just south of the ED.

1.2.1.c Current Temporary Raised 14 ft. Helistop Building:

The temporary metal structure was decommissioned and removed upon the completion of the one-story,14 ft. high building that also doubled as a storage unit parking area below with the helipad on top. This third helipad was centrally located and closer to the ED than the original ground level helipad by about 45 ft. It is approximately 444 ft. to the north of the nearest residential apartment units which are south of 220th Street. Helicopter began operations sometime in 2013 and it has been in continued use as the current helistop.

1.2.2 Future Helistop Location Descriptions

The hospital's goal is to build the new Hospital Tower with the rooftop helistop. Since the construction site for this new facility will overlap the current helistop location (see **Figure 1**), another temporary helistop location will need to be approved and permitted before the current 14 ft raised helistop building can be removed.

The ideal location for a temporary helistop is on one of the surface parking lots close to the ED. However, this is not possible at HUCLA since the competition for vehicle parking near the ambulatory/emergency department is also in high demand. In addition to the standard requirements for a flat area large enough for the helipad, there is also the requirement for clear unobstructed flight paths and transitional slopes associated with the helistop design. This increases the area that needs to be dedicated for the helistop.

There are two locations under consideration for the third temporary helistop. They are about 0.3 to 0.4 miles away from the ambulance entrance to the ED. The areas of interest are the parking lots in the southwest quadrant of the medical campus (see **Figure 1**). A metal structure similar to the one used for the first temporary helipad could be designed to meet the heliport design criteria (see **Figure 2**). Either helipad needs to be raised a minimum of 10 ft or more to provide for clear, unobstructed flight paths. This study will analyze the benefits and burdens of the three future helistops.

1.2.2.a Interim Helistop 1

A temporary Interim Helistop 1 could be located in the parking lot to the southeast of the Professional Building (see **Figure 1**). It would be on a raised structure at the far south end of the west most, double rows of north/south parking. The helipad would need to be elevated 10 ft. or more in order for the flight paths and primary helipad surface to clear the driveway, trees and some of the light pole fixtures. The center of the helipad would be 485 ft to the nearest single family dwellings west of South Normandie Avenue and 153 ft. across 220th Street to the closest residential area.

1.2.2.b Interim Helistop 2

In the alternative, the other Interim Helistop #2 is located in a separate parking lot to the east of Interim Helistop1. There is a distance of 213 ft. between Interim 1 and 2 when measured from their respective center points. The helipad is directly south of the St. John's Cardio Vascular Research Center building within the 11.4 acres designated as the future home of the BioMed Development Project. The proposed helipad site would be at the same location as the first temporary helistop metal structure established in 2008. It would also be raised at least 10 ft. above the parking lot elevation. The distance from the center of the helipad to the nearest noise sensitive residential area west of South Normandie Ave. is 698 ft. The townhouses south of the helipad and 220th Street are at a distance of 135 ft.

1.2.2.c Future Permanent Rooftop Helistop

When the permanent helistop is built, it will be located on top of the 9 story new Hospital Tower at approximately 133 ft above ground level almost in the center of the medical campus. It will be almost in the same place as the current helipad only much higher. This increase in the helipad elevation will have a positive impact on the helicopter noise exposure. The nearest multifamiliy dwelling on the east side of South Vermont is 793 ft from the estimated center of the helipad. The apartment building on the south side of 220th Street is 456 ft from the helipad. The helipad is 1,057 ft from the nearest residential area behind the commercial mall on the north side of Carson St.

2.0 HELISTOP DESIGN CRITERIA, CONDITIONS, AND CONTRAINTS

2.1 Regulatory Design Criteria – Federal and State

The new helipads, whether temporary or permanent, will need to meet the Federal Aviation Administration (FAA), latest design criteria as set forth in the most recent FAA Advisory Circular (AC No. 150/5390-2C, 2012) along with the design requirements specified by the State Division of Aeronautics (DOA), Caltrans, regulations (California Code of Regulations Title 21, Sections 3525-3560). This means that the helistop will be designed for the largest helicopter that is anticipated to land at HUCLA. As it currently stands, the Sikorsky S-70 (Firehawk) flown by the L.A. County Fire - Air Operations is the largest and would be the design helicopter. The DOA is the responsible agency that will issue the heliport operating permit once the facility is built according to plans approved by the DOA.

2.2 Site Conditions and Constraints

The helicopter landing site consists of the load bearing area where the helicopter lands and several imaginary surfaces representing the flight paths and primary surfaces. These surfaces should be clear of obstructions. Helistop placement should also take into consideration wind direction that will allow the helicopter to takeoff and land into the wind. The wind in this area is predominantly from the west/northwest except during Santa Ana wind conditions when it comes from the northeast or southeast in this area.

Patient transport by helicopter is a fast and efficient means of providing life saving medical attention. The current helistop is in an ideal location because the patient can be transferred from the helicopter by gurney to the ED. The temporary sites are at a distance from the ED that would make it impractical to move the patient by gurney over the interior roadways to the ED. Therefore, the hospital would use an ambulance for patient transport. Each temporary site has two alternate routes that could be used in the event one of the routes was blocked. Security guards should be present at all helicopter landings and takeoffs in order to control the vehicle and pedestrian traffic and keep them at a safe distance from the helicopter operations.

The helipad analysis evaluates the “benefits” of the site for a temporary helistop as well as the negative aspects of the site. The three future helistops are analyzed as follows:

2.2.1 Interim Helistop 1

This helistop would be located southeast of the Professional Building in the parking lot (see **Figure 4**). There are two double rows of north/south parking. The helistop would be placed at the south end of the far westerly row of parking. The flight paths will be to and from the east and the northwest. The flight path from the east will parallel 220th Street and the flight path to the northwest will follow Medical Center Drive and West Drive to Carson Street.

The vehicle parking in this area seems to be light to medium demand. There will be room to build a raised metal structure for the helipad (see **Figure 2**). The ground underneath the metal structure might need to be reinforced. The raised helipad might need to be a little higher than 10 ft above the ground depending upon the final height of the parking lot lights. Electricity is available in this area to supply power for the lights on the helipad and windcone.

The flight path is not clear of obstructions to the west because of the proximity and height of the SCE power poles and wires running north and south along S. Normandie Avenue. Four or five trees will need to be removed from the immediate area surrounding the helipad location and under the flight path to the northwest. Two or three parking lot light fixtures will need to be removed or lowered.

The ambulance could take two different routes to the ED but both routes would need to travel north through the Professional Building parking lot until reaching either Medical Center Drive or Medical Foundation Drive. Care would need to be taken to watch out for cars backing out of parking spaces. The ambulance would head in an easterly direction along either interior road to Central Drive then turn north to the hospital ambulance entrance. This is the slightly longer route when compared to Interim Helistop 2.

2.2.2 Interim Helistop 2

The Interim Helistop 2 could be built at the same location as the first temporary helistop established in 2008 (see **Figure 2 and 5**) if the construction schedule for the BioMedical Development Project at that location and along the flight paths could be coordinated with the amount of time the Interim Helistop 2 would be in operation. This would have to be determined.

Assuming that this area could be used for the temporary landing location, it has some benefits to consider. The site was already prepared for a raised helistop (10 ft), and any trees or poles, except for one parking light

pole to the west, have been removed. The flight paths would remain the same as before – coming in from the east and departing to the west. The ground under the proposed site has been enhanced to withstand the weight of a raised metal helipad structure (see **Figure 2**).

There are high SCE power lines running east and west along 220th Street and north and south on the South Normandie Ave (see **Figure 2**). With the raised helipad, the flight path is able to clear the power lines to the west on Normandie Ave. The flight paths will parallel the power poles on 220th Street. Electricity is available for the helipad lights.

The ambulance route to the Emergency Department could be east along South Drive and then north on Central Drive to the ambulance entrance. An alternate route could be directly south out the driveway on the east side of the helipad proceed easterly along 220th Street then turn north at Central Drive to the ambulance entrance. The Interim 2 location is slightly closer to the ED then Interim Helistop 1.

2.2.3 Future Permanent Rooftop Helistop

A rooftop helipad is planned for the new Hospital Tower. It will be 9 stories above ground right in the immediate area of the current helistop (see **Figure 6**). Again, it will be more in the middle of the medical campus. This will be beneficial in reducing the noise exposure to the neighbors and in increasing the possible flight paths the helicopter pilot could use.

Depending upon the final architectural plans there should be no issue of obstructions in the helistop area including the flight paths except for a possible elevator tower that will be used to transport the patient to the hospital services below.

3.0 FLIGHT PATHS AND NOISE MITIGATION MEASURES

The wind direction and the flight paths for the three different helistops were also taken into consideration when analyzing the sites. The wind in this area comes predominantly from the west/ northwest except during Santa Ana wind conditions when the wind changes direction and comes from the northeast or southeast. The helicopter is like a fixed wing aircraft and should takeoff and landing into the wind. But it is more versatile than a fixed wing because the pilot can move the aircraft into the wind within a very short distance and in a hover. Thus, on landing or departure the pilot will orient the aircraft, depending upon the wind speed, into the wind, and head to the west or northwest depending upon the prevailing wind direction. Similarly, the pilot will reverse these landing procedures when the wind is from the northeast or southeast during Santa Ana wind conditions.

The flight paths for the different helistops including the current in use helistop are illustrated in **Figures 3 through 6**. The helicopter can come from many directions to the hospital. The flight paths were all designed to avoid, as much as possible, over flying noise sensitive areas such as residential uses. The pilots also use a noise abatement flight profile in which they fly a steeper approach and departure to keep the aircraft's altitude as high as possible within the constraints of the Air Traffic Control directions from the neighboring airports. They can also use a noise mitigation measure such as flying alternate flight paths so that the noise exposure on the community below is not the same.

There is a similarity in the flight paths to and from the existing helistop and Interim 1 and 2, and the permanent helistop. The segments of the flight paths stay oriented over the hospital property on the approach and departure from the helistops. The flight path to the northeast stays over the hospital property until it reaches South Vermont St. It then angles further to the northeast over commercial area, avoiding the trailer park below, and onto the Fwy 110.

The helicopter pilots try to follow the major highways or freeways depending upon their mission destination. If the pilot is approaching from the southeast to the helistop, the flight path goes over commercial areas, crosses South Vermont and then onto the hospital property to the helistop. The direction would be the same for the current and the permanent helistops. But, the altitude would be higher for the permanent helistop. If the landing was at Interim 1 or 2, the flight path would parallel 220th Street on the hospital property in order to avoid the power lines (see **Figure 2** for power poles).

The departure flight paths from Interim 1 and 2 differ from each other and somewhat from the existing helistop. The departure from Interim 1 utilizes a northwest flight path, because the short distance from the helipad to the power lines to the west along South Normandie Ave. is insufficient to clear the power poles. The northwest flight path stays to the east of Medical Center Drive and West Drive and would avoid over flying the Children's Institute at the northwest corner of the intersection of West Drive and Medical Foundation Drive.

The westerly flight path from the Interim 2 could go over the SCE power poles along South Normandie Ave. This was the same flight path that was approved when the helipad was there temporarily in 2008 to 20013.

Figure 6 illustrates just a few of the possible flight paths from the permanent helistop. Since the helipad will be elevated and there should be no obstructions, it will be easy for the pilot to chose different flight directions depending upon the weather and the destination of the mission. It should be noted that the helipad is more central to the campus and clear, unobstructed flight paths could be achievable in all directions. This location will also allow the pilot to vary the flight path usage to avoid concentrating the noise exposure at the same noise

sensitive site.

4.0 HELICOPTER EMERGENCY MEDICAL SERVICE PROVIDERS (HEMS)

The helicopter medical services providers that land at HUCLAMC are both public sponsored agencies and private companies. (see **Table 1**). There are four public air operations agencies consisting of L.A. County Fire (LACFD), L.A. City Fire (LAFD), L.A. County Sheriff's Department (LASD), and the U.S. Coast Guard (USCG). The private companies that most often land at the existing helistop are Air Methods (Mercy Air), Helinet, Calstar, and REACH.

HUCLAMC is a County owned Level 1 designated trauma hospital and the main helicopter services are public agencies. The public air support providers' main mission is to transport trauma patients from accident scenes when they are not fighting fires, searching and rescuing people in the mountains or desert, and performing water rescues. The private HEMS focus on inter-hospital patient transfers such as moving a child victim from HUCLAMC to Children's Hospital, organ transplant and delivery, and also transport of trauma victims when the public agencies are over scheduled. **Figure 7** shows that 60 percent of the total helicopter takeoff and landings (542 operations) at HUCLAMC were performed by public agencies and 40 percent by the private HEMS. The public agencies had 106 more landings and takeoffs than the private providers.

The weight range for all the helicopters is between 4,900 lbs to 21,000 lbs. The public agencies fly some of the larger aircraft. There were six different types of aircraft used by the public agencies and they all have twin turbine engines. In the last couple of years, the LASD replaced the Sikorsky S-61 (Seahawk S3, 21,000 lbs) with the Super Puma (AS332L1, 17,000 lbs) which is a newer model aircraft.

The four private HEMS providers use ten different types of helicopters, and all but two models are twin turbine engine helicopters. The Bell 222, twin engine aircraft with good patient capacity, was a popular model with the private providers but it was quite noisy. Over the past few years all of the providers have replaced the Bell 222 with quieter models. Recently in June, 2016, REACH and Calstar announced that they would be merging so there may be more changes in aircraft models.

Figure 8 shows the analysis of the number of landings by helicopter model over a 96 month time period (January 9, 2008 to December 8, 2015). The Sikorsky S-70, Firehawk, from the LACFD air operations, landed the most often (74 landings) followed by the Bell 222 operated by Air Methods (52 landings), Calstar (1), REACH (1). As noted above, the Bell 222 was replaced with newer, quieter aircraft such as the EC 135 and EC 145 (name change to Airbus H135 and H145). This will have an impact on lowering the noise exposure under the flight paths for both the neighborhood and the hospital.

5.0 HELISTOP AND HELICOPTER OPERATIONS

Helicopter operations data was gathered from the eight HEMS providers going back as far as 7 years for some providers to 2008. The first set of data was captured in 2013 and then updated at the end of 2015. The period of time covers 416 weeks, rounded up to 96 months. An operation is defined as a landing or a takeoff. There were a total of 542 recorded operations over this period of time. For every 271 landing, there was a takeoff since no helicopters were based at the hospital helistop or allowed to stay overnight.

There was an average number of 67.75 (68 operations) operations per year; 5.6 (6 operations) operations per month or 3 landings and 3 takeoffs. The number of helicopter landings was analyzed by month as shown in **Figure 9**. The summer months seem to be the busiest for helicopter hospital visits. The month of September at 36 landings was followed by August with 33 landings. According to the Department of Health Services there are more penetrating traumas; and an increase in search and rescue operations due to an increase in outdoor activities; and more people on the road for vacation travel before school starts resulting in more traffic accidents.

The helicopter providers that landed the most during the summer months were LACFD – with the Sikorsky S-70 and Air Methods (Mercy Air) with the Bell 222. The analysis of the 36 landings in September attributed 42 percent to the S-70 and 22 percent to the Bell 222. The 33 August landings were more evenly divided between the S-70 at 33 percent and the Bell 222 at 30 percent.

The Helicopter Noise Study was based upon the number of operations (542 landings and takeoffs) that occurred within three periods of time representing the Community Noise Equivalent Level (CNEL) land use noise measure. **Table 2** and **Figure 10** illustrates the spread of the helicopter operations over these time periods. The number of landings do not always match up with the number of takeoffs within a given time period because the helicopter might land at the end of one time period and then takeoff in the next time period.

The results of the number of operations within a given CNEL time period reveals that 52.6 percent of the operations occurred during 7 am to 7 pm or daytime hours. Only 16 percent of the operations were in the evening between 7 pm and 10 pm and 31.4 percent of the operations were in the nighttime hours of 10 pm to 7 am. The majority of the flyovers were in the daytime when the ambient background noise is higher. The least number of operations were in the evening or family hours. A little less than a third of the flyovers occurred at night after 10 pm.

A further analysis of the number of landings and takeoffs within the three CNEL time periods was examined by helicopter model as seen in **Figures 11 and 12**. The number of landings by helicopter model was displayed in **Figure 8**, in which

the Bell 222 and the S-70 were the two helicopter models with the most operations. This was then evaluated by CNEL time period in **Figures 11** for landings and **Figure 12** for departures. The results confirm that the Bell 222 and the S-70 land the most often. However, this more detailed analysis shows that the Bell 222 lands in the daytime hours more frequently (27.7 percent) and the S-70 lands more in the nighttime hours when the ambient background level is lower. For example, out of a total of 86 nighttime landings 45 or 52 percent are a result of the LACFD S-70. The next highest user is the U.S. Coast Guard with the AS365. They performed 13.9 percent of the nighttime landings compared with 6.9 percent of the landings from the Bell 222 – Air Methods. A similar analysis can be made for the number of departures as illustrated in **Table 2 and Figure 12**. In the future, the contribution of the helicopter noise levels to the ambient background should be reduced with the continued use of quieter helicopters and pilot noise mitigation measures.

HARBOR UCLA MEDICAL CENTER

Helistop Locations

FIGURE 1

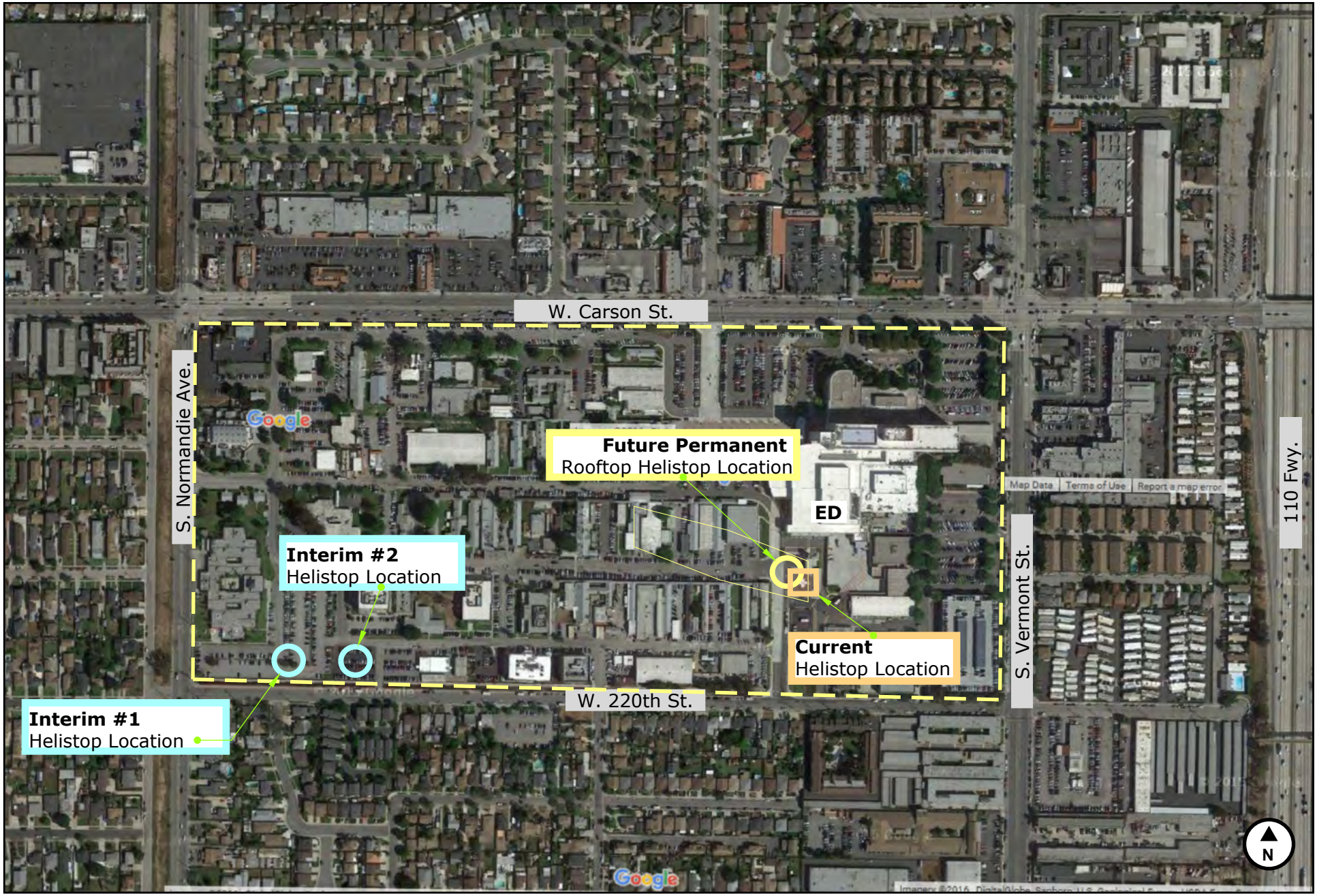

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FIGURE 2

Example of Temporary Helistop Structure Raised Minimum 10 ft.



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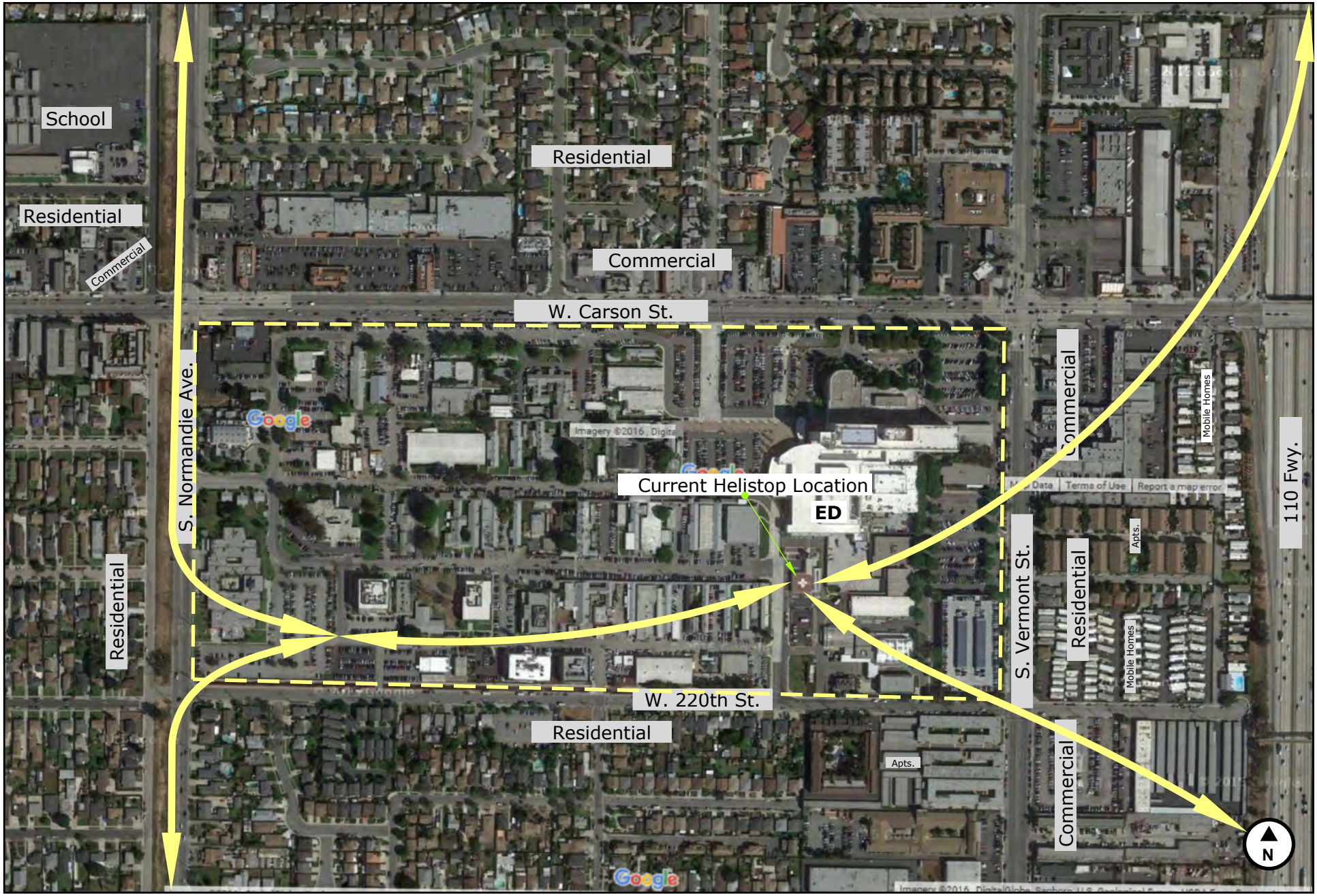
Existing Helistop Flight Paths

FIGURE 3



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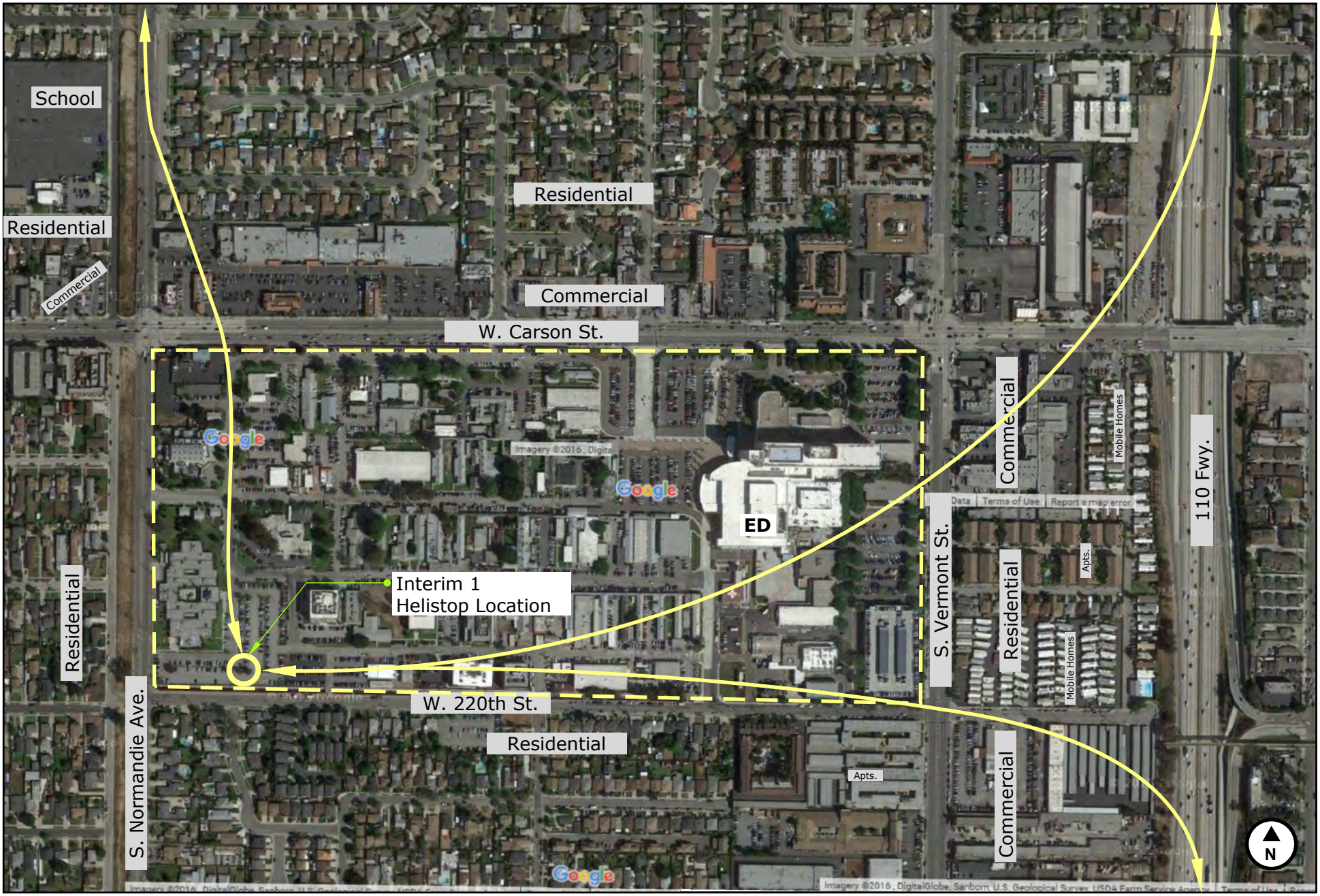
Interim 1 Helistop Flight Paths

FIGURE 4



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Interim 2 Helistop Flight Paths

FIGURE 5



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Permanent Rooftop Helistop Flight Paths

FIGURE 6

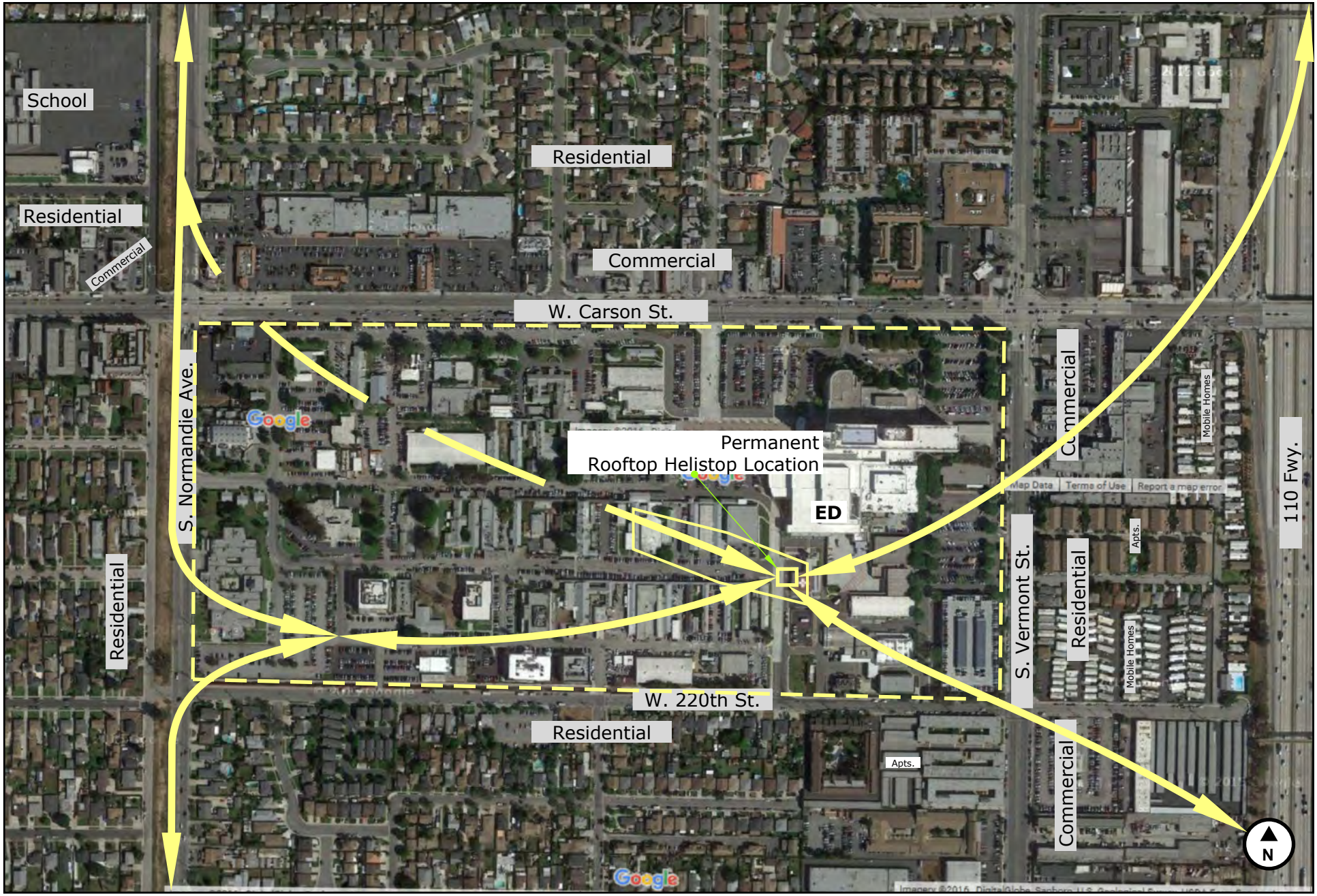
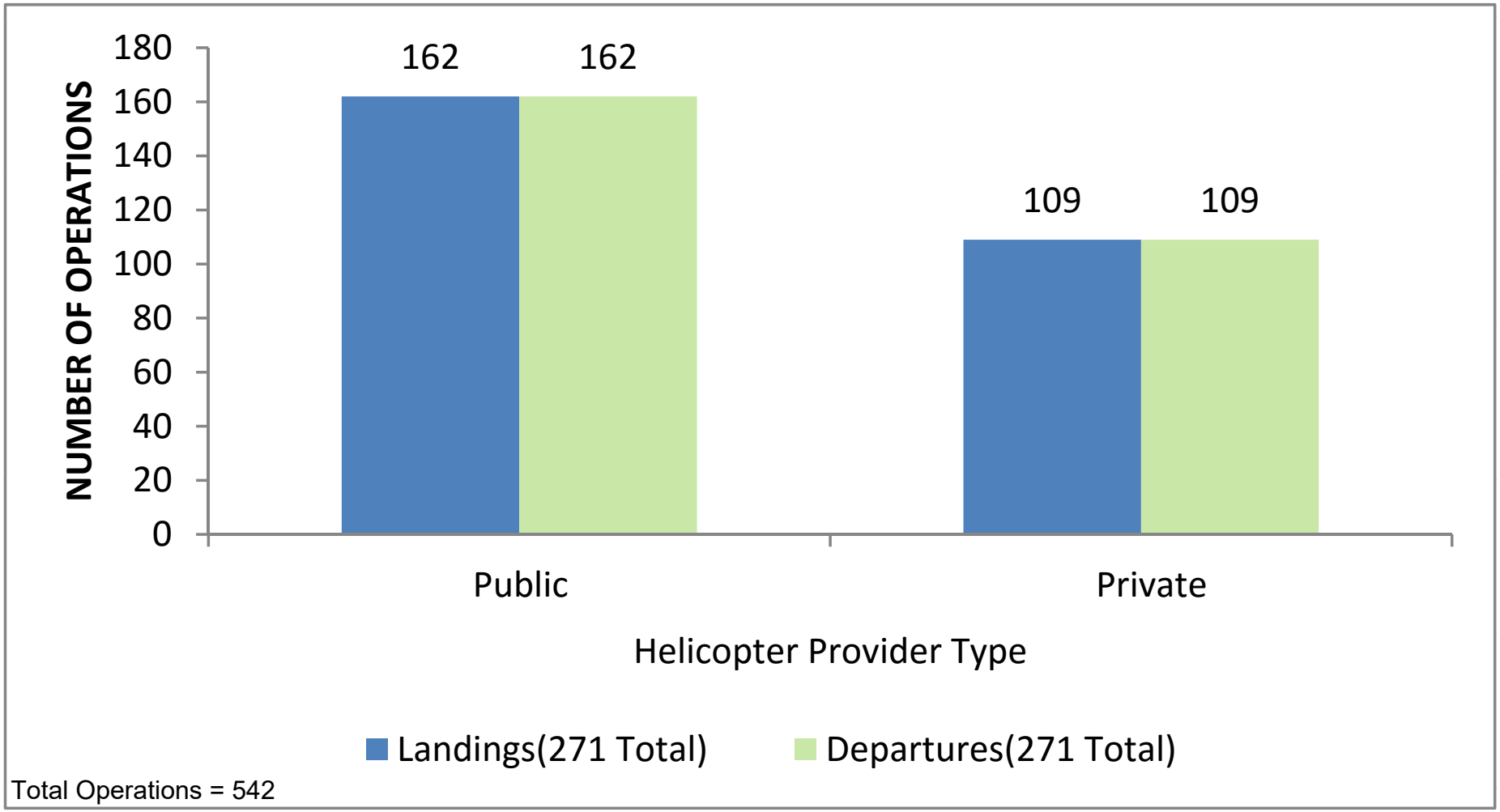


FIGURE: 7 NUMBER OF HELICOPTER OPERATIONS BY PROVIDER TYPE

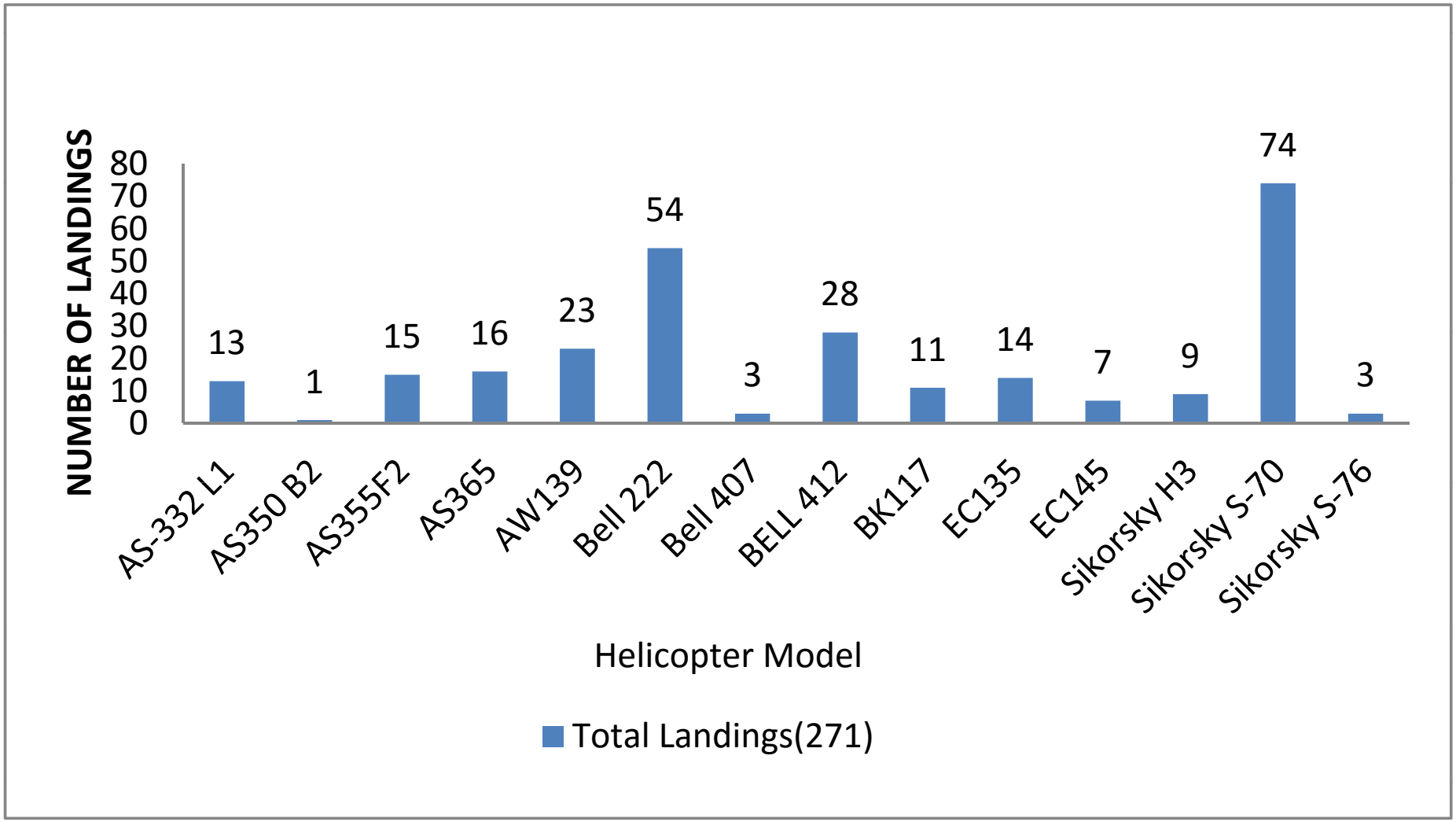


Total Operations = 542

Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

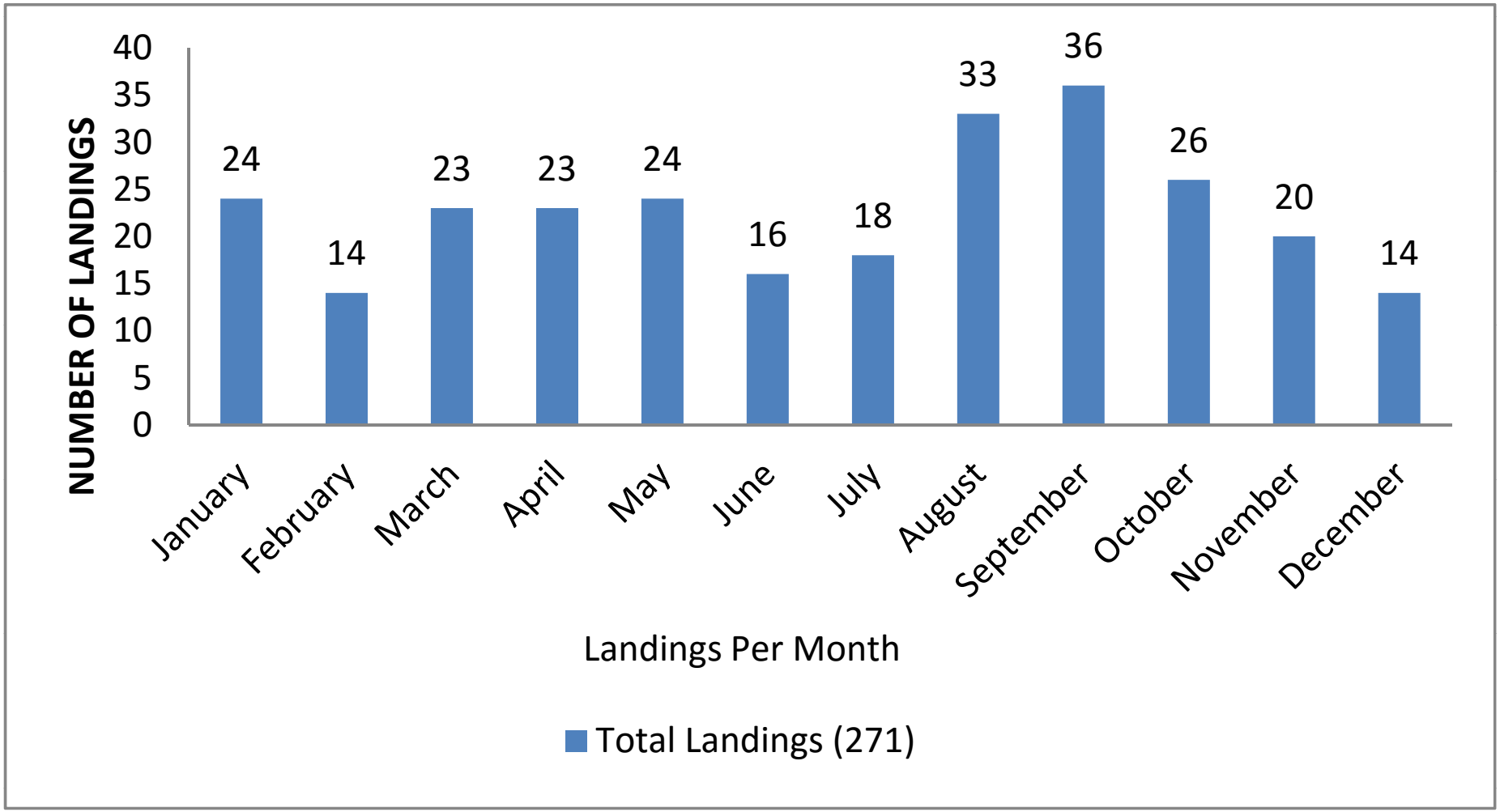
FIGURE: 8 NUMBER OF LANDINGS BY HELICOPTER MODEL



Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

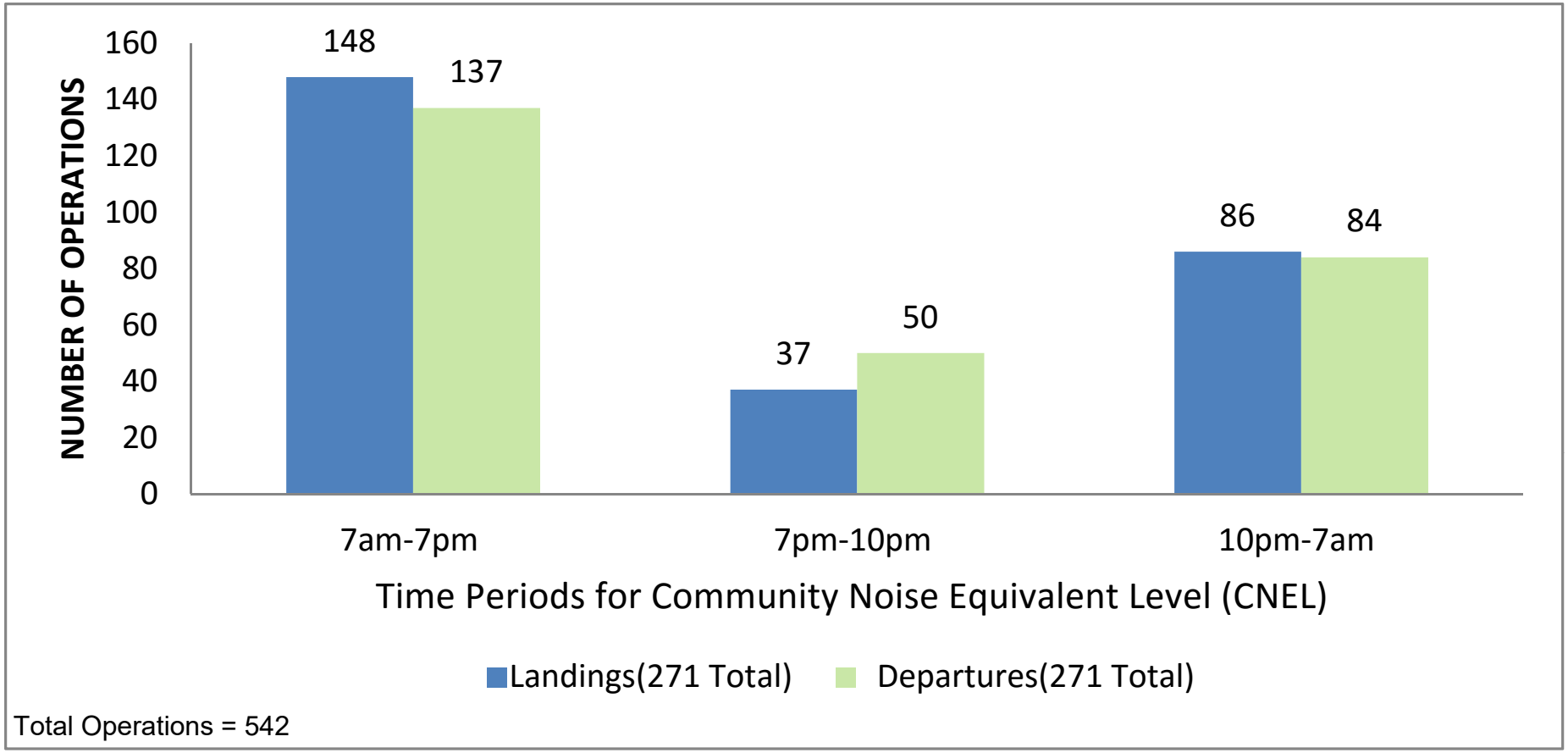
FIGURE: 9 NUMBER OF HELICOPTER LANDINGS PER MONTH



Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

FIGURE: 10 NUMBER OF HELICOPTER OPERATIONS WITHIN CNEL TIME PERIODS

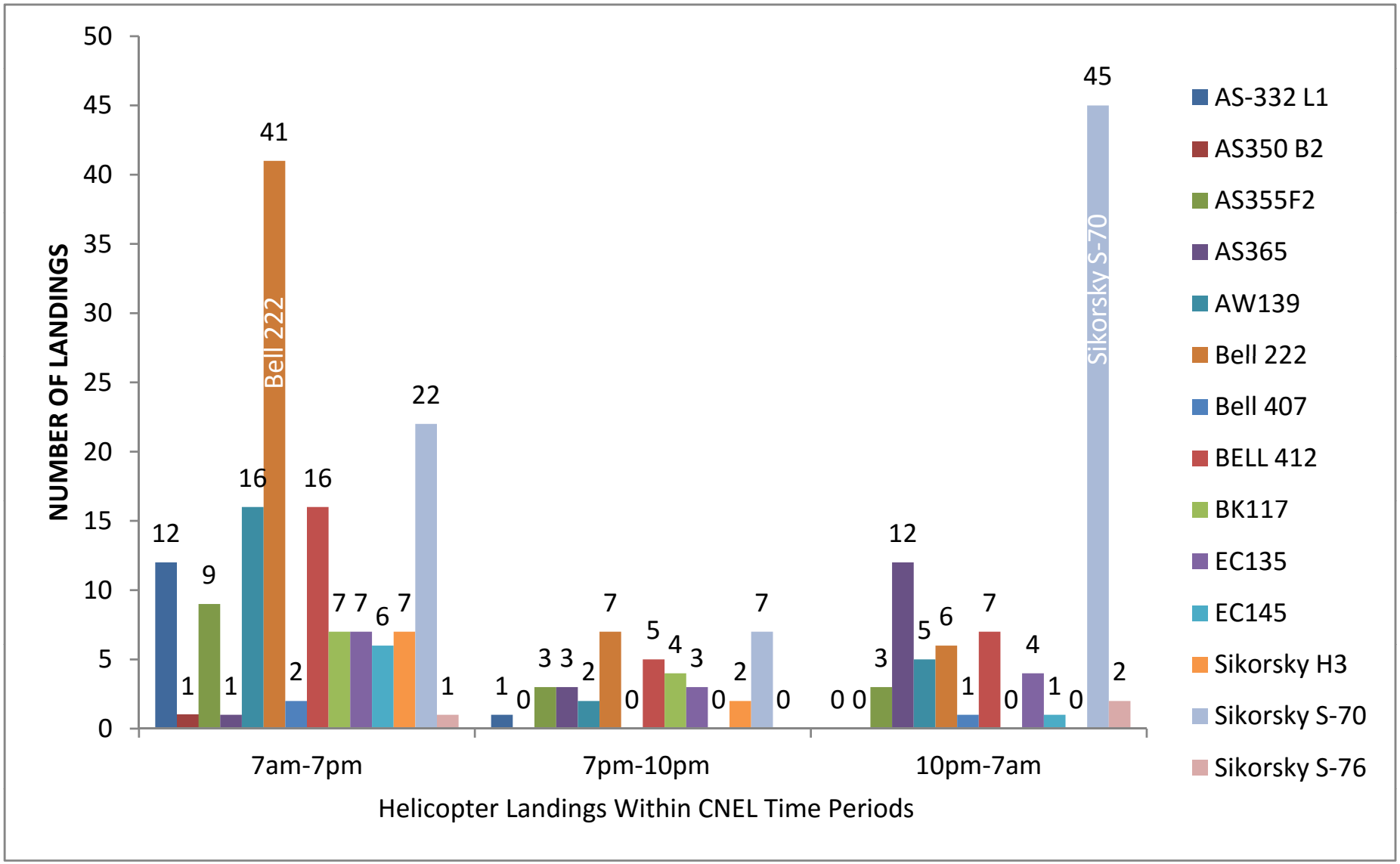


Total Operations = 542

Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

FIGURE: 11 NUMBER OF LANDINGS BY HELICOPTER MODEL WITHIN CNEL TIME PERIODS



Date Range: January 9, 2008 - December 8, 2015

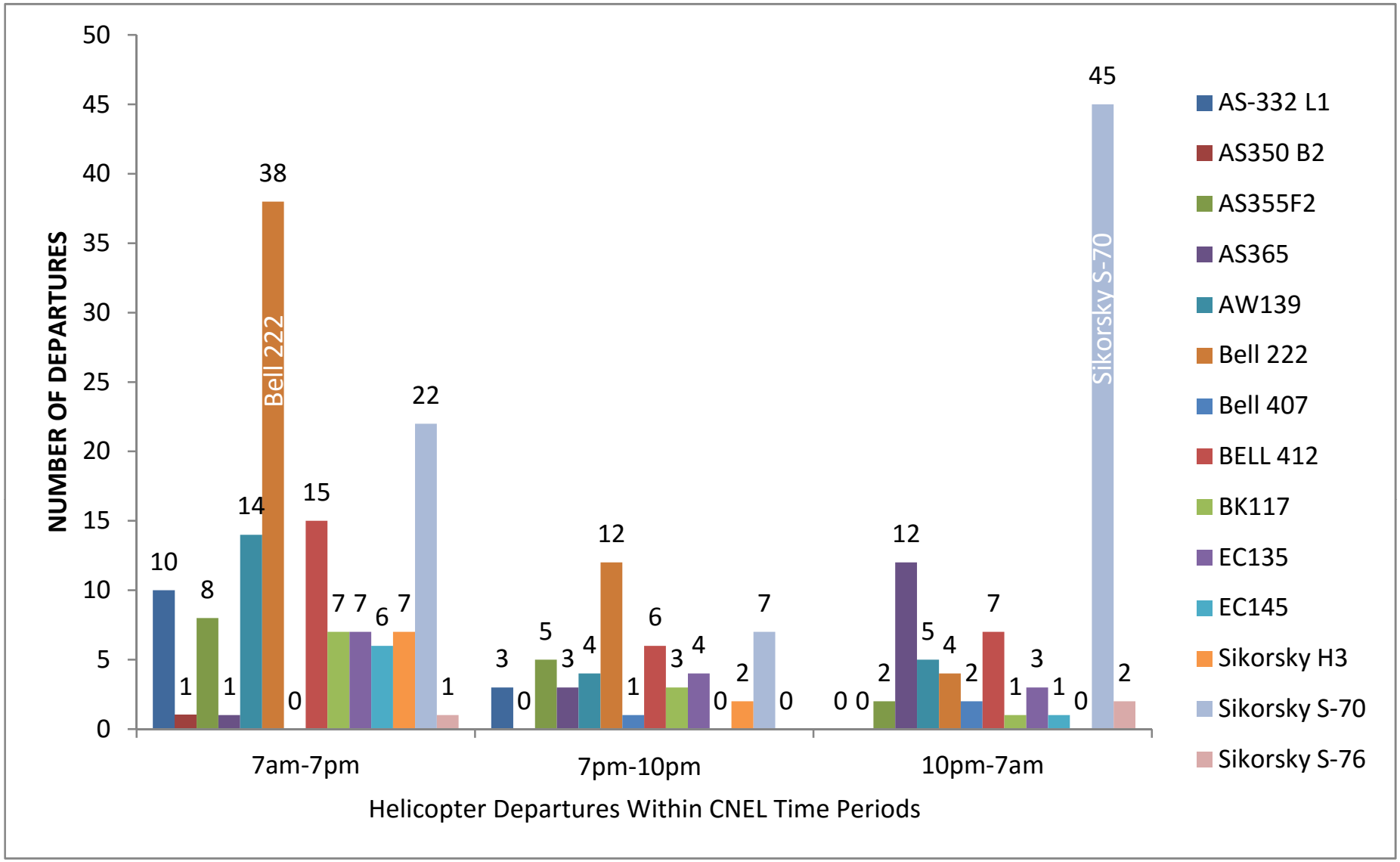
*416 Weeks of Data = 96 Months

Total Landings (271)

Heliport Consultants

07/1/16

FIGURE: 12 NUMBER OF DEPARTURES BY HELICOPTER MODEL WITHIN CNEL TIME PERIODS



Date Range: January 9, 2008 - December 8, 2015

*416 Weeks of Data = 96 Months

Total Departures (271)

Heliport Consultants

07/1/16

TABLE 1 - HELICOPTER EMERGENCY MEDICAL SERVICES (HEMS)

PUBLIC HEMS	TYPE	MGW (lbs.)
LACFD - Los Angeles County Fire Department	Bell 412	11,900
	Sikorsky S70 (Firehawk)	18,000
LASD - Los Angeles Sheriff's Department	AS332 L1 (Super Puma)	17,000
	Sikorsky S-61 (Seahawk - H3) [1]	21,000
LAFD - Los Angeles Fire Department	AW139	14,110
	Bell 412	11,900
USCG - United States Coast Guard	AS365N2 (Dauphin)	9,480

PRIVATE HEMS	TYPE	MGW (lbs.)
AirMethods (Mercy Air) -	AS350 B2	4,960
	EC135	6,250
	BK 117	7,827
	EC145	7,903
	Bell 222 [1]	8,250
	Bell 407	5,250
	Bell 412	11,900
CALSTAR -	BELL 222UT [1]	8,250
Helinet -	AS355F2	5,600
	Sikorsky S-76	10,500
REACH -	Bell 222 [1]	8,250
	Bell 407	5,250
	EC135	6,250

[1] This helicopter no longer in use by the HEMS provider

TABLE 2 - PERCENTAGE OF HELICOPTER OPERATIONS WITHIN CNEL TIME PERIODS

Time of Day CNEL	Total Operations	Percent of Total Operations	Landings	Percent of Total Operations	Departures	Percent of Total Operations
7AM - 7PM	285	52.6%	148	27.3%	137	25.3%
7PM - 10PM	87	16%	37	6.8%	50	9.2%
10PM - 7AM	170	31.4%	86	15.9%	84	15.5%
Total Operations	542	100%	271	50%	271	50%

Appendix I

Transportation and Traffic

Traffic Impact Analysis for the Harbor-UCLA Medical Center Master Plan Project

Prepared for:
ESA PCR

August 2016

LA13-2610

FEHR PEERS

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1. INTRODUCTION

This technical report summarizes the results of a traffic study conducted by Fehr & Peers to evaluate the potential traffic impacts of the proposed Harbor-UCLA Medical Center Project, which is proposed on the site of the existing Harbor-UCLA Medical Center in unincorporated Los Angeles County, California. The location of the project can be seen in Figure 1.

PROJECT DESCRIPTION

The proposed project is an update to the Harbor-UCLA Medical Center Master Plan in two phases. The first phase will be completed in the year 2023 (henceforth referred to as 2023 Project), and the second phase will be completed in the year 2030 (henceforth referred to as 2030 Project). The project includes both the redevelopment of existing land uses and the construction of new related land uses. The existing site serves as primary healthcare facility for County residents, a training center for medical students and a research facility with a partnership with Los Angeles Biomedical Research Institute (LA Biomed), which is also located on the site. The purpose of this project is to enhance the unique, and highly interactive, relationship between the clinical, educational, and research components of the Harbor-UCLA Medical Center Campus as well as to meet state requirements for seismic safety. The proposed campus site plan is shown in Figure 2 and includes the following changes to the site:

- Construction of a new Hospital Tower
- Consolidation and expansion of outpatient facilities into a sub-campus area
- Expanded space for LA Biomed and for an additional research and development tenant

As stated, the project will be completed in two phases. The 2023 Project will include the following net changes:

- Addition of 29,200 square feet (sf) of administrative office space
- Addition of 16,486 sf of new utility plant and maintenance facilities
- Addition of six staffed hospital beds
- Addition of 11,396 sf of medical office/outpatient facilities
- Addition of 125,000 sf of research & development space for Bioscience campus
- Addition of 17,746 sf of research & development space for LA Biomed

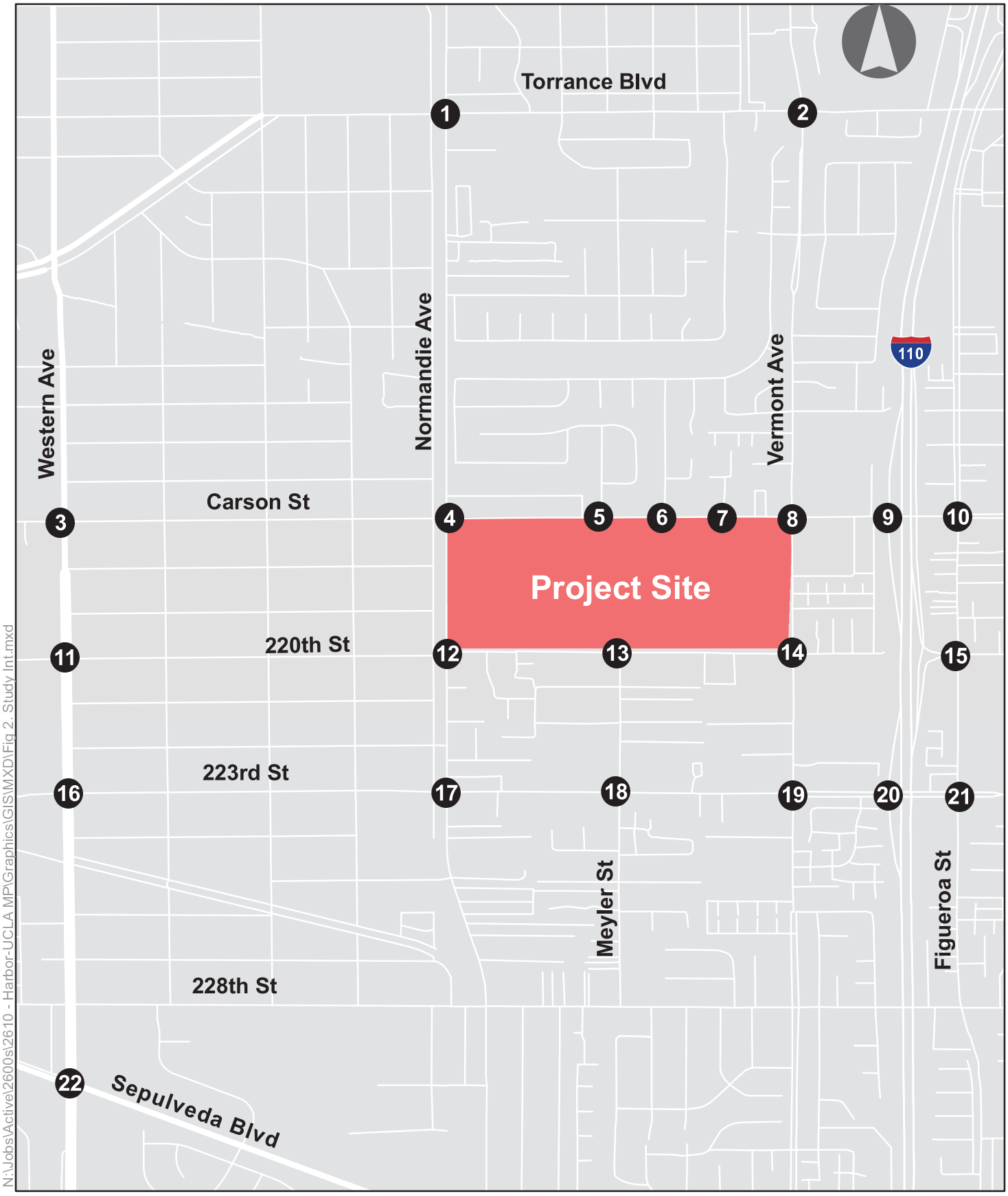


Figure 1

Project Site and Study Intersections



Figure 2

Harbor-UCLA Medical Center
Proposed Campus Site Plan

The full project buildout in 2030 will include the following net changes:

- Addition of 107,200 sf of administrative office space
- Addition of 16,486 sf of new utility plant and maintenance facilities
- Addition of six staffed hospital beds
- Addition of 85,294 sf of medical office/outpatient facilities
- Addition of 35,000 sf of wellness-oriented meeting space and retail space
- Addition of 250,000 sf of research & development space for Bioscience campus
- Addition of 130,246 sf of research & development space for LA Biomed

In addition, the project will provide additional open space and beautification of the campus. The campus will be realigned to engage Carson Street and the surrounding community by positioning services utilized by the community towards this major thoroughfare. Site access and internal circulation will be reconfigured, with patient and visitor access concentrated along Carson Street and Normandie Avenue and staff access provided off of 220th Street and Vermont Avenue. A new driveway will be located along Carson Street between Normandie Avenue and Budlong Avenue. The exact location of this driveway will be determined after consultation with Los Angeles County staff. The new proposed Bioscience campus will occupy 11 of the 70 acres on the project site.

STUDY SCOPE

This study evaluates the potential for project-related traffic impacts on the street system surrounding the project site. Peak hour traffic impacts for the project were evaluated for the peak hour during typical weekday morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak periods. The following traffic scenarios were analyzed in the study using Los Angeles County's methodology:

- Existing Conditions – The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes a description of the street system serving the site, current traffic volumes, and an assessment of the operating conditions at these locations.
- Existing plus 2023 Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of project-generated traffic from the 2023 Project. The impacts of the proposed project on existing traffic operating conditions were then identified.

- Existing plus 2030 Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of project-generated traffic from the 2030 Project scenario. The impacts of the proposed project on existing traffic operating conditions were then identified.

- Existing plus 2023 Project plus Cumulative Conditions –Traffic conditions were developed for 2023 by adding the project trips and cumulative trips near the site. The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from related projects in the vicinity of the project site and project generated trips by 2023.

- Existing plus 2030 Project plus Cumulative Conditions – Traffic conditions were developed for 2030 by adding the project trips and cumulative trips near the site. The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from related projects in the vicinity of the project site and project generated trips by 2030.

The following traffic scenarios were analyzed in the study using methodology from the Cities of Los Angeles, Carson and Torrance:

- Existing Conditions – The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes a description of the street system serving the site, current traffic volumes, and an assessment of the operating conditions at these locations.

- Existing plus 2023 Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of project-generated traffic from the 2023 Project. The impacts of the proposed project on existing traffic operating conditions were then identified.

- Existing plus 2030 Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of project-generated traffic from the 2030 Project scenario. The impacts of the proposed project on existing traffic operating conditions were then identified.

- Interim Conditions – Interim traffic conditions without the proposed project were developed for 2023. The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site by 2023.

- Cumulative Conditions – Future traffic conditions without the proposed project were developed for 2030. The objective of this analysis is to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site by 2030.

- Interim plus 2023 Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under interim conditions with the addition of project-generated traffic from partial completion. The impacts of the proposed project on interim traffic operating conditions were then identified.
- Cumulative plus Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under future conditions with the addition of project-generated traffic. The impacts of the proposed project on future traffic operating conditions were then identified.

Following extensive coordination with staff from Los Angeles County, Caltrans, City of Los Angeles, City of Carson and City of Torrance, 22 intersections were selected to be studied as part of the traffic impact analysis for the proposed project. All intersections are signal controlled, with the exception of Meyler Street & 220th Street, which is all-way stop-controlled:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
5. Budlong Avenue & Carson Street
6. Berendo Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound On-/Off-Ramps & Carson Street
10. Figueroa Street & Carson Street
11. Western Avenue & 220th Street
12. Normandie Avenue & 220th Street
13. Meyler Street & 220th Street
14. Vermont Avenue & 220th Street
15. Figueroa Street & 220th Street/I-110 Northbound On-/Off-Ramp
16. Western Avenue & 223rd Street
17. Normandie Avenue & 223rd Street
18. Meyler Street & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound On-/Off-Ramps & 223rd Street

21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Figure 1 shows the location of the project site and the 22 study intersections. Lane configurations of the study intersections can be seen in Appendix A.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this introduction. Chapter 2 describes the existing transportation conditions including an inventory of the streets, highways, and transit service in the study area, a summary of traffic volumes, and an assessment of operating conditions. The methodologies used to develop traffic forecasts for the scenarios described above and the forecasts themselves are included in Chapter 3. Chapter 4 presents an assessment of potential intersection traffic impacts of the proposed project under the scenarios described above. The results of the regional transportation system analysis are provided in Chapter 5. Chapter 6 contains the study conclusions. Appendices to this report include details of the technical analysis.

2. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions in the study area. The assessment of conditions relevant to this study includes a description of the study area, an inventory of the local street system in the vicinity of the project site, a review of traffic volumes on these facilities, an assessment of the resultant operating conditions, and the current transit service in the study area. A detailed description of these elements is presented in this chapter.

STUDY AREA

The proposed project is located at 1000 West Carson Street in the unincorporated community of West Carson, California. The study area includes intersections located in or bordering Los Angeles County, City of Los Angeles, City of Carson and City of Torrance. Carson Street, Vermont Avenue, Normandie Avenue and 220th Street currently provide access to the site via 11 driveways. In addition, a parking lot for staff is located on the southeast corner of Vermont Avenue & 220th Street, with access provided by four driveways on 220th Street. The study area for this analysis is bounded by Torrance Boulevard on the north, 223rd Street on the south, Figueroa Street on the east, and Western Avenue on the west.

EXISTING STREET SYSTEM

As indicated, Carson Street, Vermont Avenue, Normandie Avenue and 220th Street provide direct access to the site. Primary regional access to the site is provided by Carson Street, I-110, I-405 and State Route 91. Following is a brief description of the streets that serve the site.

Freeways

- San Diego Freeway (I-405) – The San Diego Freeway runs east/west approximately two miles north of the project site and southeast/northwest approximately two miles east of the project site. Access from the project site to the San Diego Freeway is provided by interchanges at Western Avenue, Normandie Avenue, Vermont Avenue (westbound vehicles only), Carson Street, and Wilmington Avenue.
- Harbor Freeway (I-110) – The Harbor Freeway runs north/south approximately ¼ mile east of the project site. Access from the project site to the Harbor Freeway is provided by via interchanges at Carson Street and 223rd Street for southbound vehicles and at 220th Street for northbound vehicles.

- Gardena Freeway/Artesia Freeway (State Route 91) – State Route 91 (SR 91) runs east/west approximately three miles north of the project site. East of the Harbor Freeway, SR 91 is known as the Gardena Freeway. West of the Harbor Freeway, SR 91 is known as the Artesia Freeway. Access from the project site to SR 91 is provided by the 110 Freeway and Vermont Avenue.

North/South Roadways

- Vermont Avenue – Vermont Avenue is designated as a Major Highway in the Los Angeles County General Plan that runs north/south on the east side of the project site and provides two travel lanes and a bicycle lane in each direction. The street also has a center turn lane. Parallel parking is available on both sides of the street. The posted speed limit is 40 miles per hour (mph).

- Normandie Avenue – Normandie Avenue is designated as a Secondary Highway in the Los Angeles County General Plan that runs north/south on the west side of the project site and provides two travel lanes in each direction. This roadway is part of the City of Los Angeles Bicycle Lane Network in the City of Los Angeles Mobility Plan. Restricted and unrestricted parking is available on both sides of the street. The posted speed limit is 35 mph. Within the study area, Normandie Avenue forms the boundary between the City of Los Angeles and the unincorporated community of West Carson.

- Western Avenue (State Route 213) – Western Avenue is designated as a Major Highway in the Los Angeles County General Plan that runs north/south to the west of the project site. The roadway provides two travel lanes in each direction and contains a raised median with intersection turn lanes on portions of the roadway. Western Avenue is part of the City of Los Angeles Mobility Plan's Bicycle Enhanced Network. Restricted and unrestricted parking is available on both sides of the street near the project site. The posted speed limit is 40 mph. Within the study area, Normandie Avenue forms the boundary between the City of Los Angeles and the City of Torrance.

- Figueroa Street – Figueroa Street is designated as a Major Highway in the City of Carson General Plan that runs north/south to the east of the project site. The roadway provides two travel lanes in each direction and contains a raised median with intersection turn lanes on portions of the roadway. Restricted and unrestricted parking is available on both sides of the street near the project site. The posted speed limit is 40 mph.

- Meyler Street – Meyler Street is a local street that runs north/south south of the project site. Unrestricted parking is available on both sides of the street near the project site.

- Berendo Avenue – Berendo Street is a local street that runs north/south north of the project site. Restricted and unrestricted parking is available on both sides of the street near the project site.

- Budlong Avenue – Budlong Street is a local street that runs north/south north of the project site. Restricted and unrestricted parking is available on both sides of the street near the project site.

East/West Roadways

- Carson Street – Carson Street is designated as a Major Highway in the Los Angeles County General Plan that runs east/west on the north side of the project site and provides two travel lanes in each direction. The portions of the roadway within the City of Los Angeles are part of the City of Los Angeles Bicycle Lane Network. Restricted and unrestricted parking is available on either side of the street on portions of the roadway. The posted speed limit is 35 mph.

- 220th Street – 220th Street is a local street that runs east/west on the south side of the project site and provides four vehicle travel lanes, two in each direction. This roadway is part of the County of Los Angeles proposed Bicycle Network. Restricted and unrestricted parking is available on either side of the street on portions of the roadway near the project site. The posted speed limit is 30 mph.

- 223rd Street – 223rd Street is designated as a Secondary Highway in the Los Angeles County General Plan that runs east/west to the south of the project site and provides two travel lanes in each direction. This roadway is part of the County of Los Angeles proposed Bicycle Network. The majority of parking is unrestricted on either side of the street. The posted speed limit is between 35 and 40 mph.

- Torrance Boulevard – Torrance Boulevard is designated as a Secondary Highway in the Los Angeles County General Plan that runs east/west north of the project site and provides two travel lanes in each direction. Parking is available on most blocks within the study area for passenger vehicles. Commercial vehicles are not allowed to park on the roadway. The posted speed limit is 35 mph.

- Sepulveda Boulevard – Sepulveda Boulevard is designated as a Major Highway in the Los Angeles County General Plan that runs east/west south of the project site and provides three travel lanes in each direction, with a raised median on portions of the roadway. Parking is not available on either side of the street. The posted speed limit is 40 mph.

EXISTING TRANSIT SERVICE

Eleven bus lines currently serve the study area. These transit lines are operated by Metro, Torrance Transit, Carson Circuit and Gardena Municipal Bus. Transit lines are described below and illustrated in Figure 3.

- Metro Line 205 – Line 205 is a north/south line that runs from the Willowbrook/Rosa Parks Station to San Pedro. The line has 30- to 35-minute headways during AM/PM peak hours and runs on Vermont Avenue within the study area, with stops every few blocks. Project site access is provided via stops at the intersections of Vermont Avenue & Carson Street and Vermont Avenue & 220th Street.

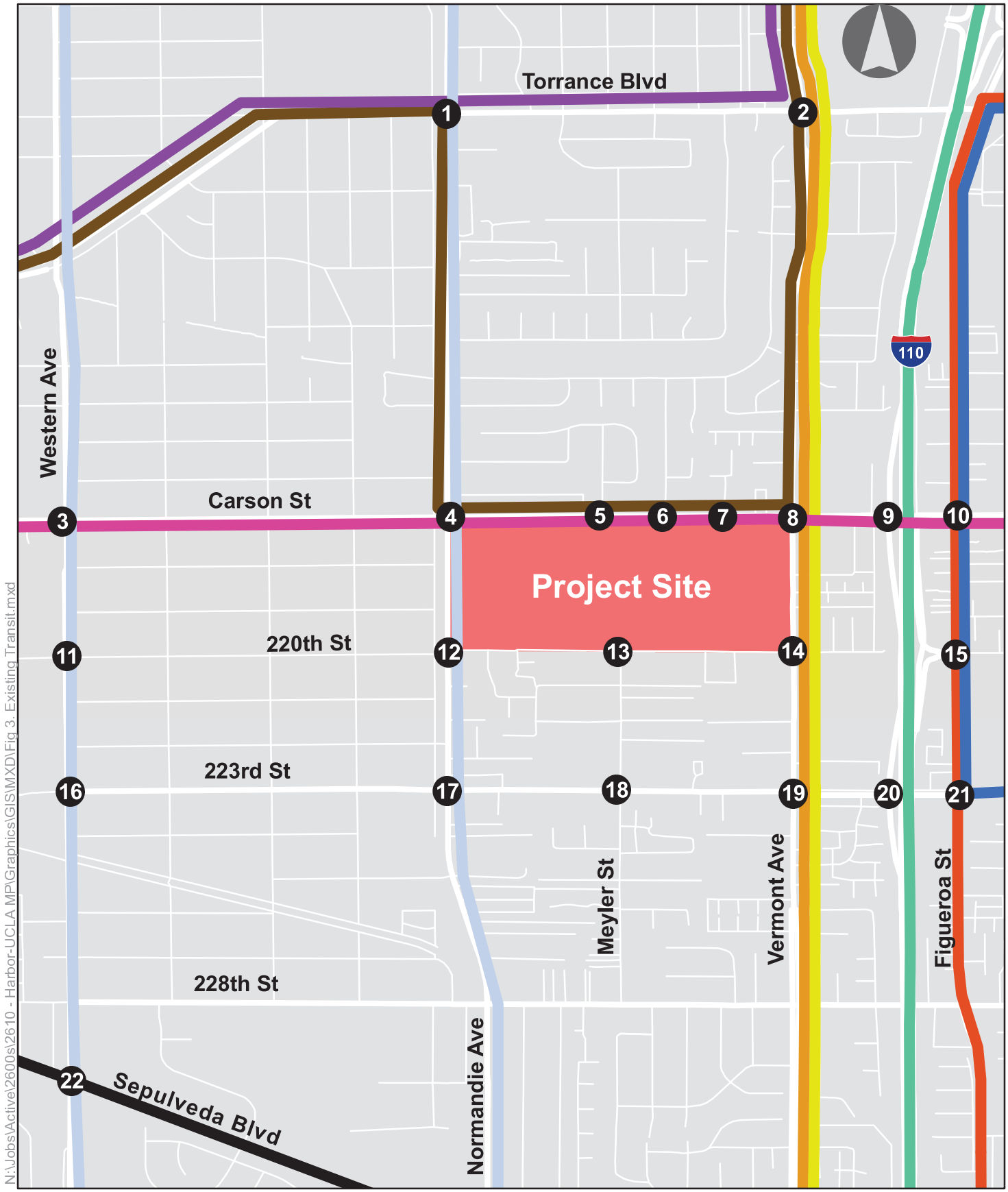


Figure 3
Existing Transit Lines

- Metro Line 950X – Line 950X is a north/south line that runs from downtown Los Angeles to San Pedro via the Harbor Freeway and provides limited service. The line has 12- to 30-minute headways during AM/PM peak periods and runs on the Harbor Freeway within the study area. Project site access is provided via a stop at Carson Street.

- Metro Line 550 – Line 550 is a north/south line that runs from the University of Southern California to San Pedro. The line has 30- to 35-minute headways during AM/PM peak hours and runs on Vermont Avenue within the study area, with stops at Torrance Boulevard and Carson Street. Project site access is provided via a stop at the intersection of Vermont Avenue & Carson Street.

- Carson Circuit Line F – Line F travels on a loop route that runs primarily along 223rd Street, Figueroa Street, 213th Street and Martin Street. The line has 40-minute headways during AM and PM peak periods and runs on 223rd Street and Figueroa Street within the study area, with stops at Figueroa Street & 223rd Street, Figueroa Street & 220th Street, Figueroa Street & Carson Street, Carson Town Center, and Figueroa Street & Torrance Boulevard.

- Carson North/South Shuttle Line S – Line S is a north/south line that runs from Wilmington to the Harbor Gateway Transit Center and provides morning and afternoon peak period service only. The line has 50-minute headways and runs on Figueroa Street within the study area, with stops at Figueroa Street & 223rd Street, Figueroa Street & 220th Street, Figueroa Street & Carson Street, Carson Town Center, and Figueroa Street & Torrance Boulevard.

- Torrance Transit Line 1 – Line 1 runs from Del Amo Fashion Center to the Harbor Gateway Center. The line runs east/west along Torrance Boulevard, north/south along Normandie Avenue and Vermont Avenue and east/west along Carson Street within the study area, with stops at every few blocks. The project site is served by two stops along Carson Street with 40- to 45-minute headways during the AM and PM peak periods.

- Torrance Transit Line 3 – Line 3 is an east/west line that runs from the Redondo Beach Pier to downtown Long Beach. The line runs along Carson Street within the study area with 20- to 25-minute headways during the AM and PM peak periods and stops at every few of blocks.

- Torrance Transit Line Rapid 3 – Line Rapid 3 is an east/west line that runs from the South Bay Galleria to downtown Long Beach and travels much of the same route as Line 3 adding frequent service to the study area between 6:30 and 8:30 AM and between 2:30 and 6:00 PM. The line runs along Carson Street within the study area and provides service with headways between 10 and 20 minutes during the AM and PM peak periods. Stops are provided at Carson Street & Western Avenue, Carson Street & Normandie Avenue, and Carson Street & Vermont Avenue within the study area.

- Torrance Transit Line 4 – Line 4 is a north/south express line that runs from the intersection of Hawthorne Boulevard and the Pacific Coast Highway to downtown Los Angeles. The line travels east/west on Torrance Boulevard and north/south on Vermont Boulevard within the study area with stops located at Torrance Boulevard & Western Avenue, Torrance Boulevard & Normandie

Avenue, and Torrance Boulevard & Vermont Avenue. The line operates between 5:30 and 8:50 AM and between 3:30 and 7:00 PM with 40-minute headways.

- Torrance Transit Line 7 – Line 7 is an east/west line that runs from the intersection of Catalina Street & Torrance Boulevard to the intersection of Sepulveda Boulevard & Avalon Boulevard. The line runs along Sepulveda Boulevard within the study area with 60-minute AM and PM peak period headways and provides a stop at Western Avenue & Sepulveda Boulevard.
- Gardena Municipal Bus Lines 2 – Line 2 is a north/south line that runs from the Metro Green Line Vermont Station to the intersection of the Pacific Coast Highway & Normandie Avenue. The line runs along Western Avenue and Normandie Avenue within the study area and provides stops every few blocks. The line provides service with headways of 15 minutes during AM and PM peak periods.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Currently, there is limited dedicated bicycle infrastructure in the study area. East of the site, bicycle lanes (Class II facilities) extend north/south on Vermont Avenue from 223rd Street through the northern edge of the study area. An east/west Class II facility exists on Carson Street between Normandie Avenue and Western Avenue. The City of Los Angeles Mobility Plan[1] includes a proposed protected bicycle lane on Western Avenue within the study area. The Los Angeles County Bicycle Master Plan[2] includes a proposed Class II bicycle lane on 223rd Street between Normandie Avenue and the Harbor Freeway and a Class III bicycle route on 220th Street between Normandie Avenue and Vermont Avenue. The City of Carson Master Plan of Bikeways includes proposed buffered bicycle lanes on Figueroa Street south of 223rd Street and bicycle lanes north of 223rd Street within the study area. The plan also calls for buffered bike lanes on 223rd Street, sharrows on Carson Street and bicycle lanes on 220th Street in the City of Carson portion of the study area. Existing and planned bicycle facilities are illustrated in Figure 4.

Pedestrian traffic typically enters the campus from one of the parking structures, parking lots or from the nearby transit stops. The medical center is located in an established neighborhood with a moderate population density. All of the streets immediately bordering the medical center and nearly all of the other streets in the vicinity include sidewalks, facilitating pedestrian movement. Marked crosswalks are present at most intersections in the study area. Pedestrian walk phases are either automatically provided at the intersections or are actuated by pedestrian push-buttons.

[1] City of Los Angeles Mobility Plan: https://la2b.org/documents/
[2] Los Angeles County Bicycle Master Plan: https://dpw.lacounty.gov/pdd/bike/masterplan.cfm

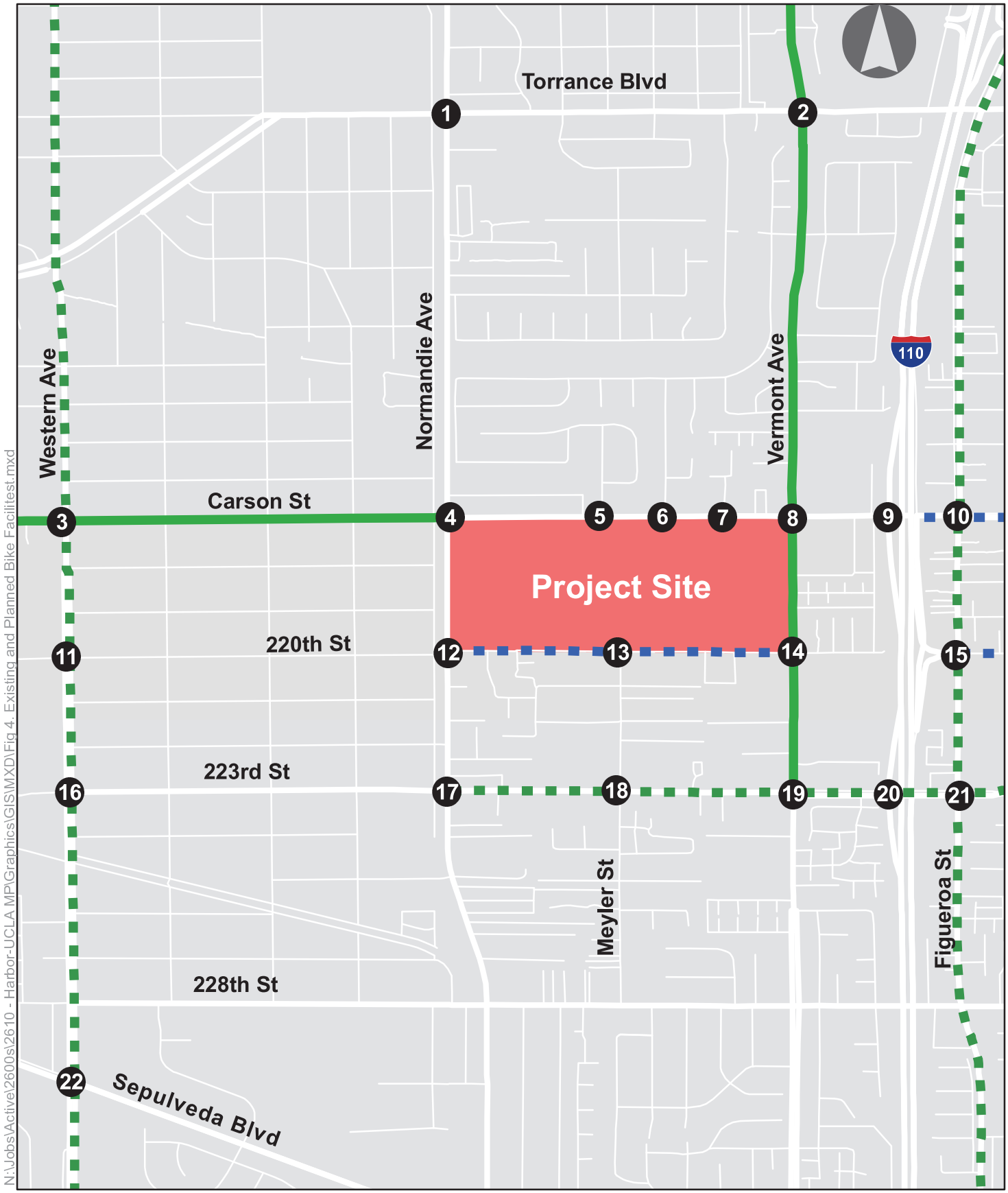


Figure 4

Existing and Planned Bicycle Facilities

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

This section presents the existing peak hour turning movement traffic volumes for each of the intersections analyzed in the study, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each, indicating volume/capacity ratios and levels of service. Traffic counts are provided in Appendix B.

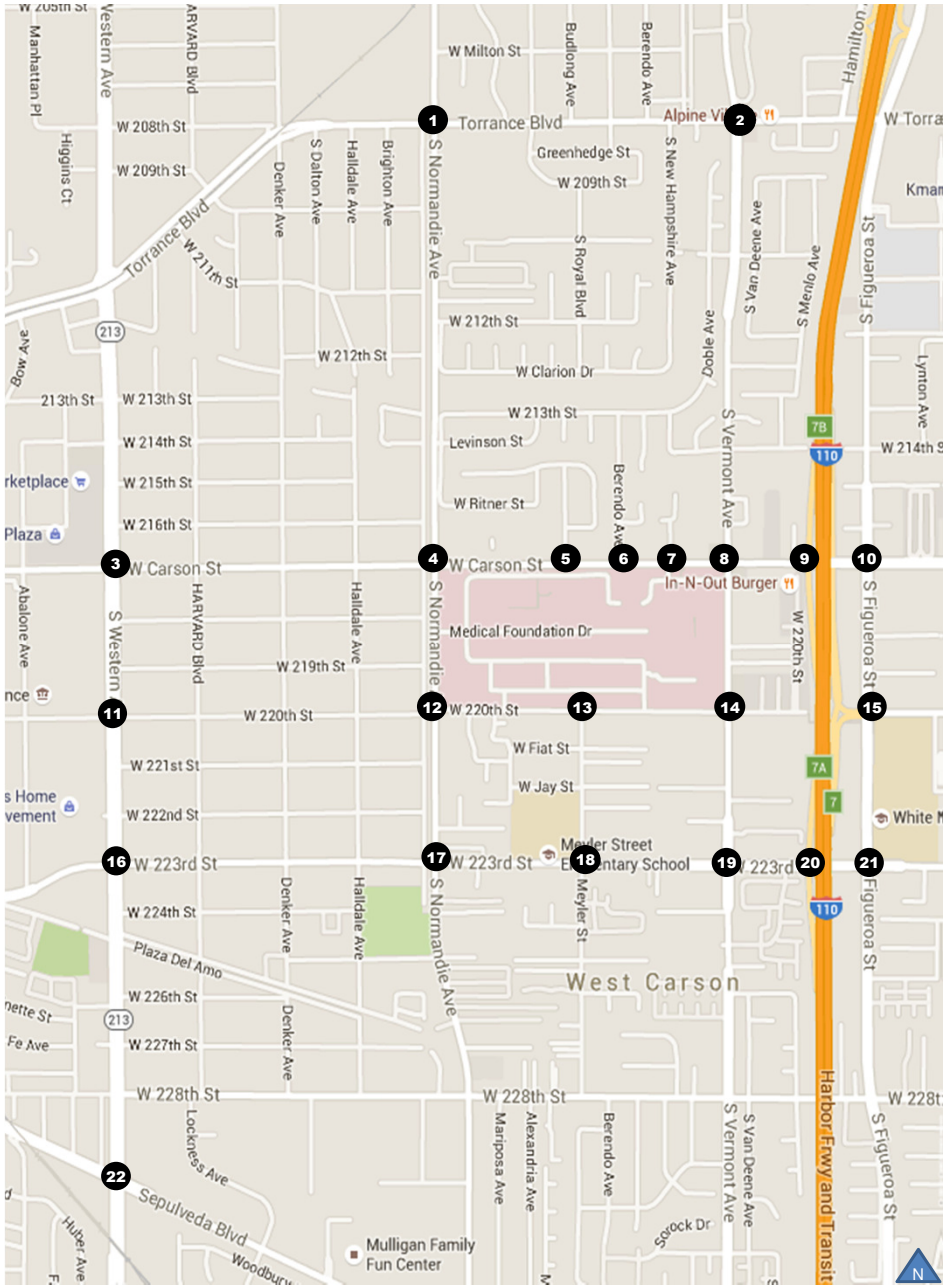
EXISTING TRAFFIC VOLUMES

Weekday morning and evening peak hour traffic counts were conducted at the 22 analyzed intersections in October 2014, May 2015, November 2015 and December 2015. Existing peak hour weekday traffic volumes are illustrated in Figure 5.

LEVEL OF SERVICE METHODOLOGY

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum desirable level of service in urban areas. Levels of service definitions are provided in Table 1.

Per the requirements of Los Angeles County, City of Torrance and City of Carson, Intersection Capacity Utilization (ICU) methodology was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding LOS for the 21 signalized study intersections wholly or partly in these jurisdictions. The ICU method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. "Capacity" represents the maximum volume of vehicles in the critical lanes that have a reasonable expectation of passing through an intersection in one hour under prevailing roadway and traffic conditions. The ICU ratios used in this study were calculated by dividing critical traffic movement volumes at an intersection by the capacity per number of lanes for the movement.



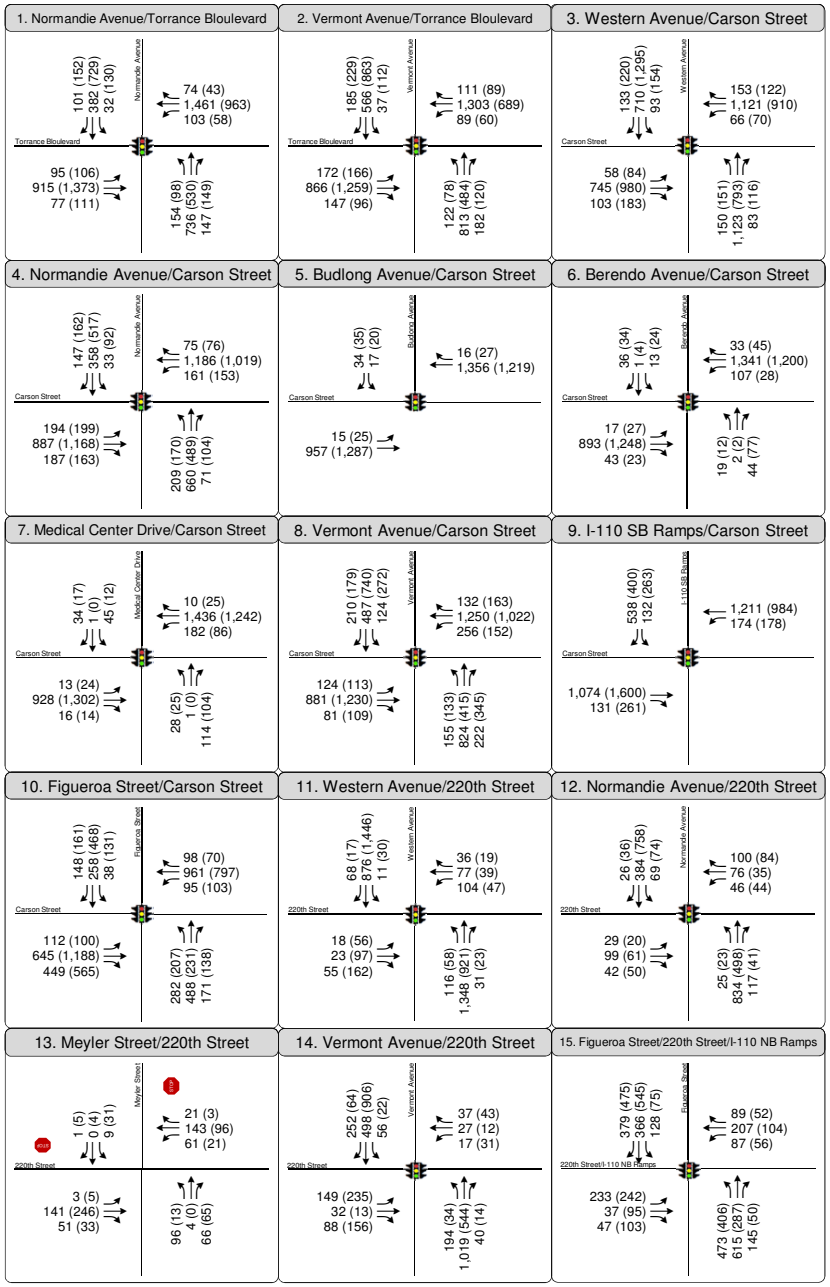
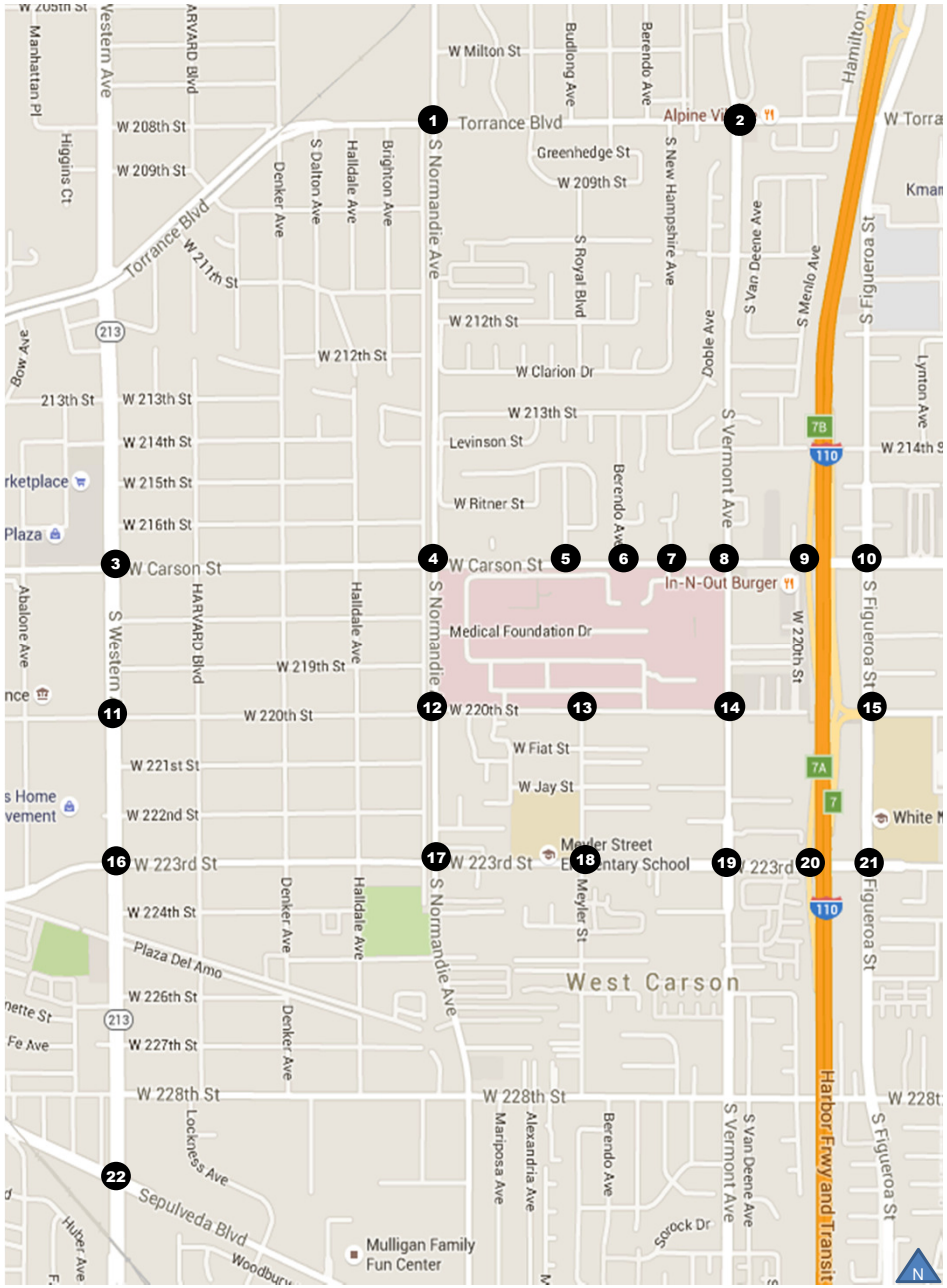


Figure 5
Existing Peak Hour Traffic Volumes



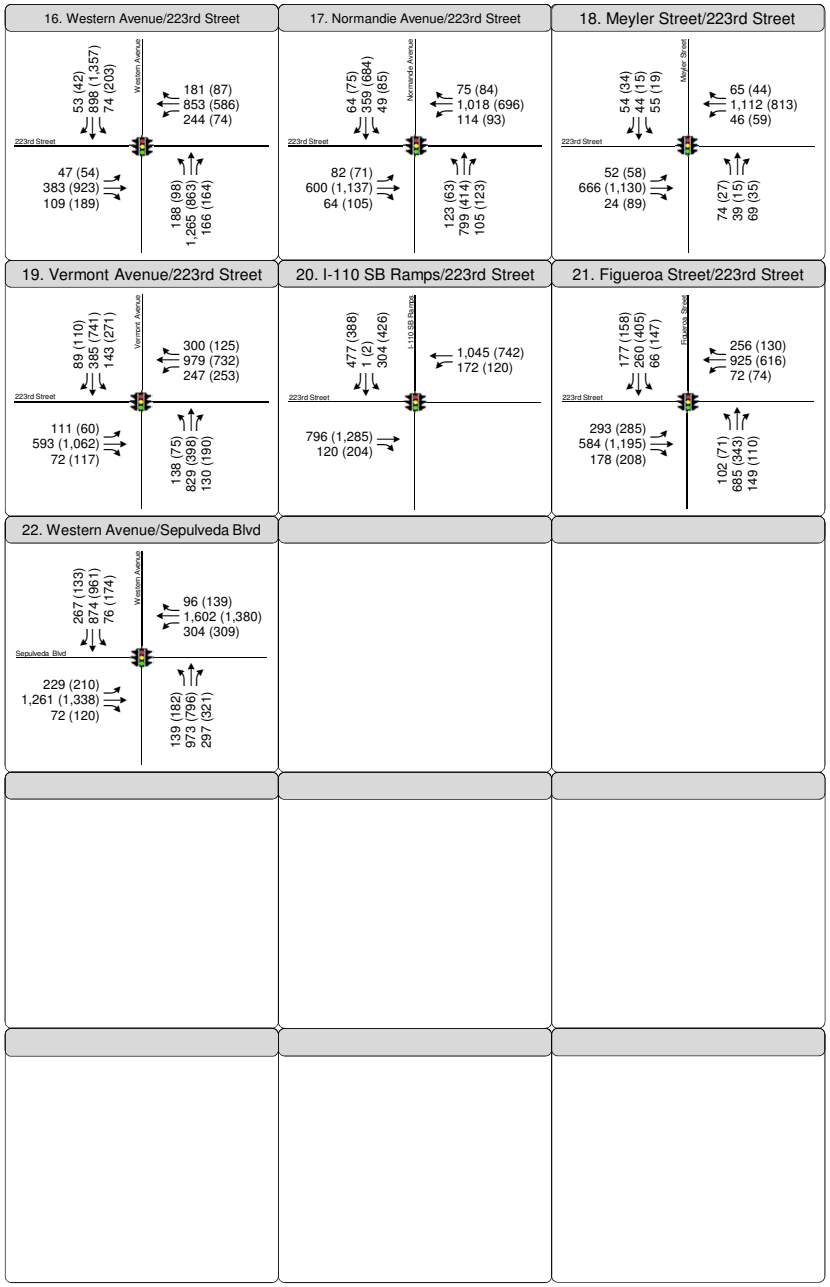


Figure 5
Existing Peak Hour Traffic Volumes

TABLE 1
LEVEL OF SERVICE DEFINITIONS
FOR SIGNALIZED INTERSECTIONS

Level of Service	Intersection Capacity Utilization	Definition
A	0.000-0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901-1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

The one unsignalized study intersection, Meyler Street & 220th Street, is located in unincorporated Los Angeles County. The County's *Impact Analysis Report Guidelines*[3] do not specify a specific methodology or thresholds of significance when analyzing unsignalized intersections. Consistent with County practices, this intersections will be evaluated as if it were signalized, using the ICU methodology. The County of Los Angeles thresholds of significance for a signalized intersection will be applied.

The City of Los Angeles requires the use of Critical Movement Analysis (CMA) methodology[4] to evaluate the operations of intersections and this methodology was used to analyze the study locations in the City of Los Angeles. The CMA method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. The CALCADB software package developed by Los Angeles Department of Transportation (LADOT) was used to implement the CMA methodology at the eight study intersections wholly or partly under City of Los Angeles jurisdiction.

The City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system is a computer-based traffic signal control system that monitors traffic conditions and system performance to allow ATSAC-operations to manage signal timing to improve traffic flow conditions. All eight signalized study intersections under City of Los Angeles jurisdiction are currently operating under the City's ATSAC system. In accordance with established City of Los Angeles procedures, a 0.07 V/C reduction was applied at each intersection where ATSAC is implemented. Per direction from LADOT, the benefits of the Adaptive Traffic Control System (ATCS) in place at these intersections (normally estimated at 0.03 V/C) are not reflected in this analysis due to the limited area of the City's system.

EXISTING LEVELS OF SERVICE

The existing traffic volumes were analyzed using the methodologies described above to determine the current operating conditions at the 22 LOS analyzed intersections. Table 2 summarizes the Existing LOS analysis results. As shown in the table, the following nine intersections are currently operating at poor levels of service, i.e., LOS E or F, during one or both of the analyzed peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard

[3] *Impact Analysis Report Guidelines* (Los Angeles County Public Works, January 1997).
[4] *Transportation Research Circular No. 212, Interim Materials on Highway Capacity* (Transportation Research Board, 1980).

TABLE 2
EXISTING
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing	
						V/C or Delay	LOS
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.902	E
					PM	0.904	E
			Los Angeles County	ICU	AM	0.935	E
					PM	0.936	E
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E
					PM	0.880	D
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	0.877	D
					PM	0.948	E
			City of Torrance	ICU	AM	0.943	E
					PM	1.006	F
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C
					PM	0.837	D
			Los Angeles County	ICU	AM	0.904	E
					PM	0.930	E
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A
					PM	0.539	A
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A
					PM	0.561	A
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.632	B
					PM	0.602	B
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E
					PM	0.893	D
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D
					PM	0.849	D
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.661	B
					PM	0.762	C
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.554	A
					PM	0.698	B
			City of Torrance	ICU	AM	0.685	B
					PM	0.819	D
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.409	A
					PM	0.293	A
			Los Angeles County	ICU	AM	0.602	B
					PM	0.481	A
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.382	A
					PM	0.365	A
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.656	B
					PM	0.714	C
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E
					PM	0.886	D
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.822	D
					PM	0.851	D
			City of Torrance	ICU	AM	0.893	D
					PM	0.919	E
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.623	B
					PM	0.701	C
			Los Angeles County	ICU	AM	0.807	D
					PM	0.822	D
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.658	B
					PM	0.581	A
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E
					PM	0.833	D
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C
					PM	0.843	D
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.827	D
					PM	0.718	C
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E
					PM	0.990	E
			City of Torrance	ICU	AM	0.957	E
					PM	1.011	F

Note:

[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.

3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Detailed LOS calculation worksheets are presented in Appendix C.

3. TRAFFIC PROJECTIONS

PROJECT TRAFFIC

The development of trip generation estimates for the proposed project is a 3-step process: trip generation, trip distribution, and traffic assignment.

PROJECT TRAFFIC GENERATION

As indicated in Chapter 1, the 2023 Project phase of the proposed project would involve the net new construction of:

- Addition of 29,200 sf of administrative office space
- Addition of 16,486 sf of new utility plant and maintenance facilities
- Addition of six staffed hospital beds
- Addition of 11,396 sf of medical office/outpatient facilities
- Addition of 125,000 sf of research & development space for Bioscience campus
- Addition of 17,746 sf of research & development space for LA Biomed

The 2030 Project phase of the proposed project would include the following net new construction:

- Addition of 107,200 sf of administrative office space
- Addition of 16,486 sf of new utility plant and maintenance facilities
- Addition of six staffed hospital beds
- Addition of 85,294 sf of medical office/outpatient facilities
- Addition of 35,000 sf of wellness-oriented meeting space and retail space
- Addition of 250,000 sf of research & development space for Bioscience campus
- Addition of 130,246 sf of research & development space for LA Biomed

Vehicle trip generation for the project was estimated using a combination of: standard rates developed by the ITE and published in *Trip Generation, 9th Edition*[5] and trip generation reduction rates for similar sites. For the Hospital's inpatient facilities (ITE Code 610), the analysis used the number of beds to estimate trip generation. The proposed new hospital tower will provide more spacious facilities consistent with current best practices, meaning that the new facility will require more floor area per bed.

As this site is located adjacent to transit, mixed uses, and falls within the Los Angeles County West Carson Transit Oriented District Specific Plan area, its trip generation pattern is likely to deviate from the data collection sites where rates from ITE were drawn. Internal trip credits, defined as a reduction that can be applied to the trip generation estimates due to trips made within the site between land uses, are also applied at a rate of 20% of the daily and peak hour trips to all land uses on the site. Many of the buildings and activities on the Harbor-UCLA Medical Center campus are related to one another, and this will continue as the site continues to add complementary uses. The internal trip credits were estimated based on the recommended factors provided in *Trip Generation, 9th Edition*; review of traffic studies for projects located in the region; and consultation with county staff as part of the Memorandum of Understanding (MOU) process.

A 7% transit credit and a 2% walk credit were applied to the all land uses on the site. These credits account for trips to and from the project site using modes other than automobiles. These include trips on transit, bicycle, walk, etc. The site is located within walking distance to the several Metro and municipal bus lines including two express lines, and is in close proximity to a wide diversity of land uses within reasonable walking distance.

Table 3A estimates the trip generation for the 2023 Project scenario and Table 3B estimates the trip generation for 2030 Project scenario. In the 2023 Project scenario, the project is estimated to generate a net increase of 1,620 daily trips, including 200 trips (166 inbound/34 outbound) during the AM peak hour and 197 trips (33 inbound/164 outbound) during the PM peak hour. For the 2030 Project scenario, the project is estimated to generate a net increase of 6,598 daily trips, including 637 trips (523 inbound/114 outbound) during the AM peak hour and 732 trips (169 inbound/563 outbound) during the PM peak hour.

[5] *Trip Generation, 9th Edition* (Institute of Transportation Engineers [ITE], 2012).

TABLE 3A - 2023 PROJECT SCENARIO
PROJECT TRIP GENERATION ESTIMATES

	Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b]						Estimated Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	Rate	% In	% Out	Rate	% In	% Out	Trips	In	Out	Total	In	Out	Total
Existing	**EXISTING USE**																
	Administrative Office	710	23.435 ksf	[c]	[c]	88%	12%	[c]	17%	83%	436	53	7	60	18	87	105
	Central Utilities/Industrial [d]	120	112.719 ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	169	50	7	57	9	68	77
	Hospital/Inpatient	610	373 Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,827	354	138	492	175	355	530
	Library	590	22.500 ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	327.304 ksf	36.13	2.39	79%	21%	3.57	28%	72%	11,825	618	164	782	327	841	1,168
	Warehouse/Storage	150	45.402 ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	LA BioMed	760	94.754 ksf	[e]	[e]	83%	17%	[e]	15%	85%	961	103	21	124	19	107	126
	Project Site Subtotal										**19,644**	**1,206**	**347**	**1,553**	**630**	**1,554**	**2,184**
	Internal Capture [f]										*-3,737*	*-221*	*-65*	*-286*	*-122*	*-290*	*-412*
	Transit Credit [g]										*-1,375*	*-84*	*-25*	*-109*	*-44*	*-109*	*-153*
	Walk/Bike Credit [h]										*-393*	*-24*	*-7*	*-31*	*-13*	*-31*	*-44*
	Total Existing Trips										**14,139**	**877**	**250**	**1,127**	**451**	**1,124**	**1,575**
Proposed	**PROPOSED PROJECT**																
	Administrative Office	710	52.635 ksf	[c]	[c]	88%	12%	[c]	17%	83%	806	101	14	115	23	114	137
	Central Utilities/Industrial [d]	120	129.205 ksf	*1.5*	0.51	88%	12%	0.68	12%	88%	194	58	8	66	10	78	88
	Hospital/Inpatient	610	379 Beds	*12.94*	1.32	72%	28%	1.42	33%	67%	4,904	360	140	500	177	361	538
	Library	590	22.500 ksf	*56.24*	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	338.700 ksf	36.13	2.39	79%	21%	3.57	28%	72%	12,237	639	170	809	338	871	1,209
	Warehouse/Storage	150	45.402 ksf	*3.56*	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	BioSciences	760	125.000 ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,209	131	27	158	24	135	159
	LA BioMed	760	112.500 ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,108	120	24	144	21	124	145
	Project Site Subtotal										**21,885**	**1,436**	**393**	**1,829**	**677**	**1,779**	**2,456**
	Internal Capture [f]										-4,155	-263	*-74*	-337	-131	*-331*	-462
	Transit Credit [g]										*-1,532*	*-101*	*-27*	*-128*	*-47*	*-125*	*-172*
	Walk/Bike Credit [h]										*-438*	*-29*	*-8*	-37	*-14*	*-35*	-49
	Total Proposed Trips										**15,760**	**1,043**	**284**	**1,327**	**485**	**1,288**	**1,773**
Net Change	**Total Net Trips**										**1,620**	**166**	**34**	**200**	**33**	**164**	**197**

a. Size in thousand square feet (ksf) unless otherwise noted.
b. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 9th Edition* , 2012.
c. ITE administrative office trip generation equations used rather than linear trip generation rate:
   Daily: Ln(T) = 0.76 * Ln(A) + 3.68, where T = trips, A = area in ksf
   AM Peak Hour: Ln(T) = 0.8 * Ln(A) + 1.57, where T = trips, A = area in ksf
   PM Peak Hour: T = 1.12 * Ln(A) + 78.45, where T = trips, A = area in ksf
d. Peak hour direction distribution not provided by ITE for code 120. Directional distribution taken from ITE code 110, General Light Industrial.
e. ITE research and development trip generation equations used rather than linear trip generation rate:
   Daily: Ln(T) = 0.83 * Ln(A) + 3.09, where T = trips, A = area in ksf
   AM Peak Hour: Ln(T) = 0.87 * Ln(A) + 0.86, where T = trips, A = area in ksf
   PM Peak Hour: Ln(T) = 0.83 * Ln(A) + 1.06, where T = trips, A = area in ksf
f. Internal capture represents the percentage of trips between land uses that occur within the site. Internal capture was used for all land uses within the site with the exception of LA BioMed. This percentage (20%) is informed by MXD 2.0 Mixed Use Trip Generation Methodology, which incorporated the findings of NCHRP Project 8-51 as described in "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010. Internal capture is taken for all land uses except LA Biomed.
g. Transit credit of 7% informed by MXD 2.0 Mixed Use Trip Generation Methodology.
h. Walk/Bike credit of 2% informed by MXD 2.0 Mixed Use Trip Generation Methodology.

TABLE 3B - 2030 PROJECT SCENARIO
PROJECT TRIP GENERATION ESTIMATES

	Land Use	ITE Land Use Code	Size [a]	Trip Generation Rates [b]							Estimated Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	Rate	% In	% Out	Rate	% In	% Out	Trips	In	Out	Total	In	Out	Total
Existing	**EXISTING USE**																
	Administrative Office	710	23.435 ksf	[c]	[c]	88%	12%	[c]	17%	83%	436	53	7	60	18	87	105
	Central Utilities/Industrial [d]	120	112.719 ksf	1.5	0.51	88%	12%	0.68	12%	88%	169	50	7	57	9	68	77
	Hospital/Inpatient	610	373 Beds	12.94	1.32	72%	28%	1.42	33%	67%	4,827	354	138	492	175	355	530
	Library	590	22.500 ksf	56.24	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	327.304 ksf	36.13	2.39	79%	21%	3.57	28%	72%	11,825	618	164	782	327	841	1,168
	Warehouse/Storage	150	45.402 ksf	3.56	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	LA BioMed	760	94.754 ksf	[e]	[e]	83%	17%	[e]	15%	85%	961	103	21	124	19	107	126
	Project Site Subtotal		**701.114**								**19,644**	**1,206**	**347**	**1,553**	**630**	**1,554**	**2,184**
	Internal Capture [f]										*-3,737*	*-221*	*-65*	*-286*	*-122*	*-290*	*-412*
	Transit Credit [g]										*-1,375*	*-84*	*-25*	*-109*	*-44*	*-109*	*-153*
	Walk/Bike Credit [h]										*-393*	*-24*	*-7*	*-31*	*-13*	*-31*	*-44*
	Total Existing Trips										**14,139**	**877**	**250**	**1,127**	**451**	**1,124**	**1,575**
Proposed	**PROPOSED PROJECT**																
	Administrative Office	710	130.635 ksf	[c]	[c]	88%	12%	[c]	17%	83%	1,608	209	28	237	38	187	225
	Central Utilities/Industrial [d]	120	129.205 ksf	1.5	0.51	88%	12%	0.68	12%	88%	194	58	8	66	10	78	88
	Hospital/Inpatient	610	379 Beds	12.94	1.32	72%	28%	1.42	33%	67%	4,904	360	140	500	177	361	538
	Library	590	22.500 ksf	56.24	1.04	71%	29%	7.3	48%	52%	1,265	16	7	23	79	85	164
	Medical Office/Outpatient	720	412.598 ksf	36.13	2.39	79%	21%	3.57	28%	72%	14,907	779	207	986	412	1,061	1,473
	Warehouse/Storage	150	45.402 ksf	3.56	0.3	79%	21%	0.32	25%	75%	162	11	3	14	4	11	15
	Retail	820	35.000 ksf	42.7	0.96	62%	38%	3.71	48%	52%	1,495	21	13	34	62	68	130
	BioSciences	760	250.000 ksf	[e]	[e]	83%	17%	[e]	15%	85%	2,149	239	49	288	42	240	282
	LA BioMed	760	225.000 ksf	[e]	[e]	83%	17%	[e]	15%	85%	1,969	218	45	263	39	220	259
	Project Site Subtotal		**850.340**								**28,654**	**1,911**	**500**	**2,411**	**862**	**2,311**	**3,173**
	Internal Capture [f]		130.246								-5,337	-339	*-91*	-430	-165	*-418*	-583
	Transit Credit [g]										*-2,006*	*-134*	*-35*	*-169*	*-60*	*-161*	*-221*
	Walk/Bike Credit [h]										*-573*	*-38*	*-10*	-48	*-17*	*-45*	-62
	Total Proposed Trips										**20,738**	**1,400**	**364**	**1,764**	**620**	**1,687**	**2,307**
Net Change	**Total Net Trips**										**6,598**	**523**	**114**	**637**	**169**	**563**	**732**

Note:

a. Size in thousand square feet (ksf) unless otherwise noted.

b. Source: Institute of Transportation Engineers (ITE), *Trip Generation, 9th Edition* , 2012.

c. ITE administrative office trip generation equations used rather than linear trip generation rate:
   Daily: Ln(T) = 0.76 * Ln(A) + 3.68, where T = trips, A = area in ksf
   AM Peak Hour: Ln(T) = 0.8 * Ln(A) + 1.57, where T = trips, A = area in ksf
   PM Peak Hour: T = 1.12 * Ln(A) + 78.45, where T = trips, A = area in ksf

d. Peak hour direction distribution not provided by ITE for code 120. Directional distribution taken from ITE code 110, General Light Industrial.

e. ITE research and development trip generation equations used rather than linear trip generation rate:
   Daily: Ln(T) = 0.83 * Ln(A) + 3.09, where T = trips, A = area in ksf
   AM Peak Hour: Ln(T) = 0.87 * Ln(A) + 0.86, where T = trips, A = area in ksf
   PM Peak Hour: Ln(T) = 0.83 * Ln(A) + 1.06, where T = trips, A = area in ksf

f. Internal capture represents the percentage of trips between land uses that occur within the site. Internal capture was used for all land uses within the site with the exception of LA BioMed.. This percentage (20%) is informed by MXD 2.0 Mixed Use Trip Generation Methodology, which incorporated the findings of NCHRP Project 8-51 as described in "Improved Estimation for Internal Trip Capture for Mixed-use Developments," ITE Journal, August 2010. Internal capture is taken for all land uses except LA Biomed.

g. Transit credit of 7% informed by MXD 2.0 Mixed Use Trip Generation Methodology.

h. Walk/Bike credit of 2% informed by MXD 2.0 Mixed Use Trip Generation Methodology.

PROJECT TRAFFIC DISTRIBUTION

The geographic distribution of the traffic generated by the proposed project depends on several factors. These factors include the type and density of the proposed land uses, the geographic distribution from which patients and staff are drawn, and the location of the project in relation to the surrounding street system. The general distribution pattern used in this traffic study was developed in consultation with county staff and is illustrated in Figure 6. Aggregated data on existing staff home zip codes and patient home zip codes was used to determine existing origins for trips coming to and leaving from the project.

PROJECT TRAFFIC ASSIGNMENT

The traffic expected to be generated by the proposed project was assigned to the street network using the distribution pattern described in Figure 6. Project traffic was assigned based on the vehicle access and circulation diagram from the Harbor-UCLA Master Plan, as seen in Figure 7. Figure 8 illustrates the assignment of project traffic for the 2023 Project scenario at each of the 22 intersections analyzed in this study, and Figure 9 illustrates the assignment of 2030 Project scenario project traffic.

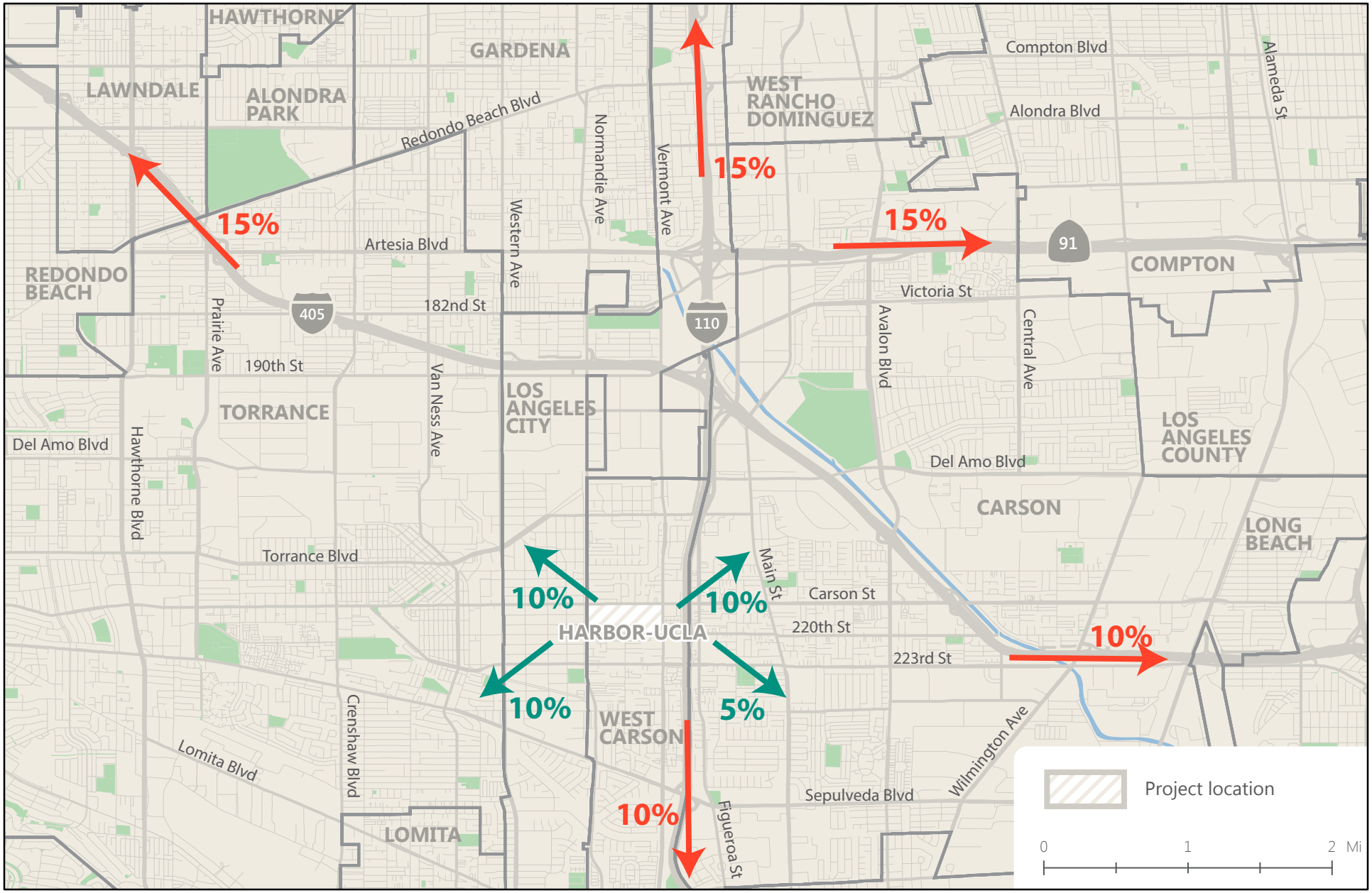
EXISTING BASELINE PLUS PROJECT TRAFFIC PROJECTIONS

The estimated project traffic was added to the Existing traffic volumes to estimate Existing plus Project traffic volumes. Existing plus 2023 Project traffic volumes, presented in Figure 10, were analyzed to determine the projected V/C ratios and LOS for each intersection. Table 4 summarizes the Existing plus 2023 Project LOS. The following 10 intersections are projected to operate at LOS E or F during one or both peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

Additionally, Existing plus 2030 Project traffic volumes, presented in Figure 11, were analyzed to determine the projected V/C ratios and LOS for each intersection. Table 5 summarizes the Existing plus 2030 Project LOS. The following 10 intersections are projected to operate at LOS E or F during one or both peak hours:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

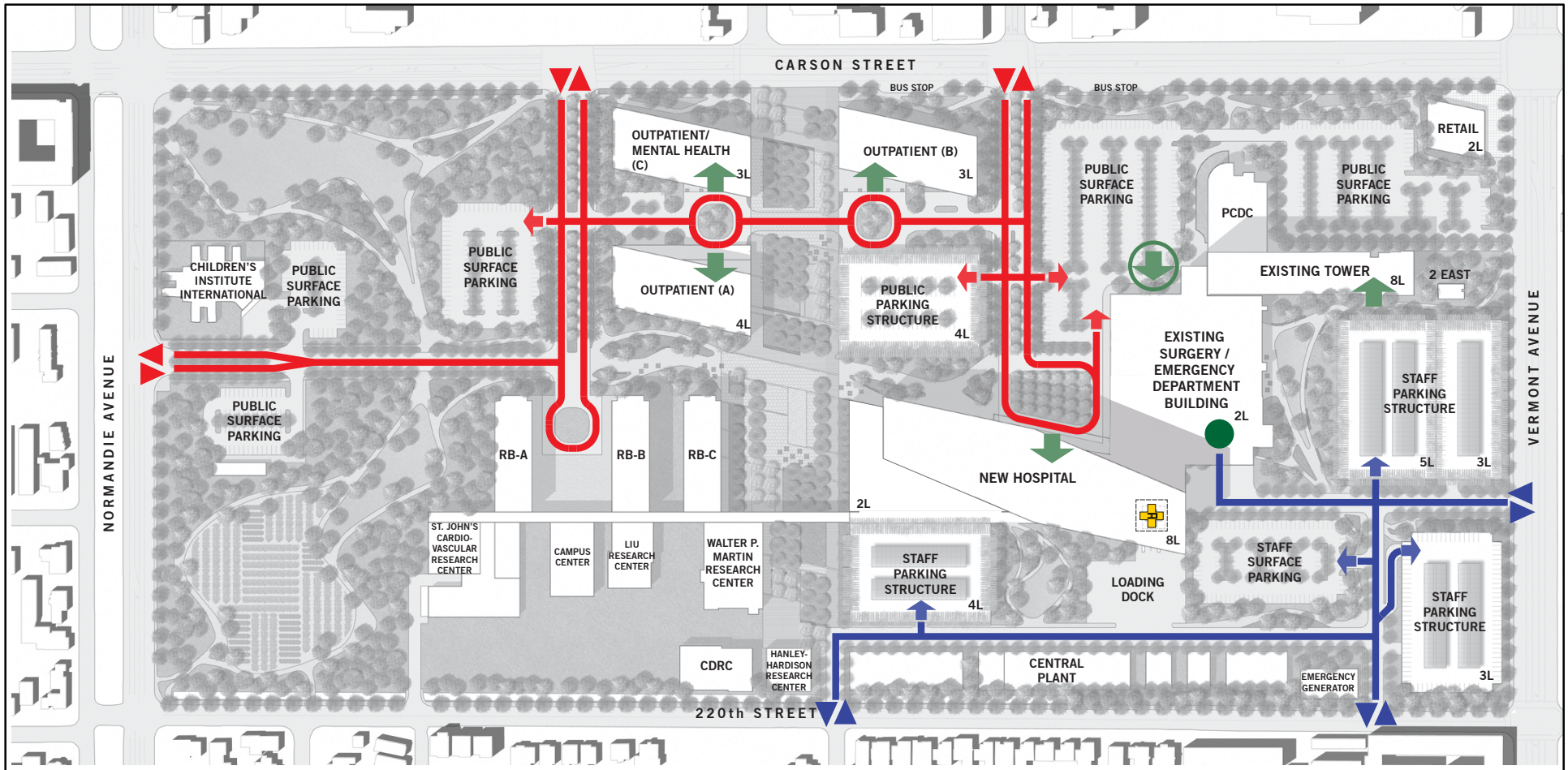


10% Freeway Distribution

10% Surface Street Distribution

Figure 6

Project Trip Distribution



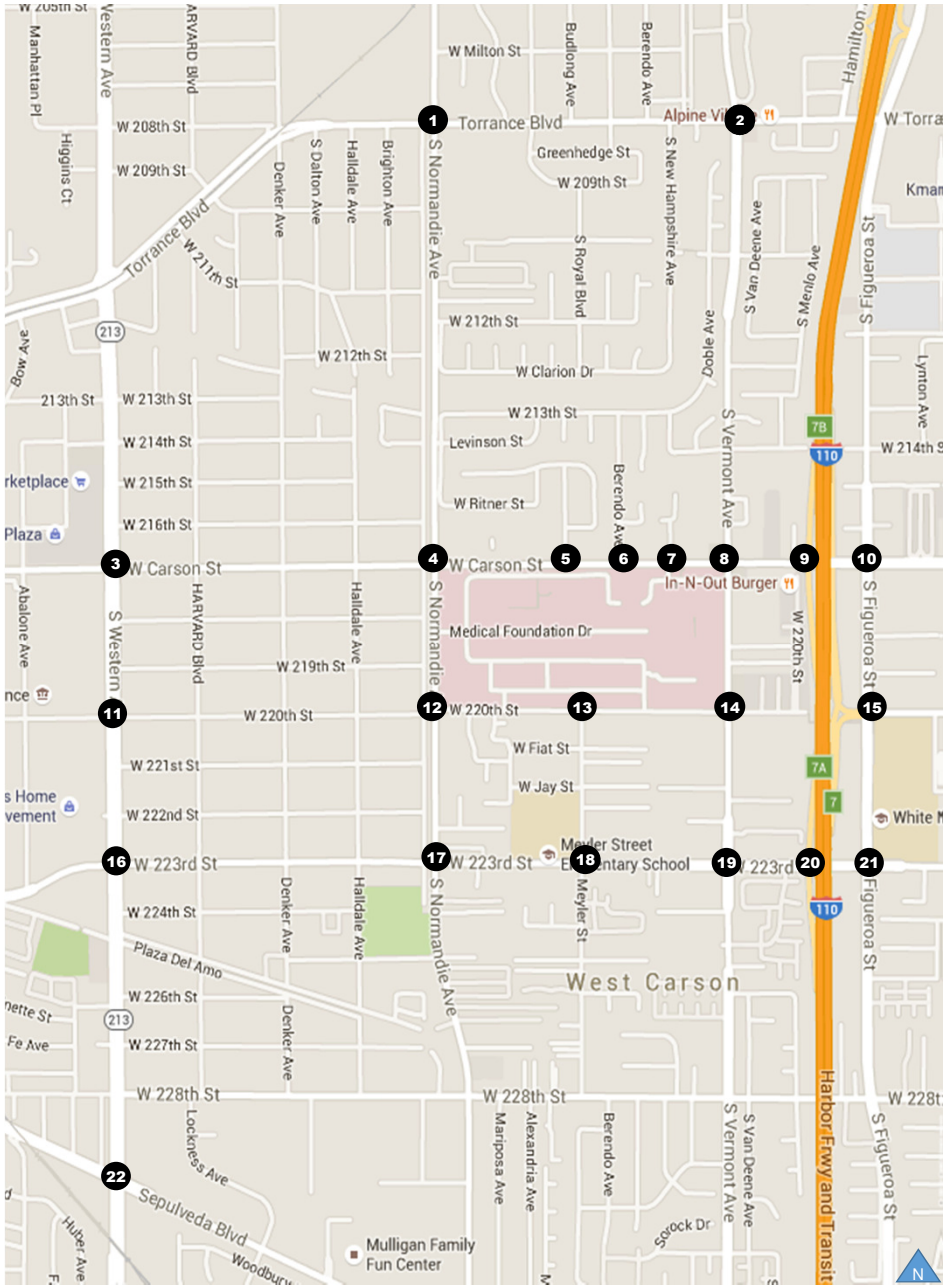
VEHICULAR CIRCULATION PLAN

LEGEND

- PUBLIC ENTRY/EXIT TO CAMPUS
- STAFF ENTRY/EXIT TO CAMPUS
- PUBLIC ENTRY/EXIT TO PARKING
- STAFF ENTRY/EXIT TO PARKING
- MAIN BUILDING ENTRANCE
- PUBLIC EMERGENCY ENTRANCE
- PRIMARY PUBLIC VEHICULAR CIRC.
- PRIMARY STAFF VEHICULAR CIRC.
- AMBULANCE EMERGENCY ENTRY

Figure 7

Vehicle Access and Circulation



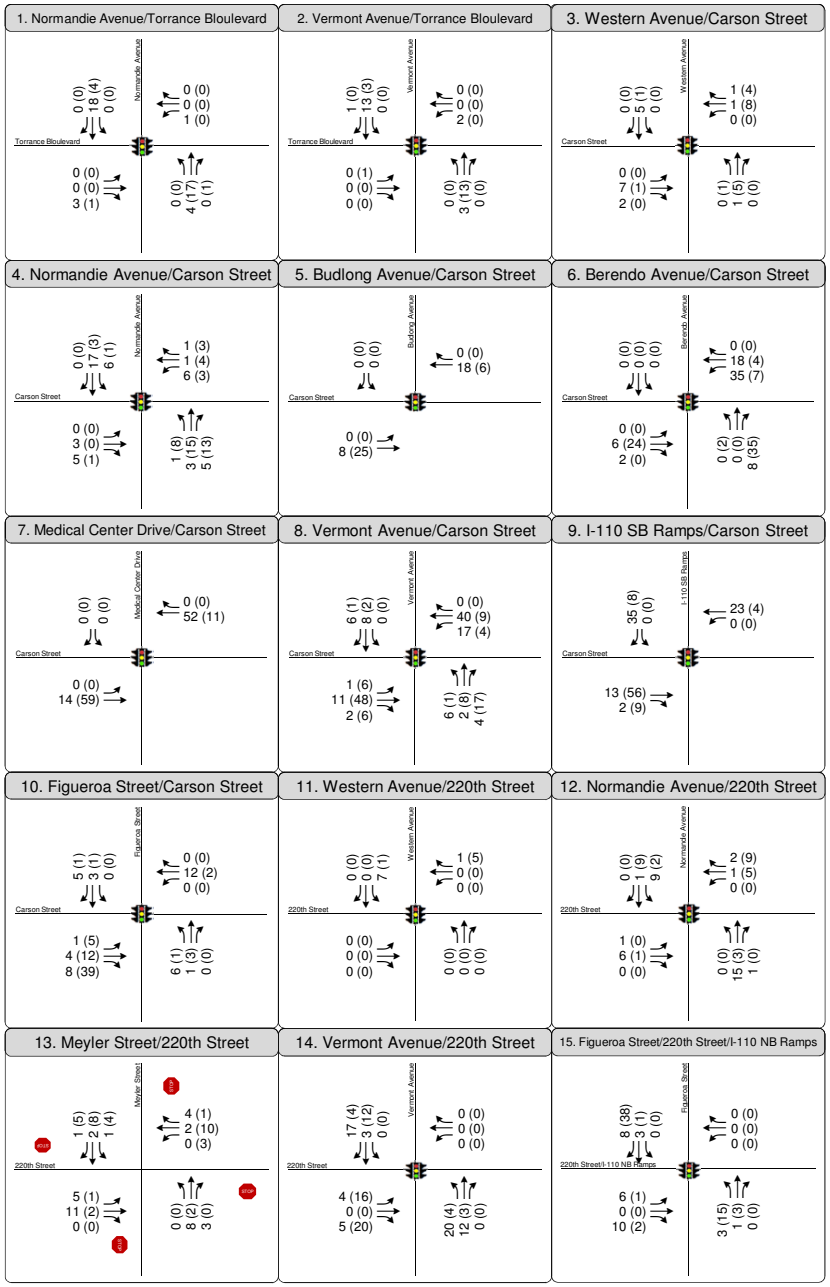
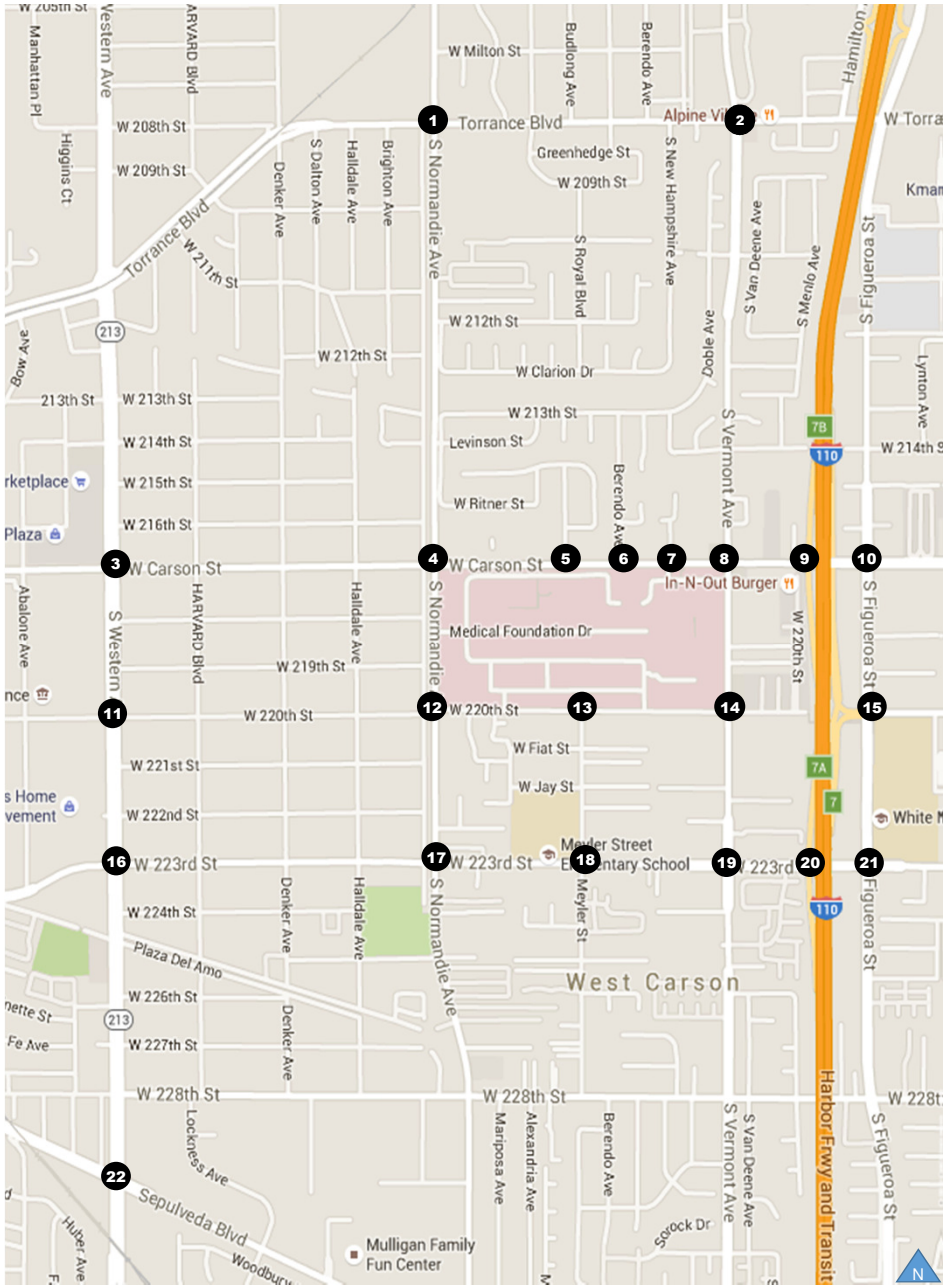
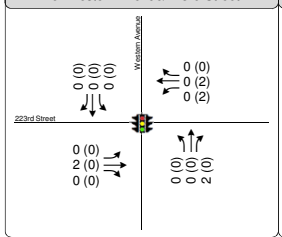


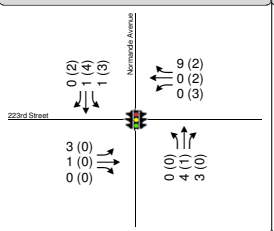
Figure 8
2023 Project Only Traffic Volumes



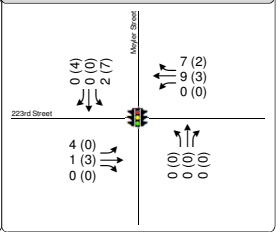
16. Western Avenue/223rd Street



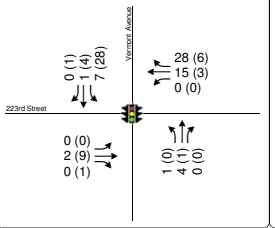
17. Normandie Avenue/223rd Street



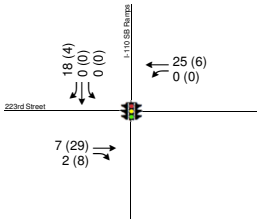
18. Meyler Street/223rd Street



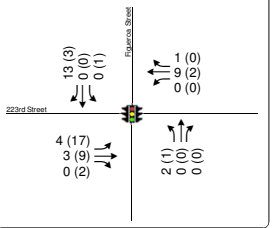
19. Vermont Avenue/223rd Street



20. I-110 SB Ramps/223rd Street



21. Figueroa Street/223rd Street



22. Western Avenue/Sepulveda Blvd

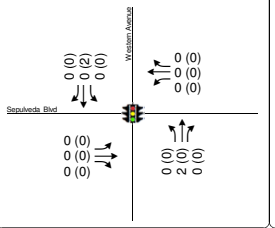
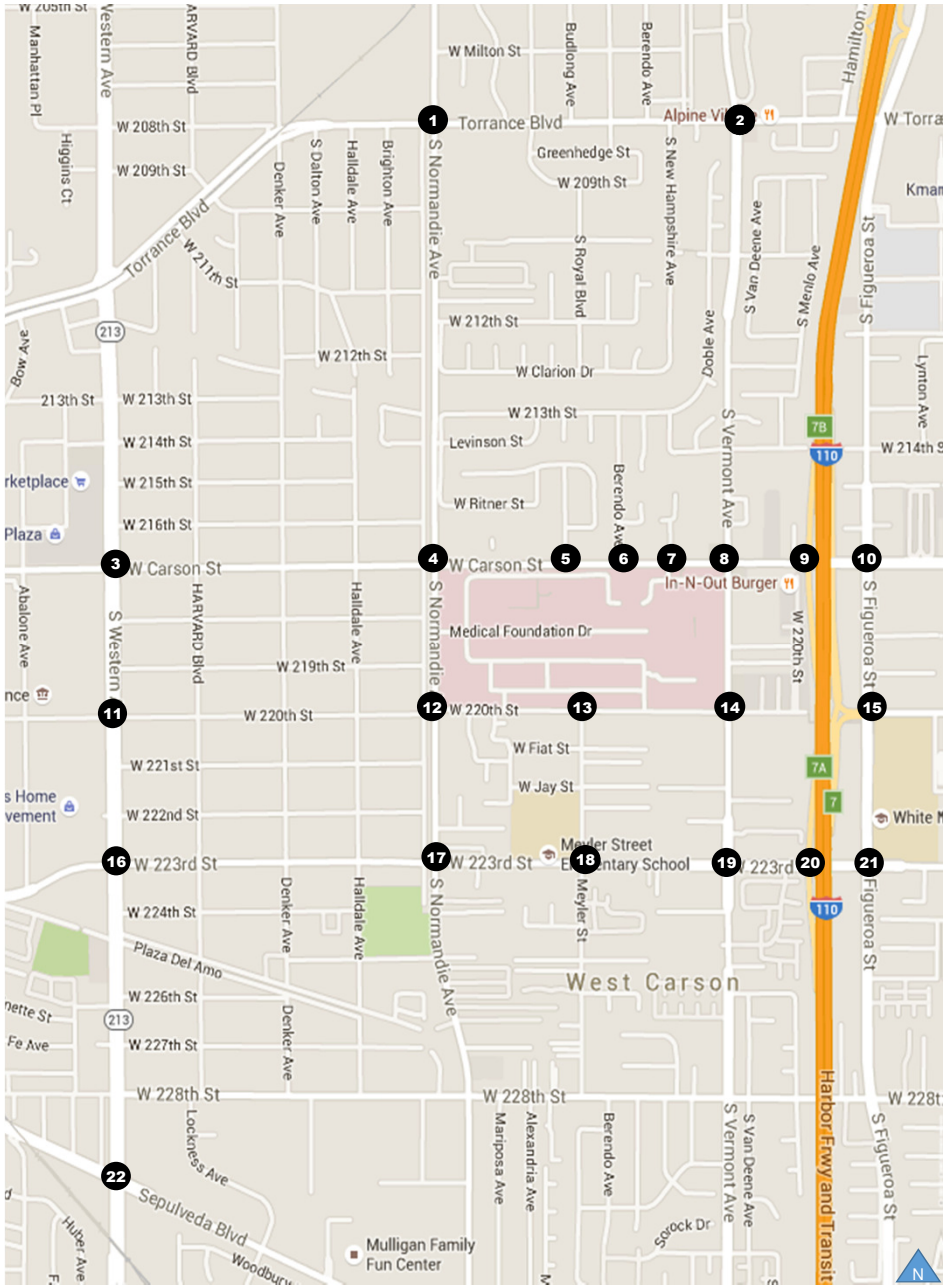


Figure 8
2023 Project Only Traffic Volumes



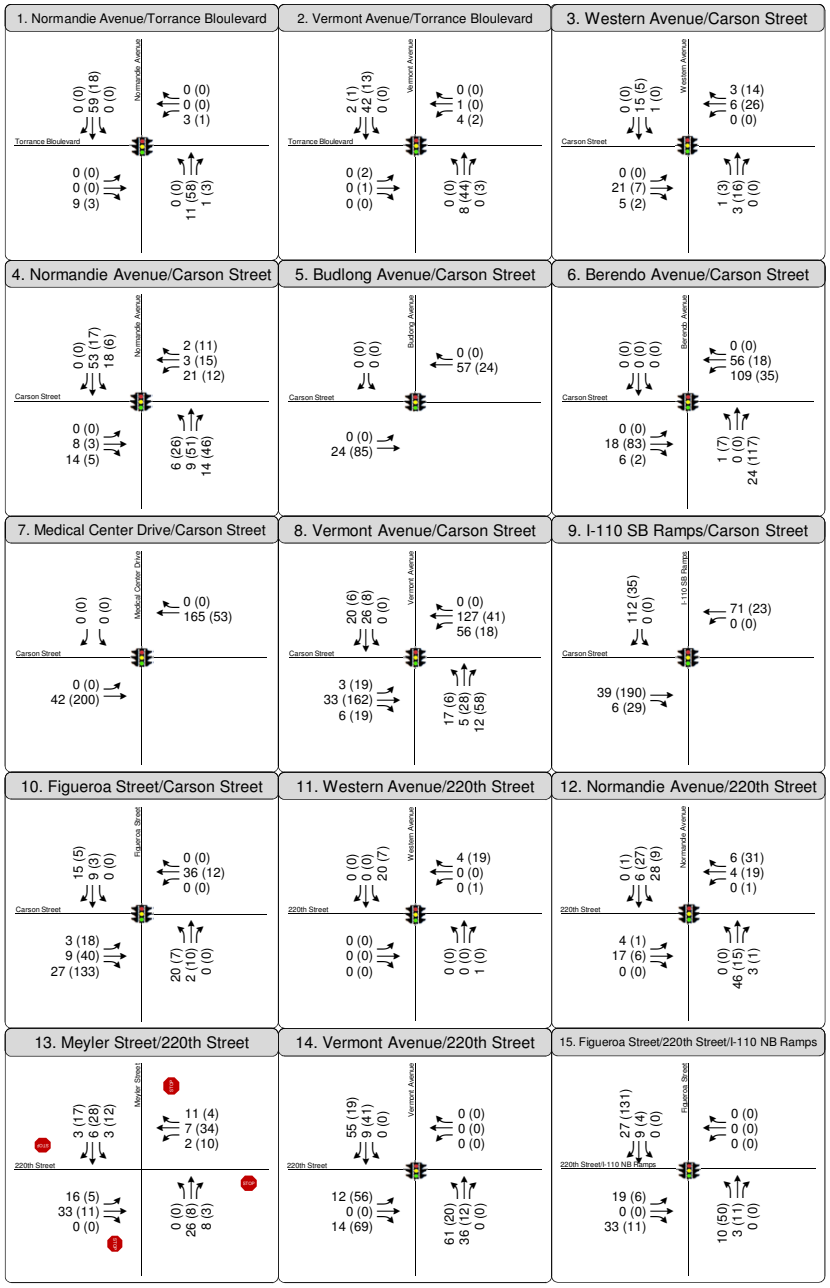
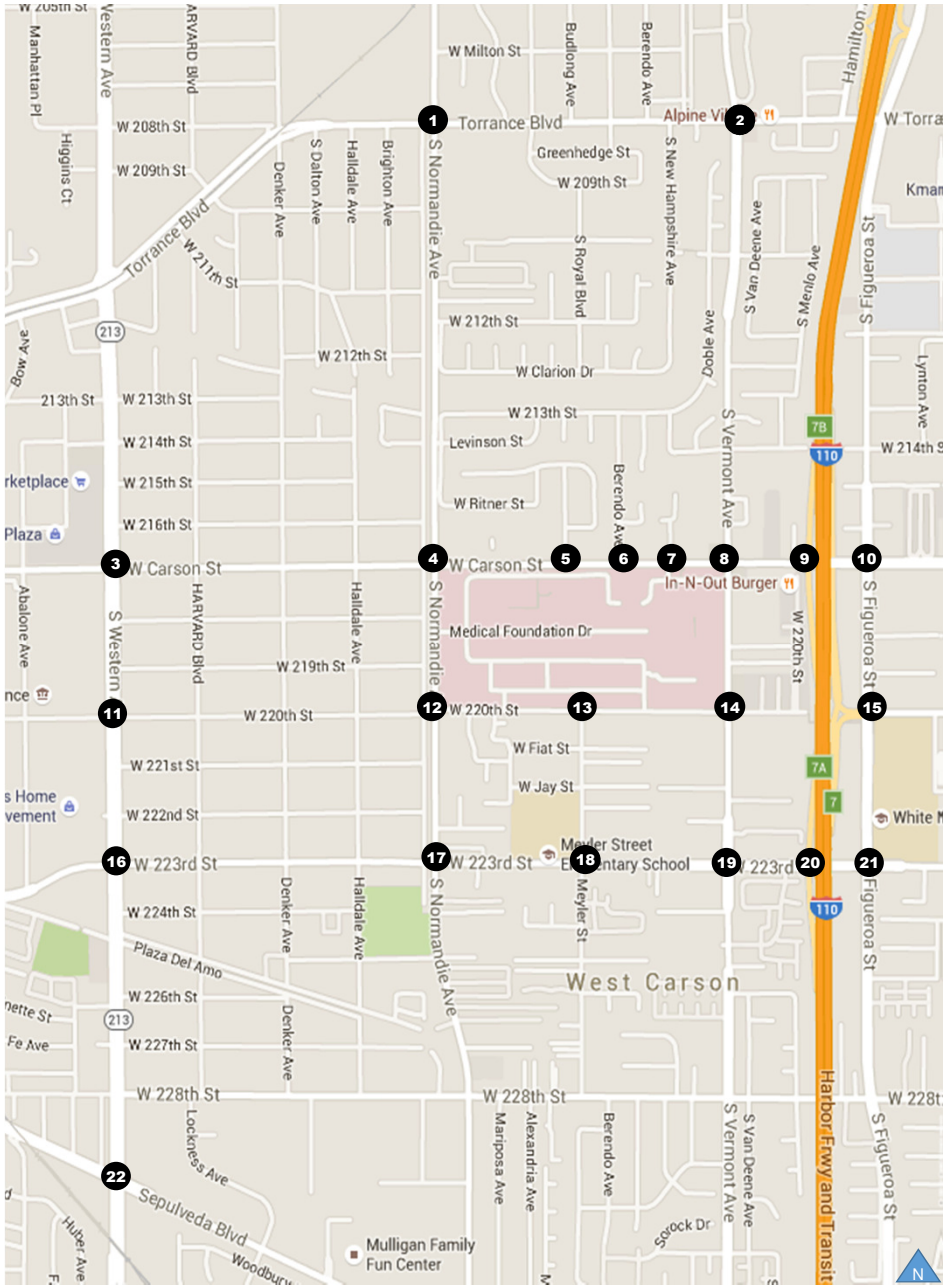


Figure 9
2030 Project Only Traffic Volumes



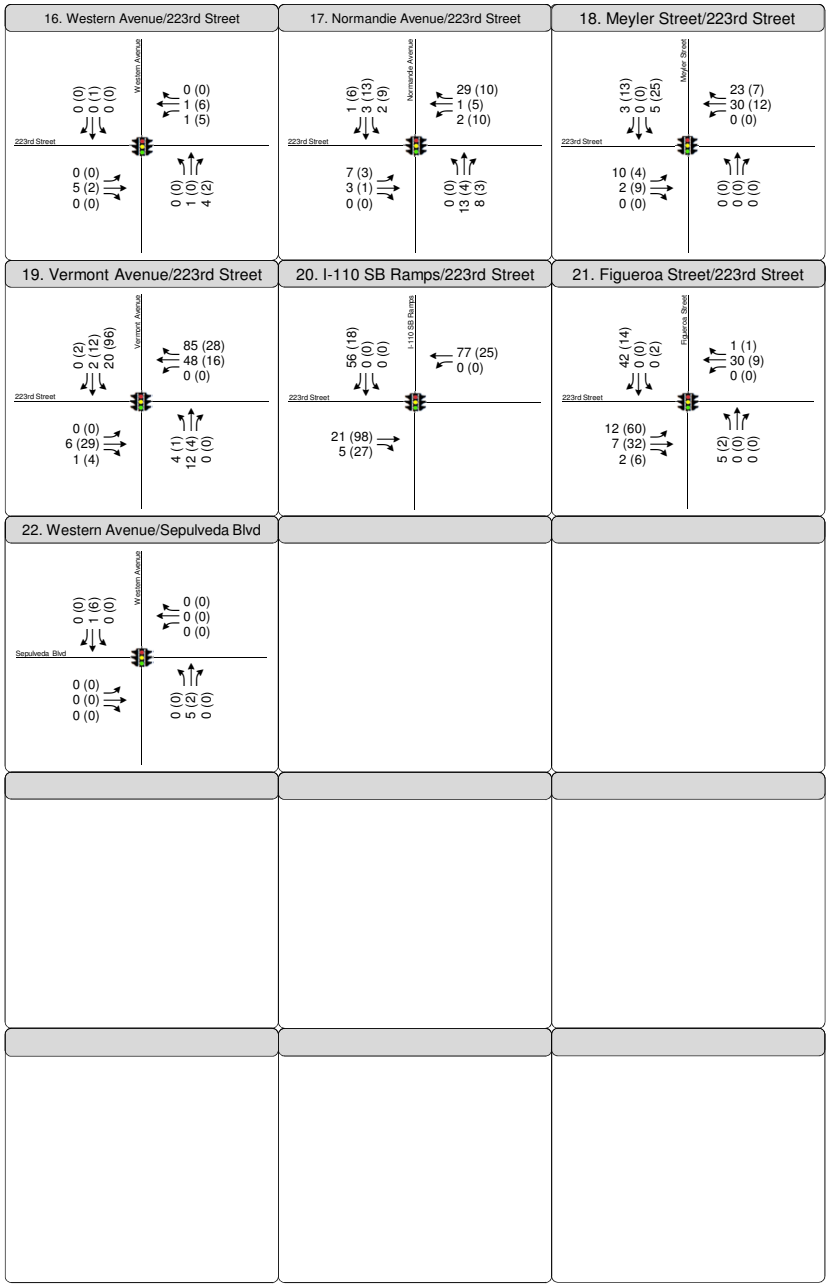
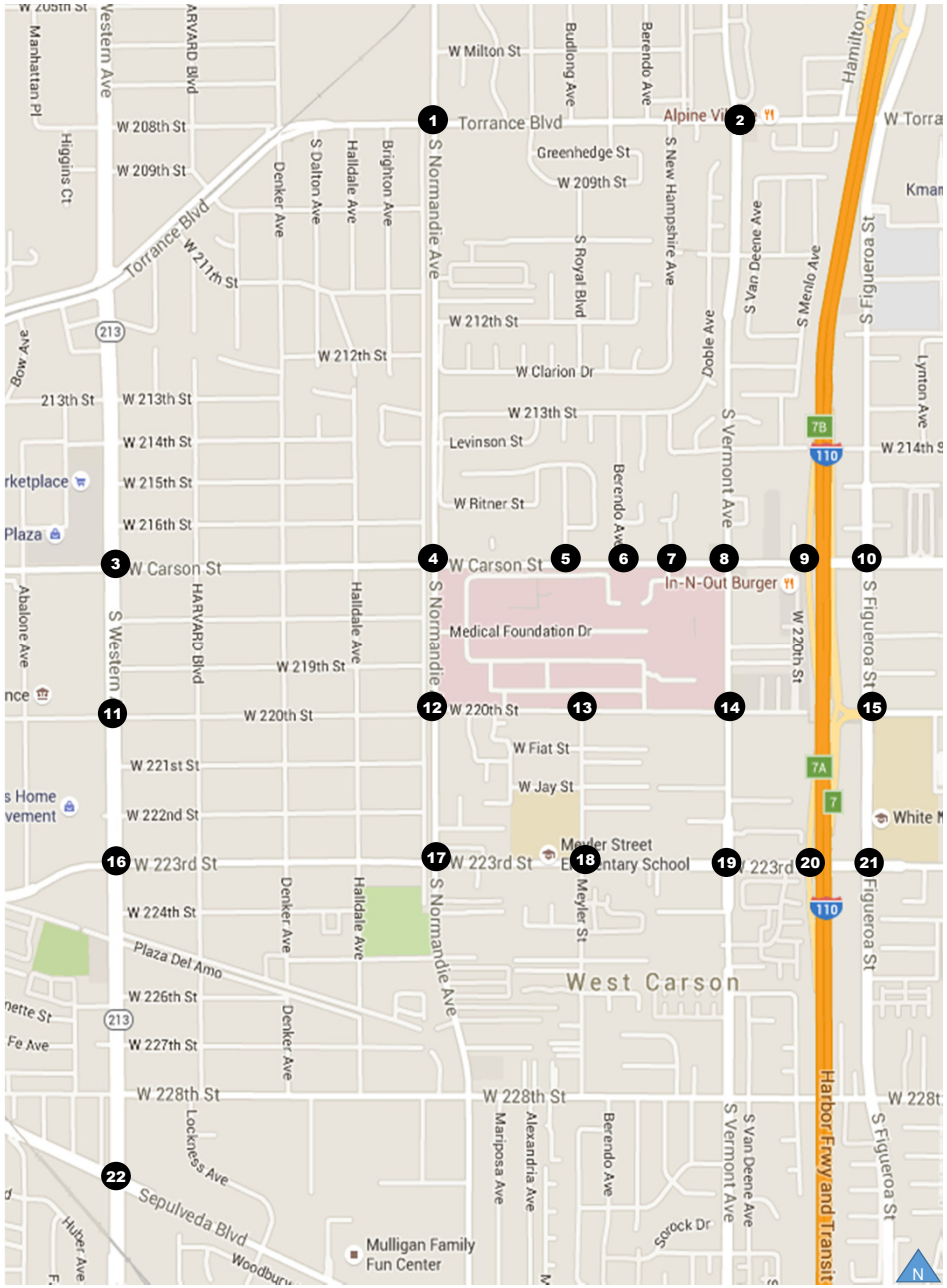


Figure 9
2030 Project Only Traffic Volumes



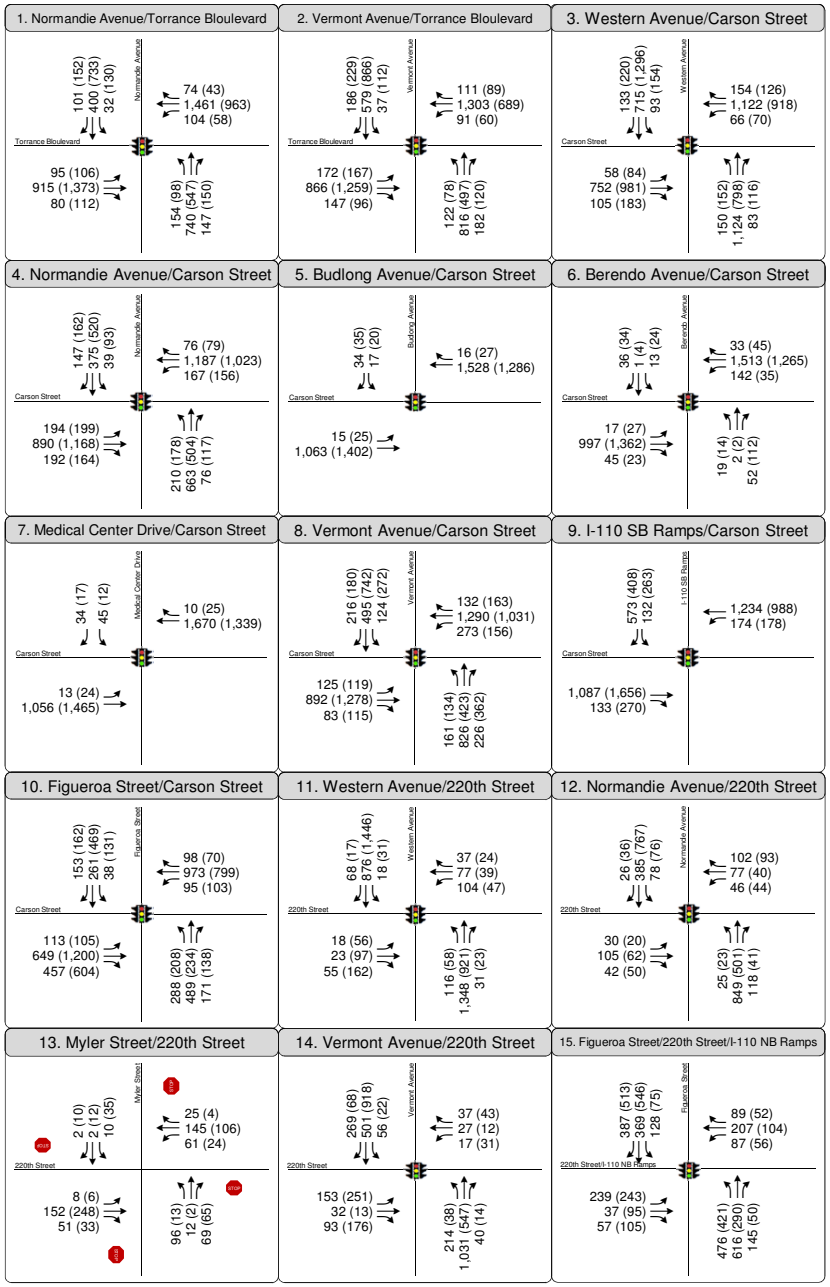
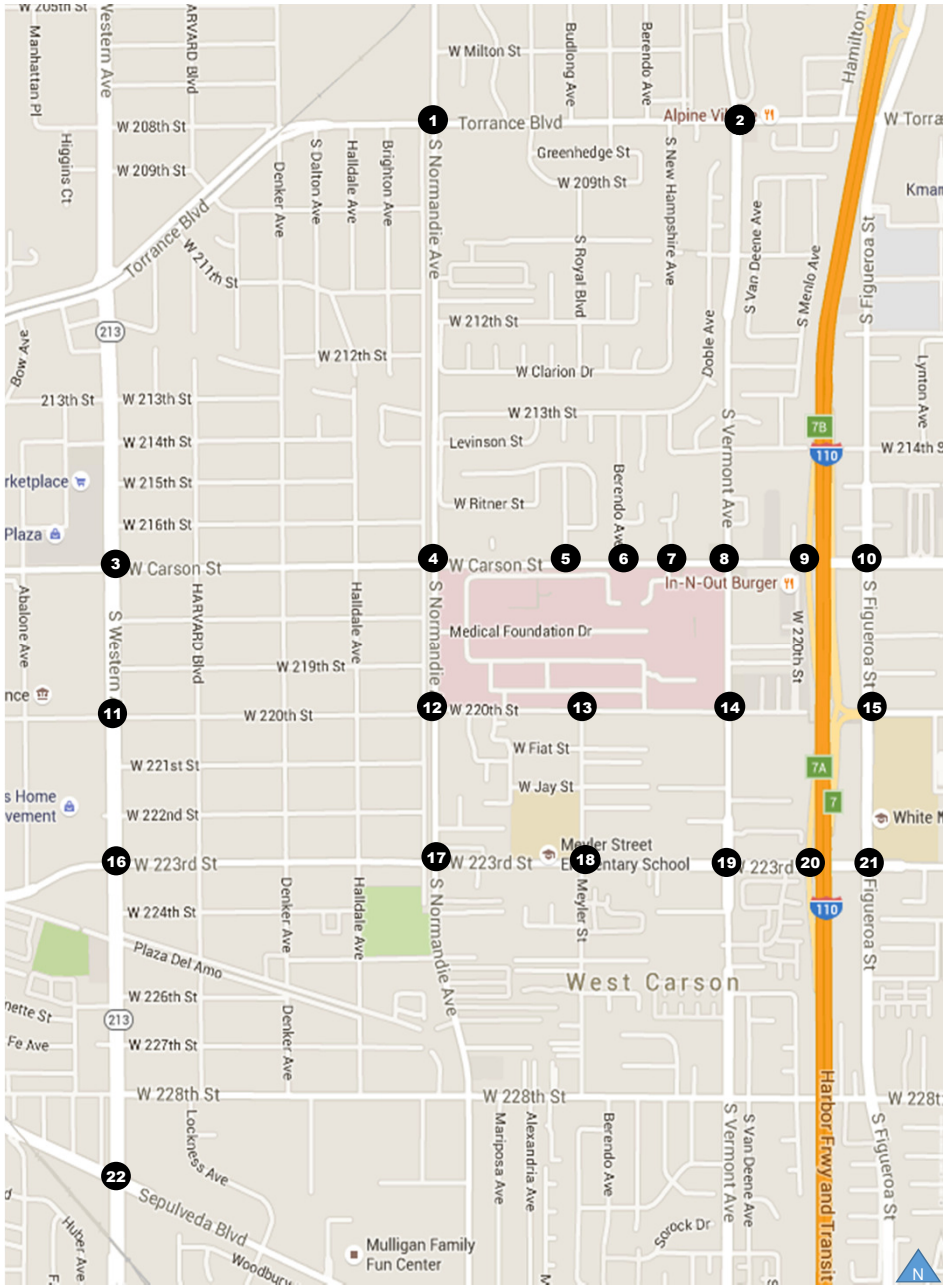


Figure 10
Existing Plus 2023 Project Traffic Volumes



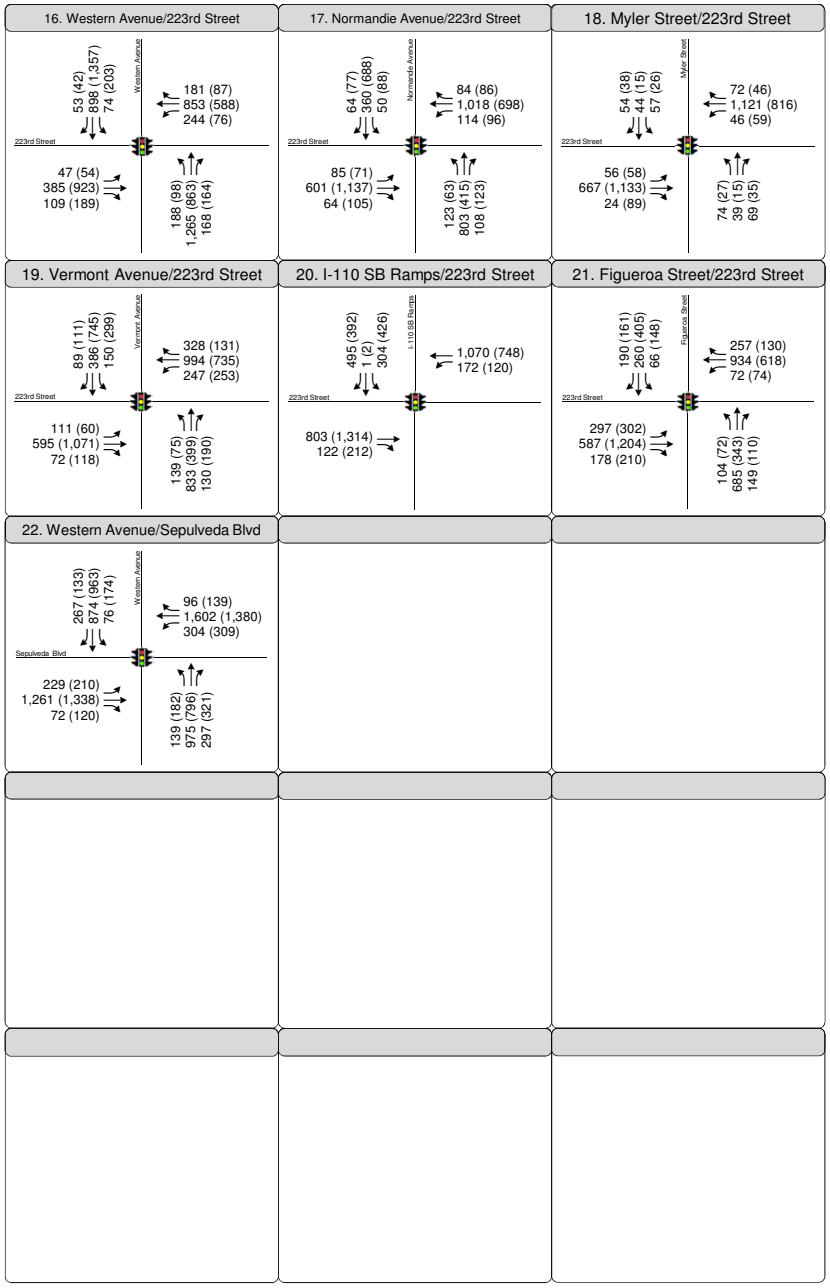


Figure 10
Existing Plus 2023 Project Traffic Volumes

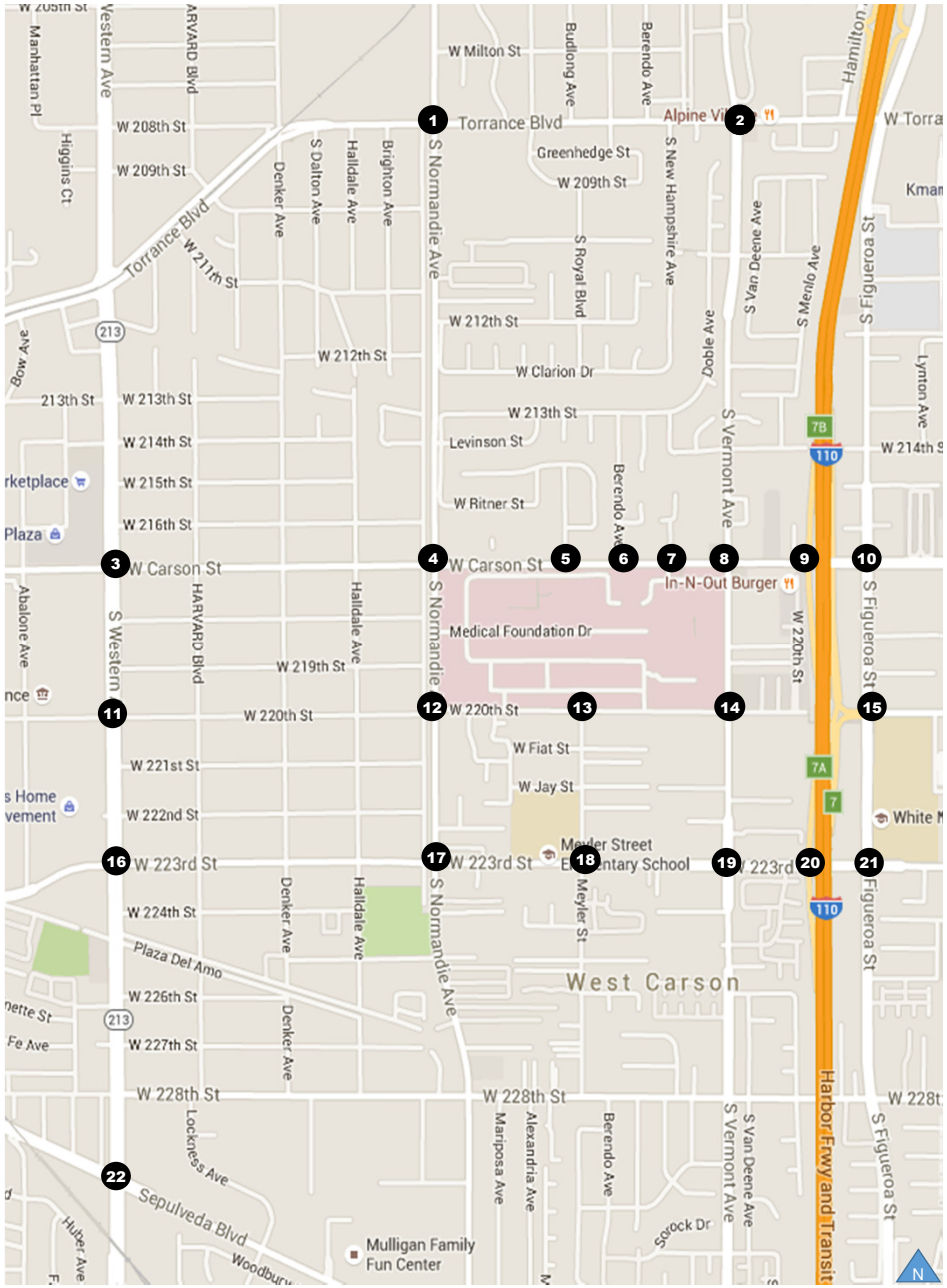
TABLE 4
EXISTING PLUS 2023 PROJECT
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.902	E	0.904	E	0.002	NO
					PM	0.904	E	0.906	E	0.002	NO
			Los Angeles County	ICU	AM	0.935	E	0.936	E	0.001	NO
					PM	0.936	E	0.938	E	0.002	NO
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.928	E	0.001	NO
					PM	0.880	D	0.881	D	0.001	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	0.877	D	0.878	D	0.001	NO
					PM	0.948	E	0.949	E	0.001	NO
			City of Torrance	ICU	AM	0.943	E	0.944	E	0.001	NO
					PM	1.006	F	1.008	F	0.002	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.769	C	0.006	NO
					PM	0.837	D	0.846	D	0.009	NO
			Los Angeles County	ICU	AM	0.904	E	0.910	E	0.006	NO
					PM	0.930	E	0.938	F	0.008	NO
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.624	B	0.054	NO
					PM	0.539	A	0.572	B	0.033	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.629	B	0.054	NO
					PM	0.561	A	0.618	B	0.057	NO
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.632	B	0.686	B	0.054	NO
					PM	0.602	B	0.577	B	-0.025	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.917	E	0.012	YES
					PM	0.893	D	0.913	E	0.020	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.844	D	0.030	YES
					PM	0.849	D	0.867	E	0.018	NO
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.661	B	0.670	B	0.009	NO
					PM	0.762	C	0.767	D	0.005	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.554	A	0.559	A	0.005	NO
					PM	0.698	B	0.698	B	0.000	NO
			City of Torrance	ICU	AM	0.685	B	0.689	B	0.004	NO
					PM	0.819	D	0.819	D	0.000	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.409	A	0.425	A	0.016	NO
					PM	0.293	A	0.297	A	0.004	NO
			Los Angeles County	ICU	AM	0.602	B	0.616	B	0.014	NO
					PM	0.481	A	0.493	A	0.012	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.382	A	0.433	A	0.051	NO
					PM	0.365	A	0.372	A	0.007	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.656	B	0.671	B	0.015	NO
					PM	0.714	C	0.745	C	0.031	NO
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.922	E	0.009	NO
					PM	0.886	D	0.919	E	0.033	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.822	D	0.822	D	0.000	NO
					PM	0.851	D	0.853	D	0.002	NO
			City of Torrance	ICU	AM	0.893	D	0.893	D	0.000	NO
					PM	0.919	E	0.921	E	0.002	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.623	B	0.627	B	0.004	NO
					PM	0.701	C	0.705	C	0.004	NO
			Los Angeles County	ICU	AM	0.807	D	0.813	D	0.006	NO
					PM	0.822	D	0.826	D	0.004	NO
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.658	B	0.666	B	0.008	NO
					PM	0.581	A	0.589	A	0.008	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.936	E	0.019	YES
					PM	0.833	D	0.838	D	0.005	NO
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.768	C	0.013	NO
					PM	0.843	D	0.852	D	0.009	NO
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.827	D	0.833	D	0.006	NO
					PM	0.718	C	0.722	C	0.004	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.927	E	0.927	E	0.000	NO
					PM	0.990	E	0.991	E	0.001	NO
			City of Torrance	ICU	AM	0.957	E	0.957	E	0.000	NO
					PM	1.011	F	1.012	F	0.001	NO

Note:

[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.

[b] Project results in the closure of the medical center driveway at Intersection 7.



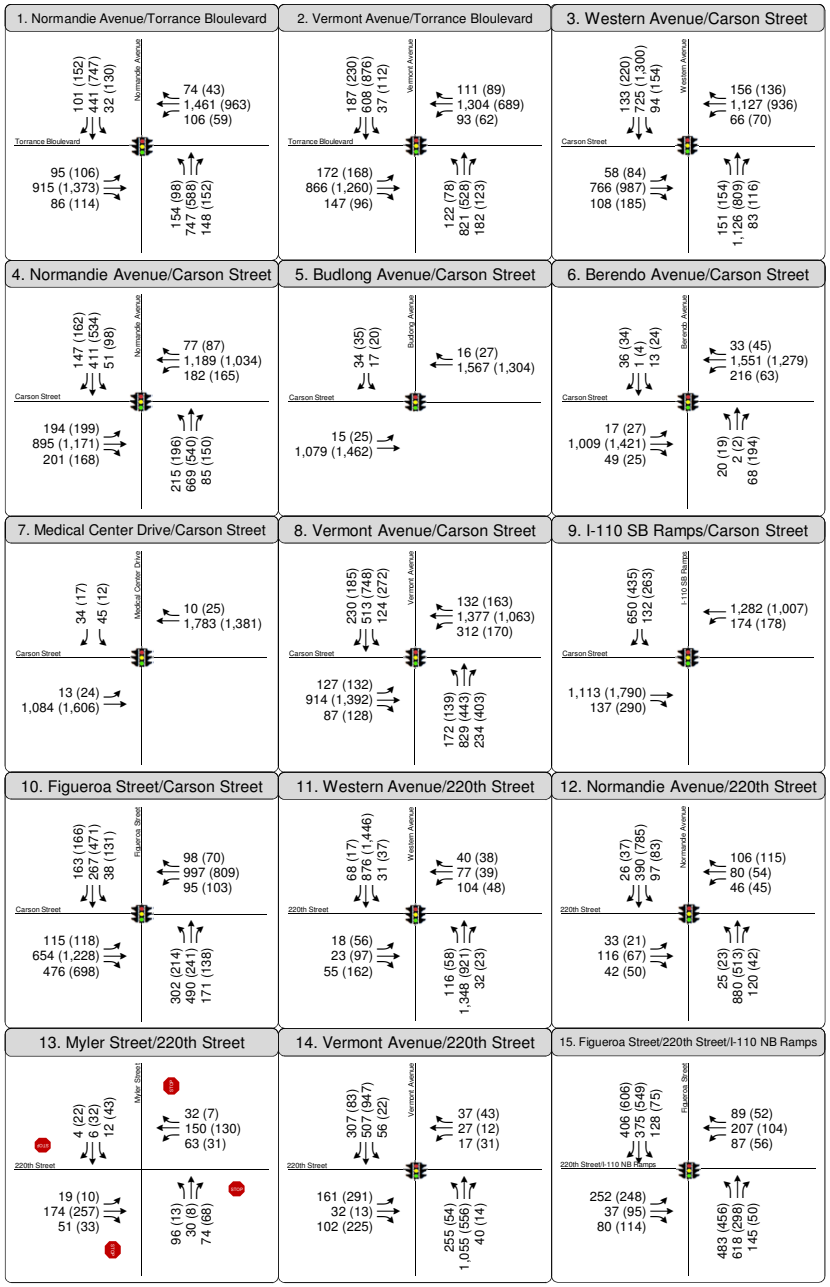
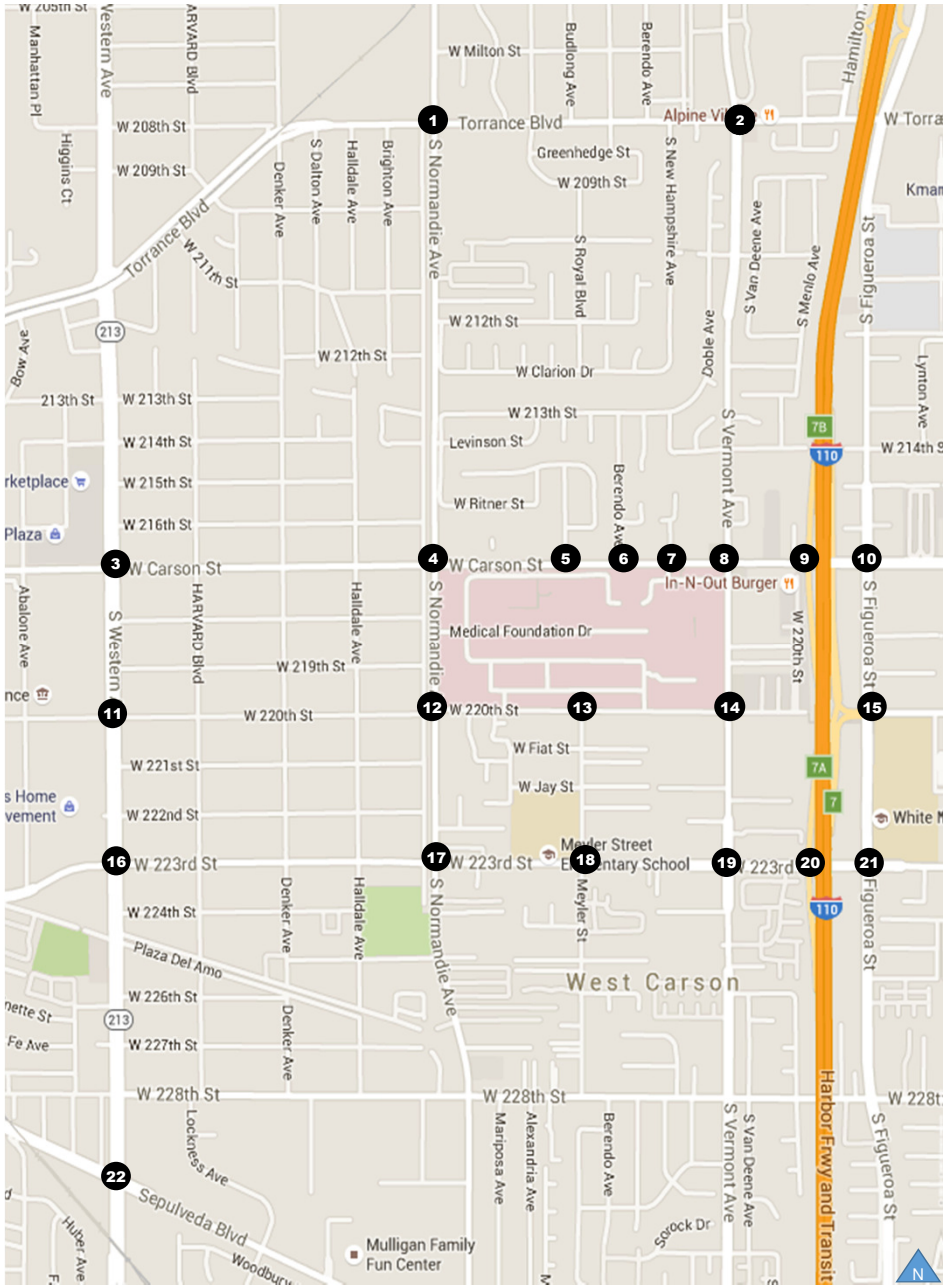


Figure 11
Existing Plus 2030 Project Traffic Volumes



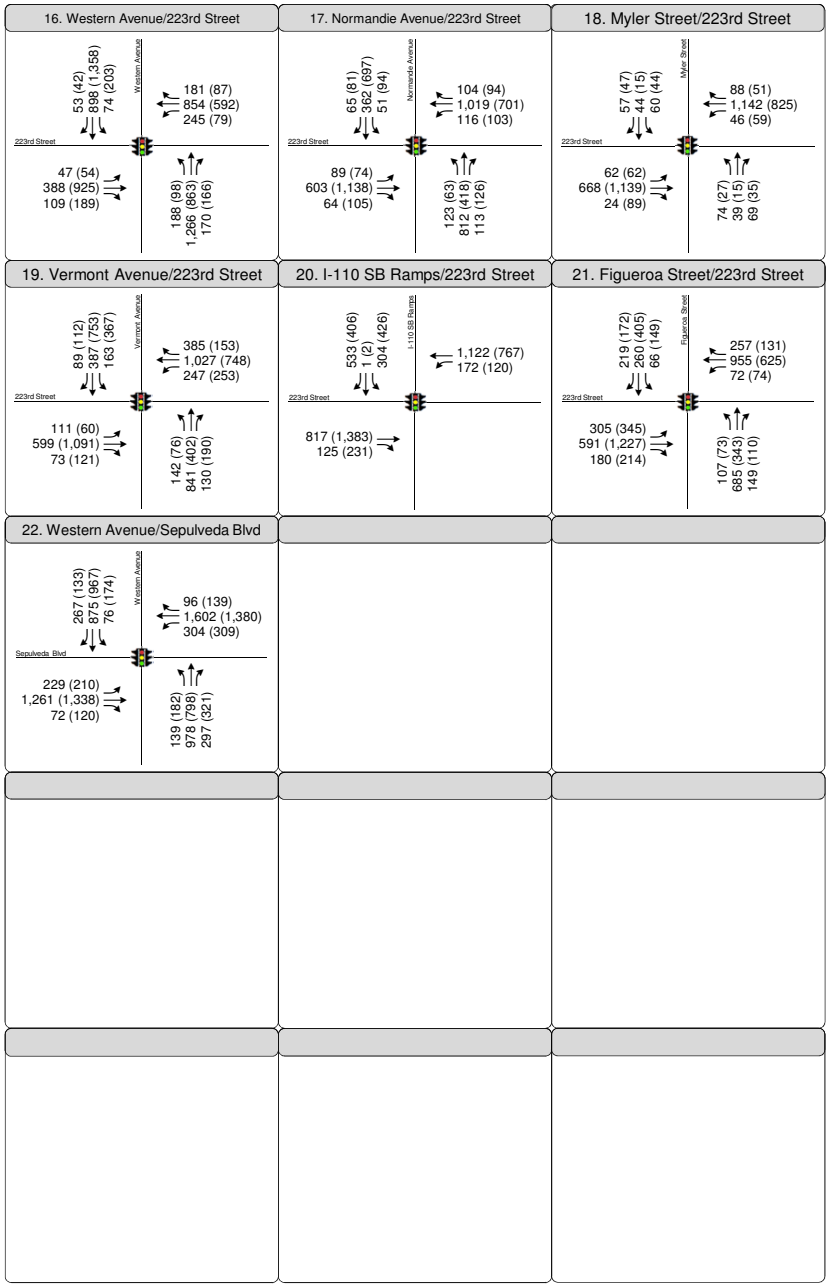


Figure 11
Existing Plus 2030 Project Traffic Volumes

TABLE 5
EXISTING PLUS 2030 PROJECT
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Control	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project		Project Increase In V/C	Significant Impact?
							V/C or Delay	LOS	V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	Signal	City of Los Angeles	CMA	AM	0.902	E	0.907	E	0.005	NO
						PM	0.904	E	0.913	E	0.009	NO
				Los Angeles County	ICU	AM	0.935	E	0.939	E	0.004	NO
						PM	0.936	E	0.944	E	0.008	NO
2	Vermont Avenue	Torrance Boulevard	Signal	Los Angeles County	ICU	AM	0.927	E	0.930	E	0.003	NO
						PM	0.880	D	0.886	D	0.006	NO
3	Western Avenue	Carson Street	Signal	City of Los Angeles	CMA	AM	0.877	D	0.882	D	0.005	NO
						PM	0.948	E	0.955	E	0.007	NO
				City of Torrance	ICU	AM	0.943	E	0.948	E	0.005	NO
						PM	1.006	F	1.012	F	0.006	NO
4	Normandie Avenue	Carson Street	Signal	City of Los Angeles	CMA	AM	0.763	C	0.785	C	0.022	NO
						PM	0.837	D	0.872	D	0.035	YES
				Los Angeles County	ICU	AM	0.904	E	0.925	E	0.021	YES
						PM	0.930	E	0.962	E	0.032	YES
5	Budlong Avenue	Carson Street	Signal	Los Angeles County	ICU	AM	0.570	A	0.636	B	0.066	NO
						PM	0.539	A	0.591	A	0.052	NO
6	Berendo Avenue	Carson Street	Signal	Los Angeles County	ICU	AM	0.575	A	0.642	B	0.067	NO
						PM	0.561	A	0.688	B	0.127	NO
7	Medical Center Drive	Carson Street	Signal	Los Angeles County	ICU	AM	0.632	B	0.721	C	0.089	YES
						PM	0.602	B	0.621	B	0.019	NO
8	Vermont Avenue	Carson Street	Signal	Los Angeles County	ICU	AM	0.905	E	0.946	E	0.041	YES
						PM	0.893	D	0.962	E	0.069	YES
9	I-110 SB Ramps	Carson Street	Signal	Los Angeles County	ICU	AM	0.814	D	0.907	E	0.093	YES
						PM	0.849	D	0.916	E	0.067	YES
10	Figueroa Street	Carson Street	Signal	City of Carson	ICU	AM	0.661	B	0.685	B	0.024	NO
						PM	0.762	C	0.779	C	0.017	NO
11	Western Avenue	220th Street	Signal	City of Los Angeles	CMA	AM	0.554	A	0.570	A	0.016	NO
						PM	0.698	B	0.699	B	0.001	NO
				City of Torrance	ICU	AM	0.685	B	0.699	B	0.014	NO
						PM	0.819	D	0.820	D	0.001	NO
12	Normandie Avenue	220th Street	Signal	City of Los Angeles	CMA	AM	0.409	A	0.458	A	0.049	NO
						PM	0.293	A	0.308	A	0.015	NO
				Los Angeles County	ICU	AM	0.602	B	0.645	B	0.043	NO
						PM	0.481	A	0.523	A	0.042	NO
13	Meyler Street	220th Street	All Way Stop	Los Angeles County	ICU	AM	0.382	A	0.438	A	0.056	NO
						PM	0.365	A	0.397	A	0.032	NO
14	Vermont Avenue	220th Street	Signal	Los Angeles County	ICU	AM	0.656	B	0.720	C	0.064	YES
						PM	0.714	C	0.827	D	0.113	YES
15	Figueroa Street	220th Street/I-110 NB Ramps	Signal	City of Carson	ICU	AM	0.913	E	0.942	E	0.029	YES
						PM	0.886	D	1.000	E	0.114	YES
16	Western Avenue	223rd Street	Signal	City of Los Angeles	CMA	AM	0.822	D	0.823	D	0.001	NO
						PM	0.851	D	0.856	D	0.005	NO
				City of Torrance	ICU	AM	0.893	D	0.894	D	0.001	NO
						PM	0.919	E	0.923	E	0.004	NO
17	Normandie Avenue	223rd Street	Signal	City of Los Angeles	CMA	AM	0.623	B	0.634	B	0.011	NO
						PM	0.701	C	0.715	C	0.014	NO
				Los Angeles County	ICU	AM	0.807	D	0.828	D	0.021	YES
						PM	0.822	D	0.834	D	0.012	NO
18	Meyler Street	223rd Street	Signal	Los Angeles County	ICU	AM	0.658	B	0.683	B	0.025	NO
						PM	0.581	A	0.609	B	0.028	NO
19	Vermont Avenue	223rd Street	Signal	Los Angeles County	ICU	AM	0.917	E	0.975	E	0.058	YES
						PM	0.833	D	0.886	D	0.053	YES
20	I-110 SB Ramps	223rd Street	Signal	Los Angeles County	ICU	AM	0.755	C	0.796	C	0.041	YES
						PM	0.843	D	0.873	D	0.030	YES
21	Figueroa Street	223rd Street	Signal	City of Carson	ICU	AM	0.827	D	0.844	D	0.017	NO
						PM	0.718	C	0.729	C	0.011	NO
22	Western Avenue	Sepulveda Blvd	Signal	City of Los Angeles	CMA	AM	0.927	E	0.928	E	0.001	NO
						PM	0.990	E	0.993	E	0.003	NO
				City of Torrance	ICU	AM	0.957	E	0.957	E	0.000	NO
						PM	1.011	F	1.013	F	0.002	NO

Note:
[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.
[b] Project results in the closure of the medical center driveway at Intersection 7.

FUTURE STREET NETWORK CHANGES

The existing traffic signal at the intersection of Western Avenue & Carson Street will be modified to include a protected/permitted left turn phase at the east/west approaches. The existing signal is being installed by the City of Los Angeles in consultation with Caltrans and the City of Torrance using funding from the Highway Safety Improvement Program (HSIP). As part of the proposed project, the southern leg of the intersection of Carson Street & Medical Center Drive, which serves as an entrance point to Harbor-UCLA Medical Center, would be closed and a new entrance will be opened on Carson Street between Budlong Avenue and Normandie Avenue.

INTERIM AND CUMULATIVE BASE TRAFFIC GENERATION

In order to evaluate the potential impact of the proposed project in the future on the surrounding street system, it was necessary to develop estimates of future traffic conditions both with and without the project. Future traffic volumes without the project were first estimated, representing the Interim base conditions and the Cumulative base conditions. The trips generated by the proposed project are then estimated and separately assigned to the surrounding street system.

The Interim and Cumulative base traffic projections reflect growth in traffic from two primary sources: background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area, and traffic generated by specific projects in, or in the vicinity of, the study area. These factors are described below.

AREAWIDE TRAFFIC GROWTH

As part of the MOU process with county staff, an areawide traffic growth of 0.73% per year was agreed upon for the study area. Future increases in the background traffic volumes due to regional growth and development are expected to continue at this rate, at least through 2030. For the Interim analysis period, existing baseline traffic volumes were adjusted upward by a factor of 6.8% to reflect areawide regional growth up to 2023. With the projected completion date of 2030 for the Medical Center, the existing baseline traffic volumes were adjusted upward by a factor of 12.3% to reflect areawide regional growth up to the Cumulative period. The methodology prescribed by Los Angeles County does not include adding areawide traffic growth to existing volumes.

CUMULATIVE PROJECTS TRAFFIC GENERATION

As indicated, the second major source of traffic growth in the study area is from specific cumulative development projects, also called related projects, expected to be built in the vicinity of the proposed project site prior to the proposed buildout. Data describing cumulative projects in the area was developed using information obtained from Los Angeles County Department of Regional Planning, City of Los Angeles Department of Transportation (LADOT), City of Carson Department of Planning and City of Torrance Department of Planning. A total of 26 cumulative projects were identified in the surrounding area and are listed in Table 6. The locations of the related projects are illustrated in Figure 12.

Trip generation estimates for cumulative projects within the City of Los Angeles were obtained from the LADOT. All other trip generation estimates were determined using standard rates developed by the ITE and published in *Trip Generation, 9th Edition* or from data in the traffic studies prepared for the projects. Table 6 presents the resulting trip generation estimates for these related projects. These projections are conservative in that they do not in every case account for either the existing uses to be removed or the possible use of non-motorized travel modes (transit, walking, etc.). The cumulative projects are expected to generate approximately 85,391 daily trips, including 3,684 trips during the morning peak hour and 7,316 trips during the evening peak hour.

CUMULATIVE PROJECTS TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

The geographic distribution of the traffic generated by the cumulative projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees and potential patrons of the proposed developments are drawn, and the location of the employment and commercial centers to which residents of residential projects would be drawn, and the location of the projects in relation to the surrounding street system. If available, trip distribution from a cumulative project's traffic study was used in this analysis. When trip distribution was not available for a cumulative project, it was estimated based on the factors described above. The trip generation estimates were assigned to the local street system using the trip distribution pattern described above. Figure 13 shows the traffic generated from the cumulative projects at the study intersections.

TABLE 6
RELATED PROJECTS TRIP GENERATION ESTIMATES

Number	Jurisdiction	Project Location	Land Use	ITE Land Use Code	Size	Estimated Trip Generation [a]						
						Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
							In	Out	Total	In	Out	Total
1	County	24500 Normandie Ave	Apartments Retail	220 820	112 Units 3.9 KSF	969	14	49	63	58	35	93
2	County	1028 W 223rd St	Condos	230	19 Units	152	2	12	14	10	5	15
3	County	22700 Meyler St	Condos	230	60 Units	412	6	28	34	27	13	40
4	County	19208 S Vermont Ave	Condos	230	20 Units	159	2	12	14	11	5	16
5	Carson	440 Sepulveda Blvd	Apartments	220	11 Units	190	2	7	9	16	8	24
6	Carson	628 Lincoln St	Single Family	210	3 Units	29	0	2	2	2	1	3
7	Carson	616 E Carson St	Apartments Retail	220 820	152 Units 13 KSF	1600	23	67	90	89	60	149
8	Carson	19220 S Main St	Driver Training Facility	[d]	65.000 KSF	438	91	0	91	12	80	92
9	Carson	402 E Sepulveda	Apartments Retail	220 820	65 Units 3 KSF	645	9	30	39	39	25	64
10	Carson	21521 S Avalon Blvd	Apartments Retail	220 820	357 Units 32.000 KSF	3653	55	155	210	196	137	333
11	Carson	23401 S Avalon Blvd	Retail	820	6.3 KSF	269	4	2	6	11	12	23
12	Carson	21791 Moneta Ave	Apartments	220	13 Units	202	2	8	10	16	9	25
13	Carson	20920 Chico St	Medical	720	11.34 KSF	249	21	6	27	11	30	41
14	Carson	22303 Avalon	Automated Car Wash Office Space	[c] [c]	4.673 KSF 0.48 KSF	923	21	18	39	41	42	83
15	Carson	Carson Marketplace	Regional Retail Neighborhood Retail Residential Hotel Restaurants Commercial Recreational	[g]	1370.000 KSF 130.000 KSF 1550.000 Units 300.000 Rooms 81.125 KSF 214.000 KSF	68951	1269	1244	2513	2956	2806	5762
16	Los Angeles	1311 W Sepulveda Blvd	Apartments Retail	[b] [b]	352 Units 17.904 KSF	1434	5	14	19	34	21	55
17	Los Angeles	21176 S Western Ave	Retail	[b]	0.836 KSF	653	54	33	87	15	17	32
18	Los Angeles	20805-22341 S. Normandie Avenue	Single Family	[b]	63.000 Units	602	12	35	47	40	23	63
19	Torrance	1640 Cabrillo Ave	Apartments Retail	220 820	44.000 Units 3.700 KSF	548	7	22	29	34	22	56
20	Torrance	1752 Border Ave	Warehouse Automobile Care Center [e]	150 942	10 KSF 3 KSF	194	4	3	7	8	9	17
21	Torrance	570 Alaska Ave	Warehouse	150	31.015 KSF	110	7	2	9	2	8	10
22	Torrance	2540 Sepulveda Blvd	Automobile Care Center [e]	942	2.525 KSF	101	4	2	6	4	4	8
23	Torrance	465 Crenshaw Blvd	Transit Center	[f]	17.8 KSF	2426	189	85	274	87	165	252
24	Torrance	23625 Arlington Ave	Apartments	220	14 Units	208	2	9	11	16	9	25
25	Torrance	20405 Gramercy Place	Light Industrial	110	17 KSF	118	14	2	16	2	14	16
26	Torrance	1750 214th Street/1600 Abalone Avenue	Warehouse Manufacturing	150 140	30 KSF 13 KSF	157	14	4	18	5	14	19

a. Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition, 2012 unless otherwise noted.
b. Daily Trips, AM Peak Hour Total Trips, and PM Peak Hour Total Trips provided by City of Los Angeles Department of Transportation.
The directional distribution derived using ITE trip generation directional distribution.
c. Daily Trips, AM Peak Hour Total Trips, and PM Peak Hour Total Trips taken from City of Carson Planning Commission Report dated October 27, 2015.
d. Daily Trips, AM Peak Hour Total Trips, and PM Peak Hour Total Trips taken from Porsche Driving Center Experience Project Traffic Impact Analysis.
e. ITE does not provide weekday trip estimates for Automobile Care Center (ITE Code 942). Weekday trip generation rate from Quick Lubrication Shop (ITE Code 941) was used instead.
f. Trip Generation taken from Traffic Impact Analysis Report for Torrance Transit Center, dated April 29, 2013.
g. Trip Generation taken from Traffic Impact Study for Carson Marketplace, dated October 2005.

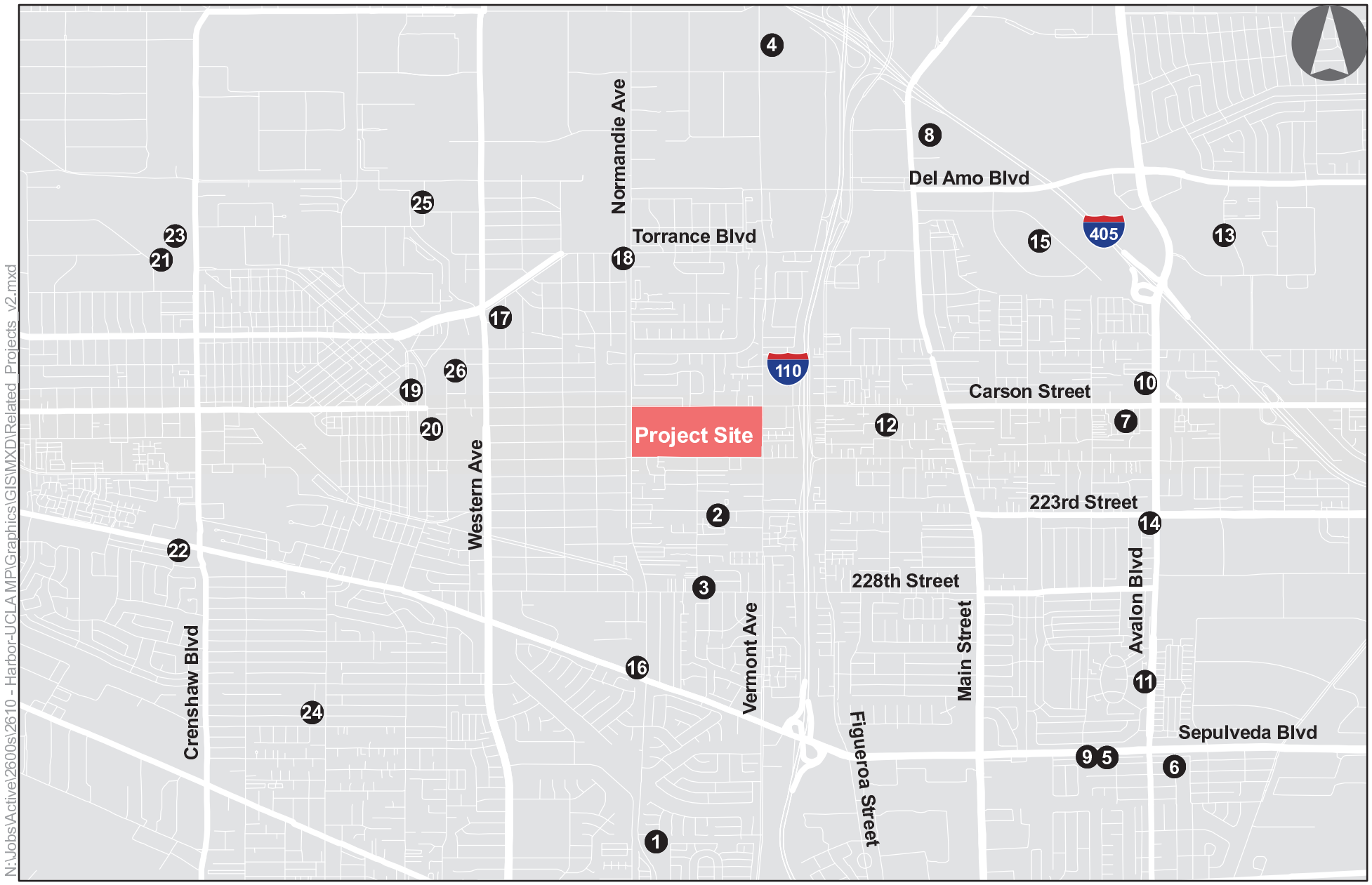
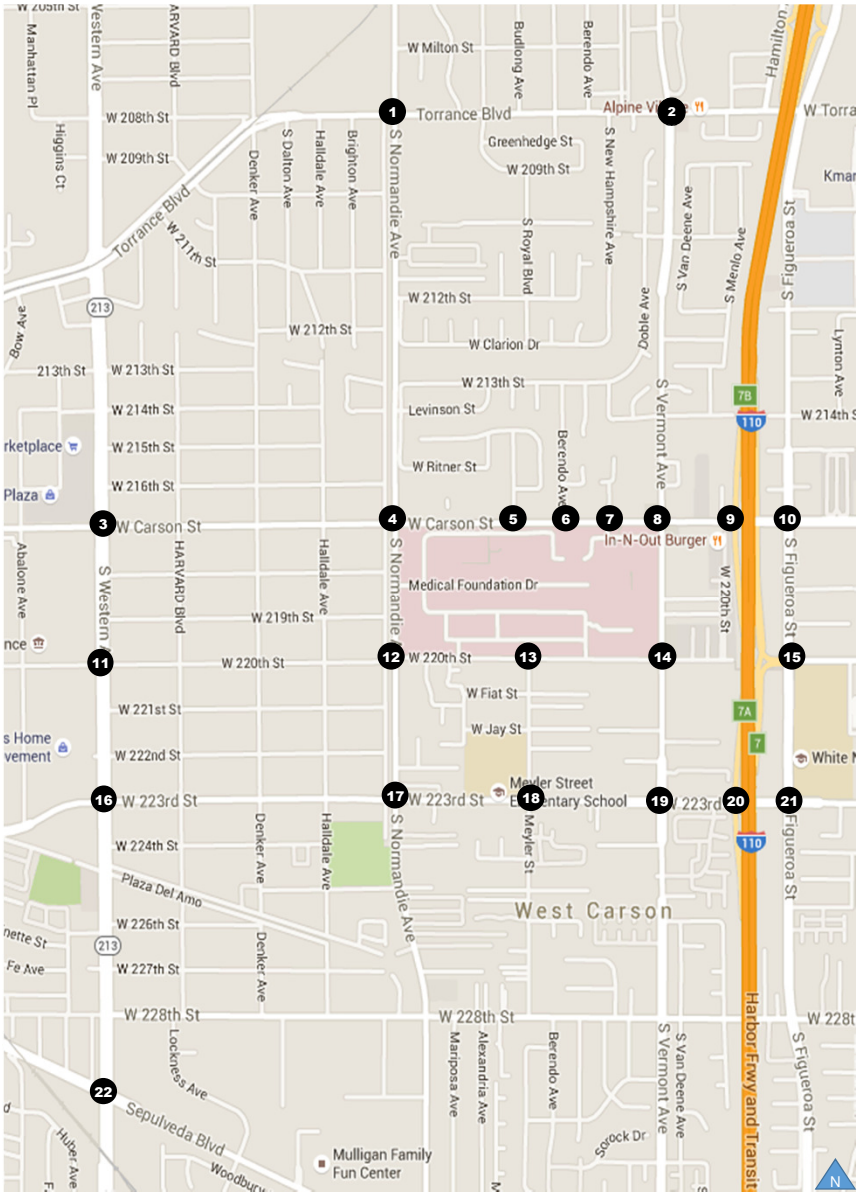


Figure 12
Location of Related Projects



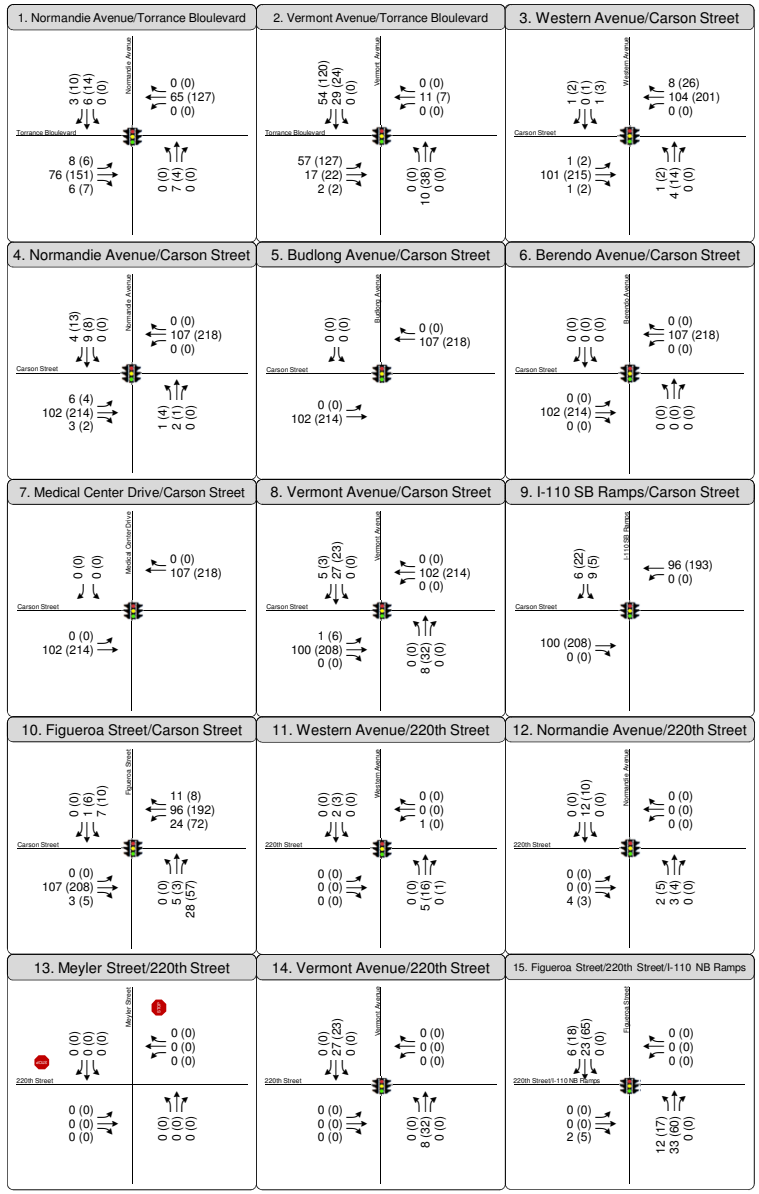
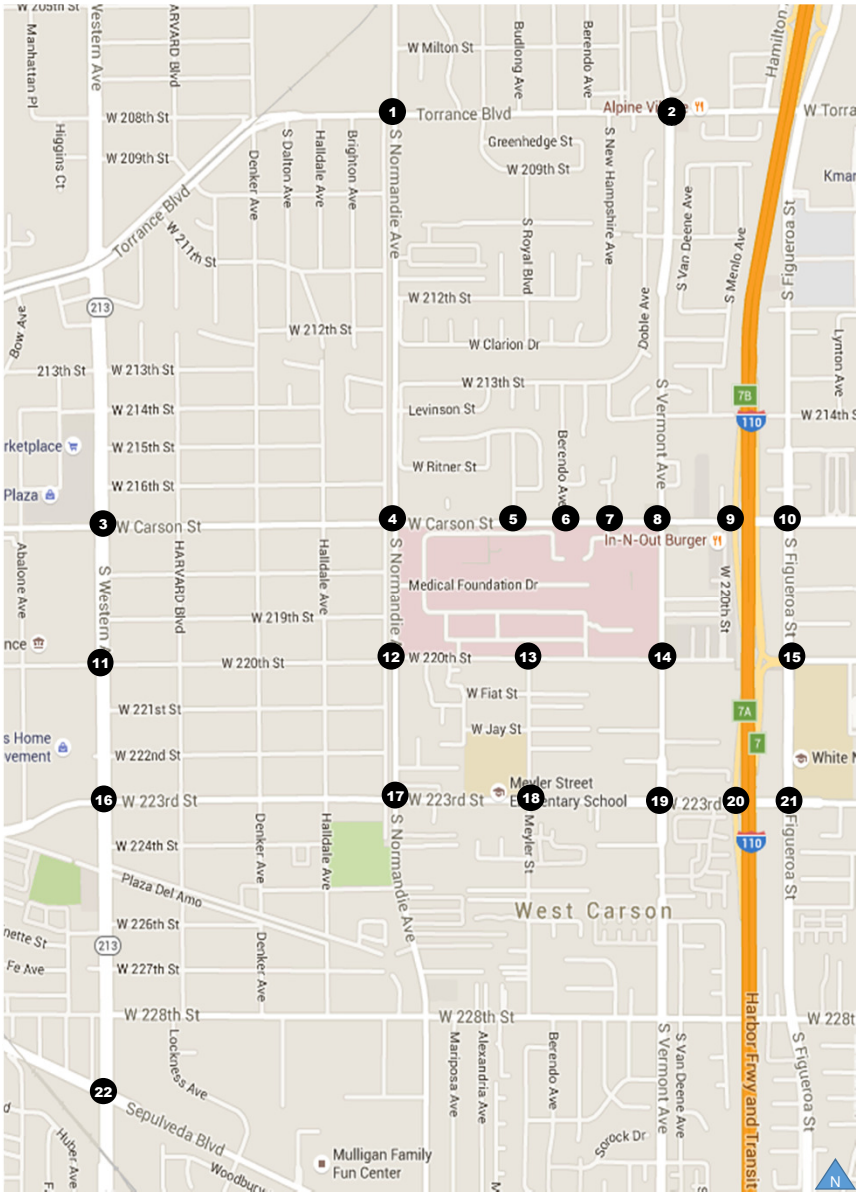


Figure 12
Related Project Traffic Volumes



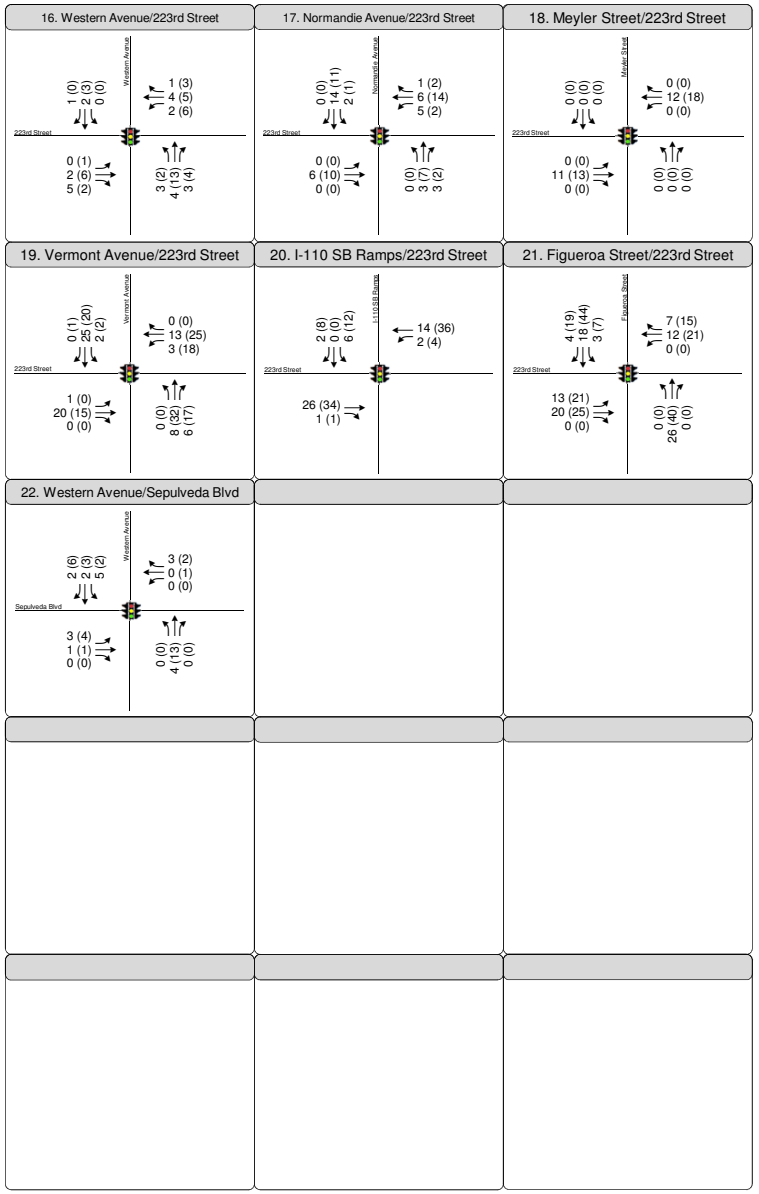
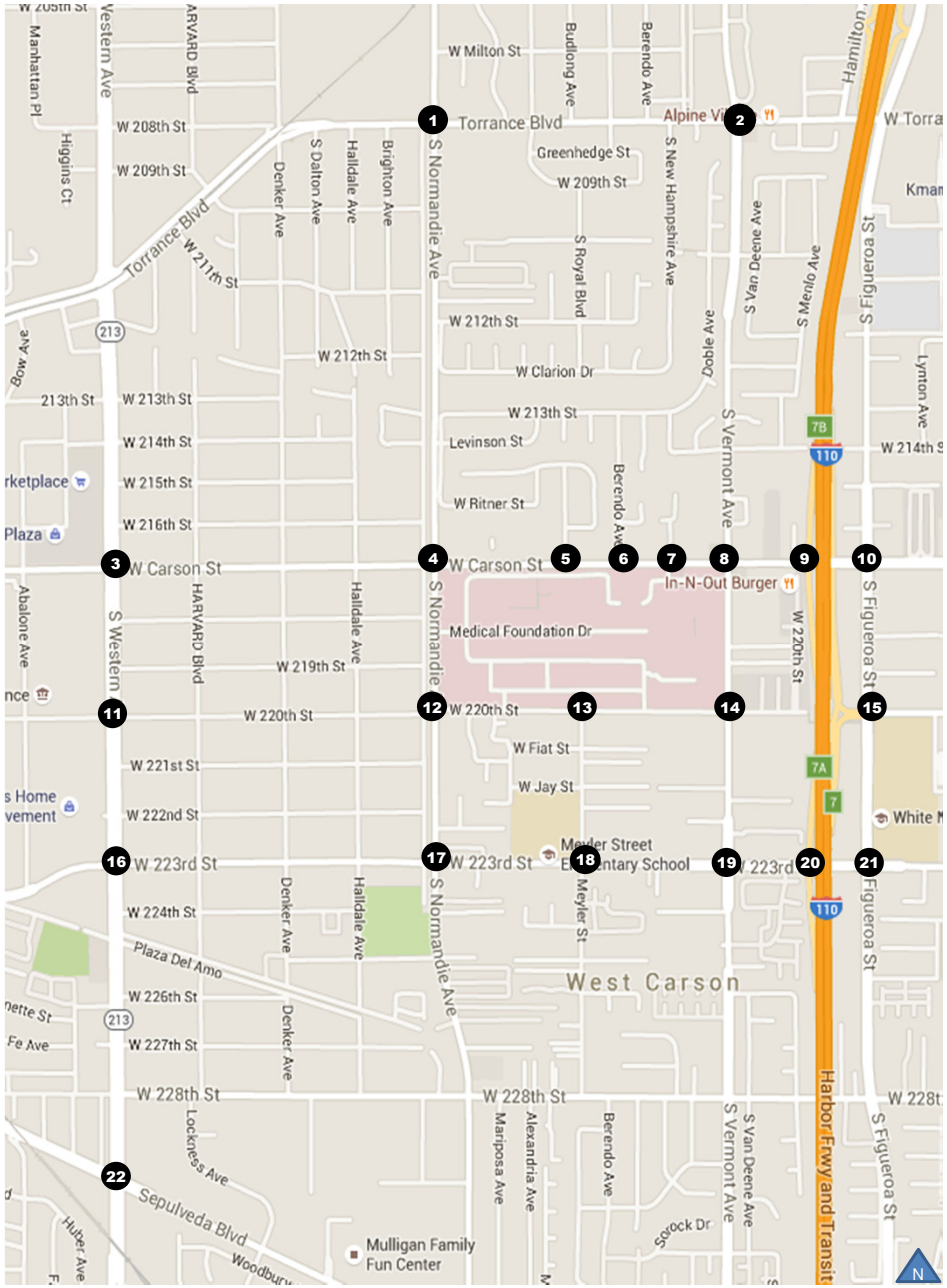


Figure 12
Related Project Traffic Volumes

EXISTING PLUS 2023 PROJECT PLUS CUMULATIVE TRAFFIC CONDITIONS

Existing plus 2023 Project plus Cumulative peak hour traffic volumes were developed to determine the projected V/C ratio and LOS for the analyzed intersections within unincorporated Los Angeles County. Figure 14 and Table 7 summarize the levels of service. Poor operating conditions (LOS E or F) are projected at six of the 15 study intersections within Los Angeles County's jurisdiction during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street



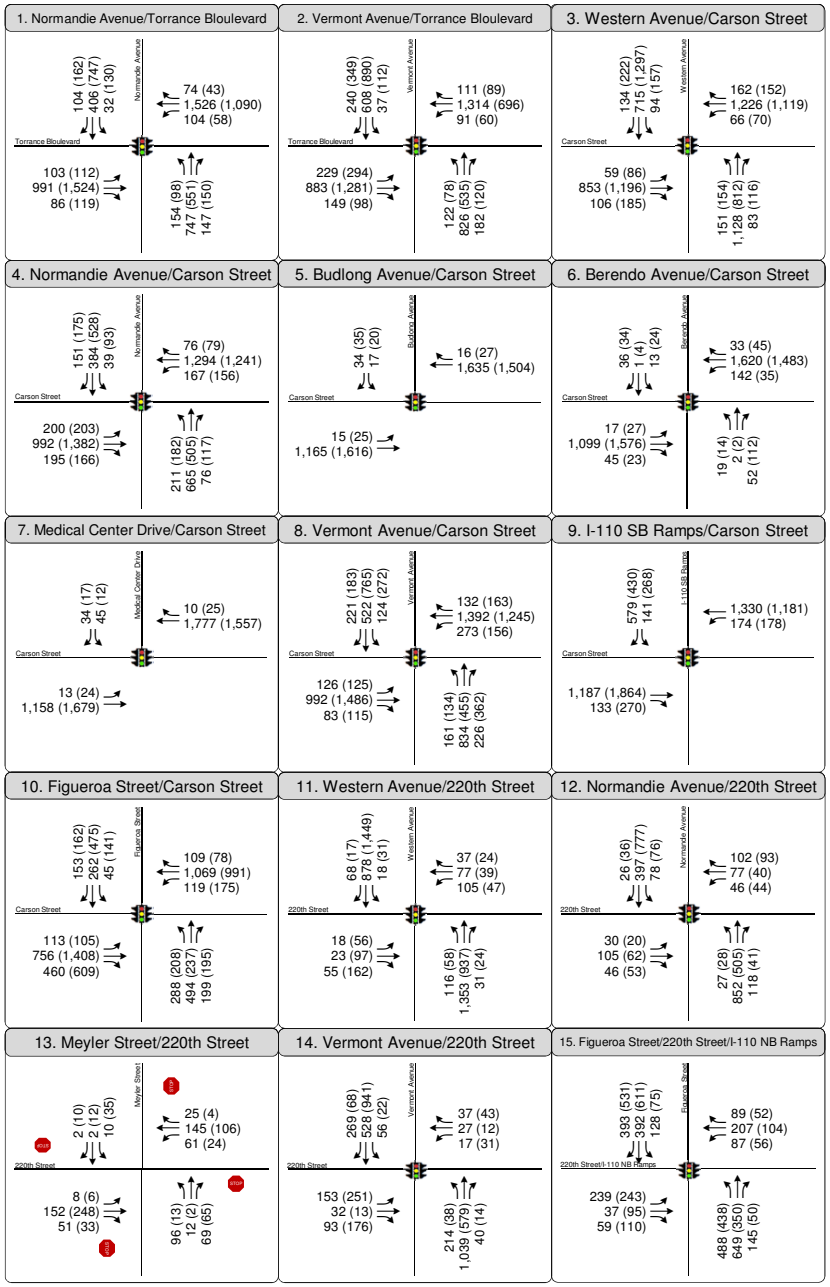
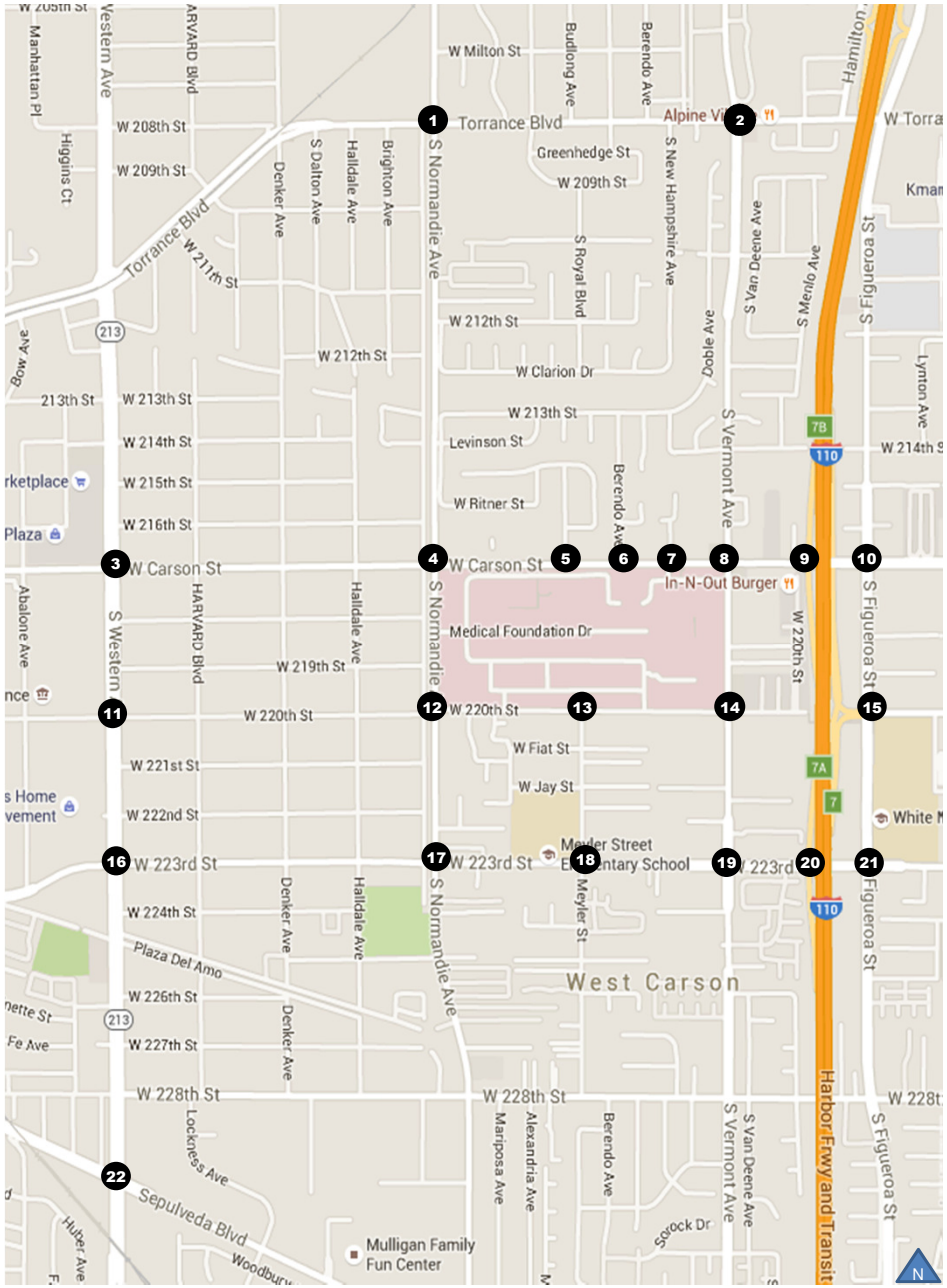


Figure 14
Existing plus 2023 Project plus Cumulative Traffic Volumes



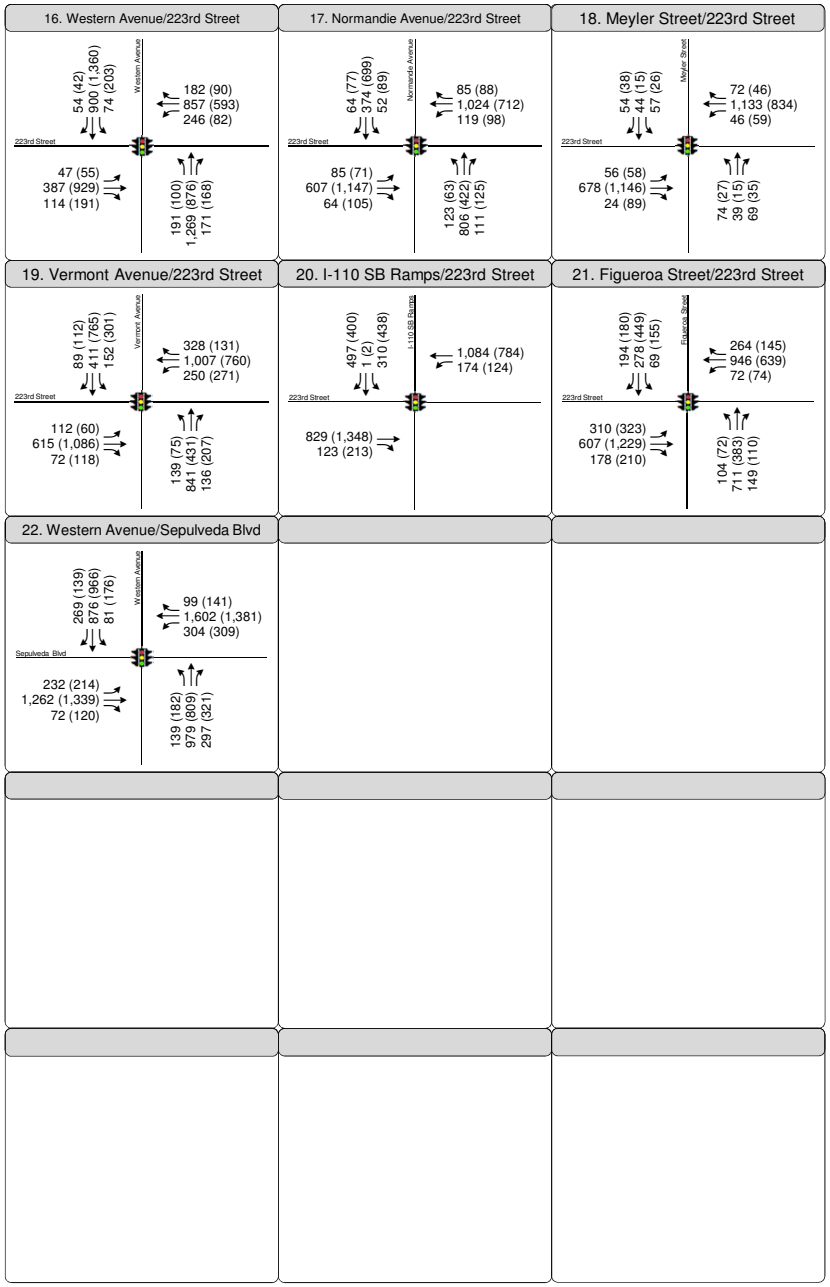


Figure 14
Existing plus 2023 Project plus Cumulative Traffic Volumes

TABLE 7
EXISTING PLUS 2023 PROJECT PLUS CUMULATIVE FOR UNINCORPORATED LOS ANGELES COUNTY
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing plus 2023 Project plus Cumulative		Total Increase in V/C	Cumulative Impact?
						V/C or Delay	LOS	V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.935	E	0.963	E	0.028	YES
					PM	0.936	E	0.994	E	0.058	YES
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.969	E	0.042	YES
					PM	0.880	D	0.896	D	0.016	NO
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.904	E	0.952	E	0.048	YES
					PM	0.930	E	1.016	F	0.086	YES
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.657	B	0.087	NO
					PM	0.539	A	0.639	B	0.100	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.663	B	0.088	NO
					PM	0.561	A	0.685	B	0.124	NO
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.632	B	0.719	C	0.087	YES
					PM	0.602	B	0.644	B	0.042	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.953	E	0.048	YES
					PM	0.893	D	0.985	E	0.092	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.878	D	0.064	YES
					PM	0.849	D	0.925	E	0.076	YES
12	Normandie Avenue	220th Street	Los Angeles County	ICU	AM	0.602	B	0.617	B	0.015	NO
					PM	0.481	A	0.500	A	0.019	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.382	A	0.433	A	0.051	NO
					PM	0.365	A	0.372	A	0.007	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.656	B	0.679	B	0.023	NO
					PM	0.714	C	0.752	C	0.038	NO
17	Normandie Avenue	223rd Street	Los Angeles County	ICU	AM	0.807	D	0.820	D	0.013	NO
					PM	0.822	D	0.834	D	0.012	NO
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.658	B	0.670	B	0.012	NO
					PM	0.581	A	0.593	A	0.012	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.945	E	0.028	YES
					PM	0.833	D	0.856	D	0.023	YES
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.779	C	0.024	NO
					PM	0.843	D	0.873	D	0.030	YES

Note:

[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all way-stop controlled.

[b] Project results in the closure of the medical center driveway at Intersection 7.

INTERIM TRAFFIC CONDITIONS

Interim peak hour traffic volumes were developed to determine the projected V/C ratio and LOS for the analyzed intersections within the Cities of Los Angeles, Carson and Torrance. Figure 15 and Table 8 summarize the levels of service. Poor operating conditions (LOS E or F) are projected at seven of the 11 study intersections during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
22. Western Avenue & Sepulveda Boulevard

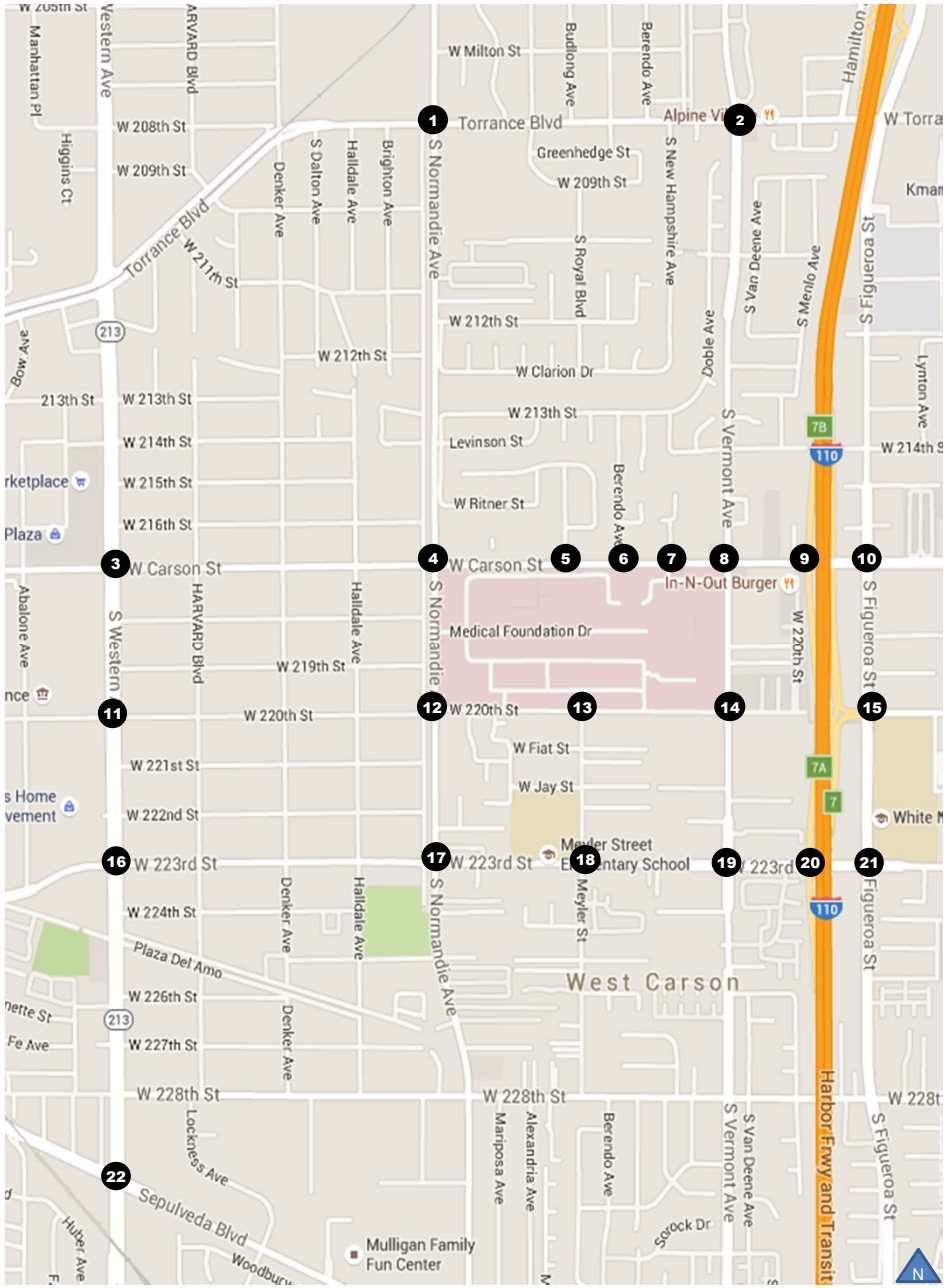
INTERIM PLUS 2023 PROJECT TRAFFIC CONDITIONS

Interim plus 2023 Project peak hour traffic volumes were developed to determine the projected V/C ratio and LOS for the analyzed intersections within the Cities of Los Angeles, Carson and Torrance. Figure 16 and Table 8 summarize the levels of service. Poor operating conditions (LOS E or F) are projected at eight of the 11 study intersections during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
21. Figueroa Street and 223rd Street
22. Western Avenue & Sepulveda Boulevard

TABLE 8
INTERIM PLUS 2023 PROJECT FOR INCORPORATED CITIES
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Interim		Interim + 2023 Project		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	0.999	E	1.001	F	0.002	NO
					PM	1.036	F	1.038	F	0.002	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	1.022	F	1.022	F	0.000	NO
					PM	1.137	F	1.139	F	0.002	NO
			City of Torrance	ICU	AM	1.038	F	1.039	F	0.001	NO
					PM	1.138	F	1.139	F	0.001	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.863	D	0.870	D	0.007	NO
					PM	0.987	E	0.996	E	0.009	NO
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.730	C	0.737	C	0.007	NO
					PM	0.919	E	0.924	E	0.005	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.598	A	0.603	B	0.005	NO
					PM	0.751	C	0.751	C	0.000	NO
			City of Torrance	ICU	AM	0.727	C	0.732	C	0.005	NO
					PM	0.870	D	0.870	D	0.000	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.443	A	0.459	A	0.016	NO
					PM	0.325	A	0.328	A	0.003	NO
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.979	E	0.987	E	0.008	NO
					PM	0.960	E	0.994	E	0.034	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.886	D	0.886	D	0.000	NO
					PM	0.922	E	0.924	E	0.002	NO
			City of Torrance	ICU	AM	0.950	E	0.950	E	0.000	NO
					PM	0.984	E	0.985	E	0.001	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.675	B	0.679	B	0.004	NO
					PM	0.761	C	0.765	C	0.004	NO
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.900	D	0.904	E	0.004	NO
					PM	0.786	C	0.788	C	0.002	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	0.998	E	0.998	E	0.000	NO
					PM	1.063	F	1.064	F	0.001	NO
			City of Torrance	ICU	AM	1.017	F	1.017	F	0.000	NO
					PM	1.074	F	1.074	F	0.000	NO



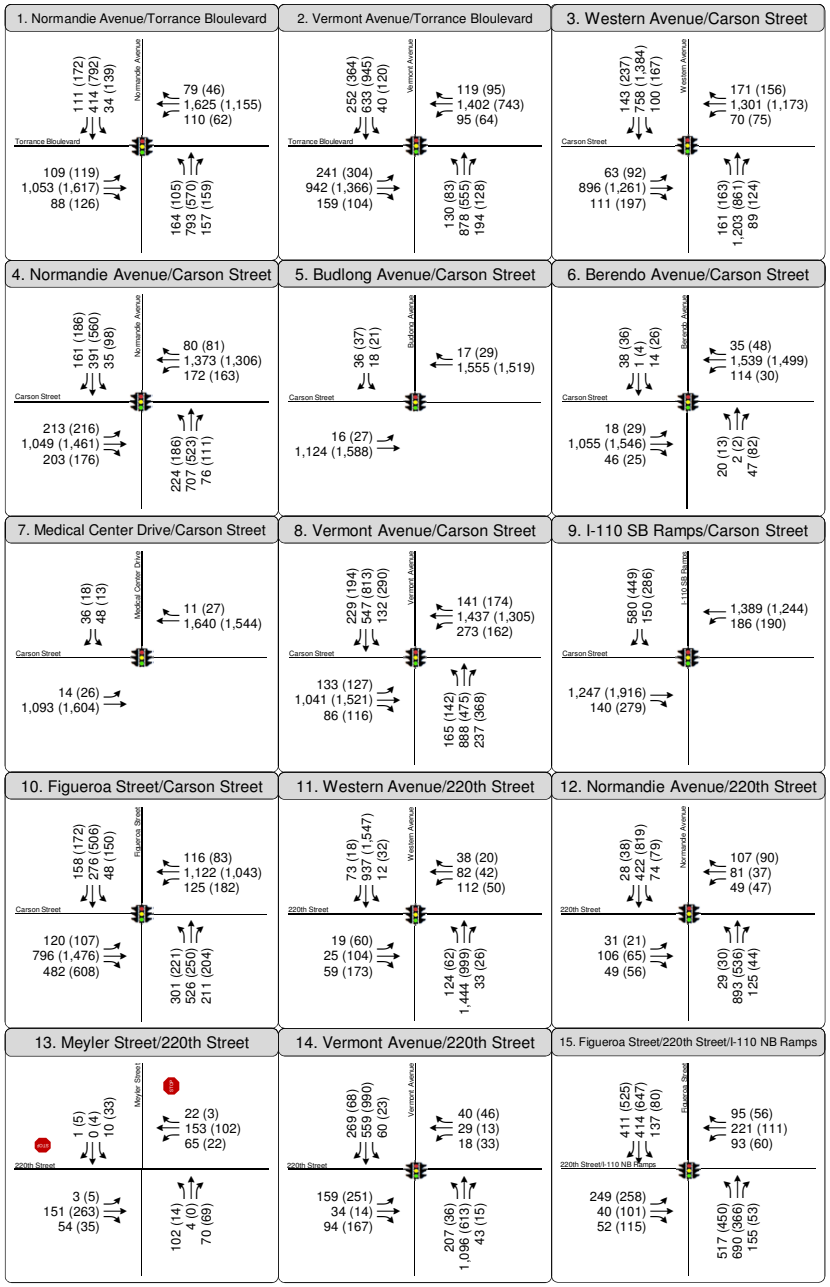
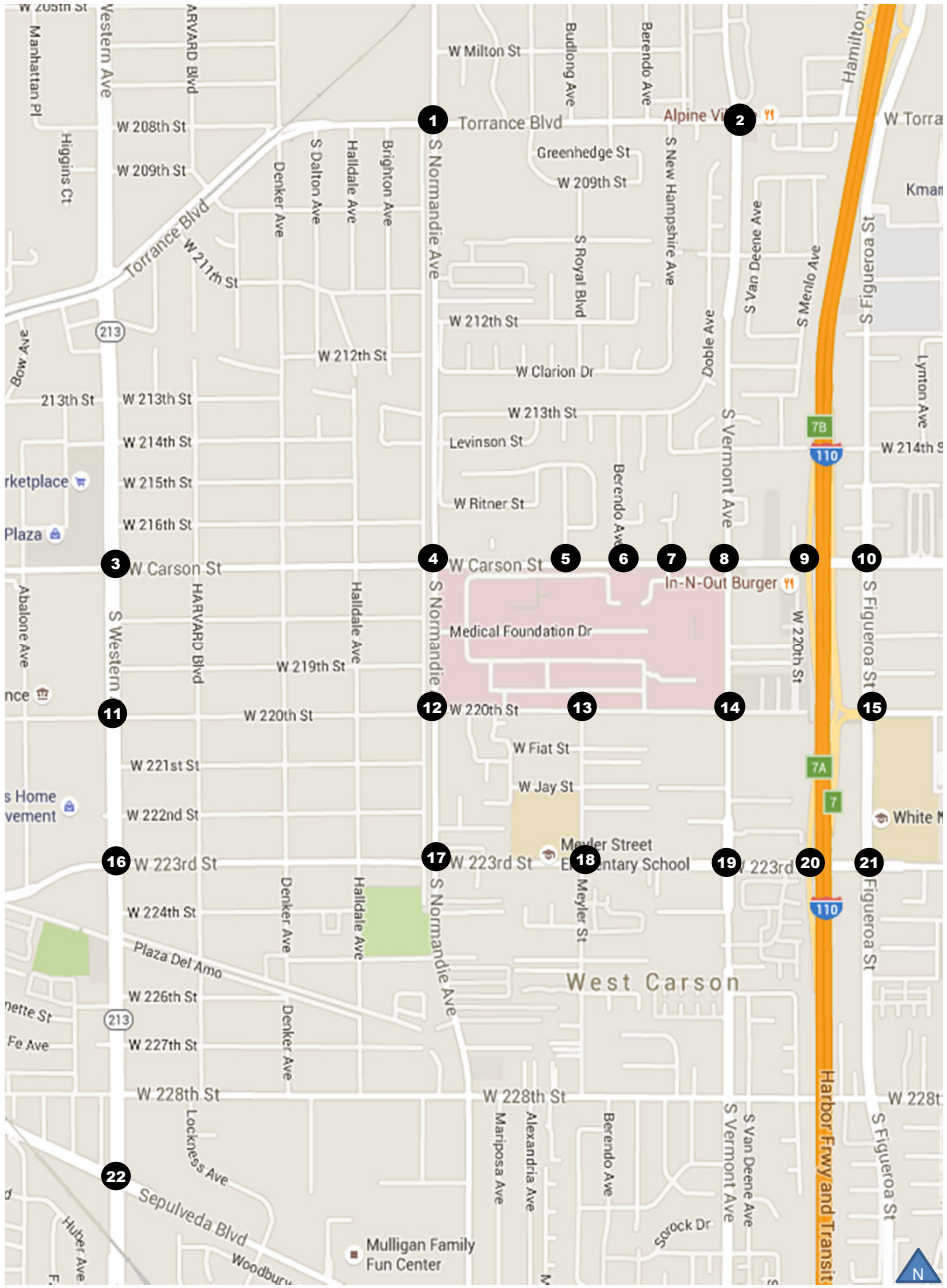


Figure 15
Interim Peak Hour Traffic Volumes



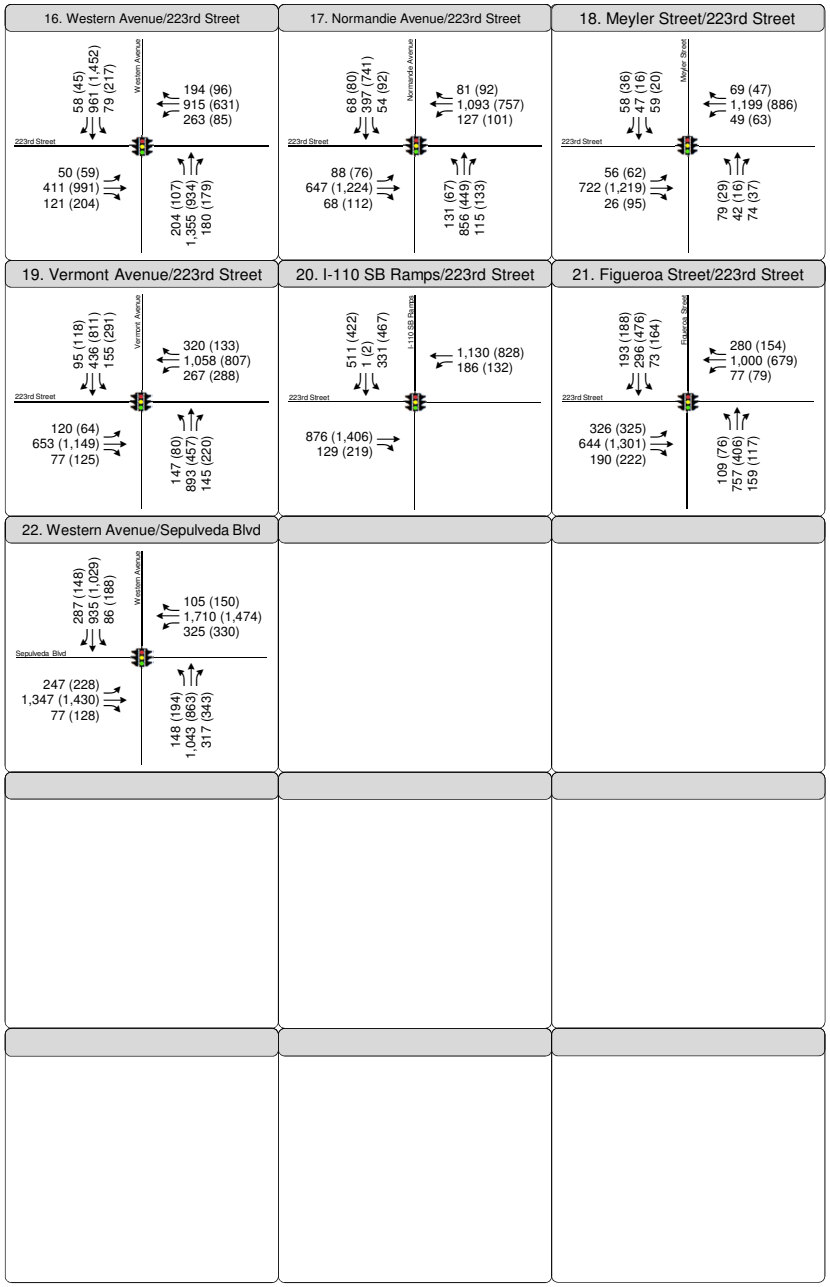
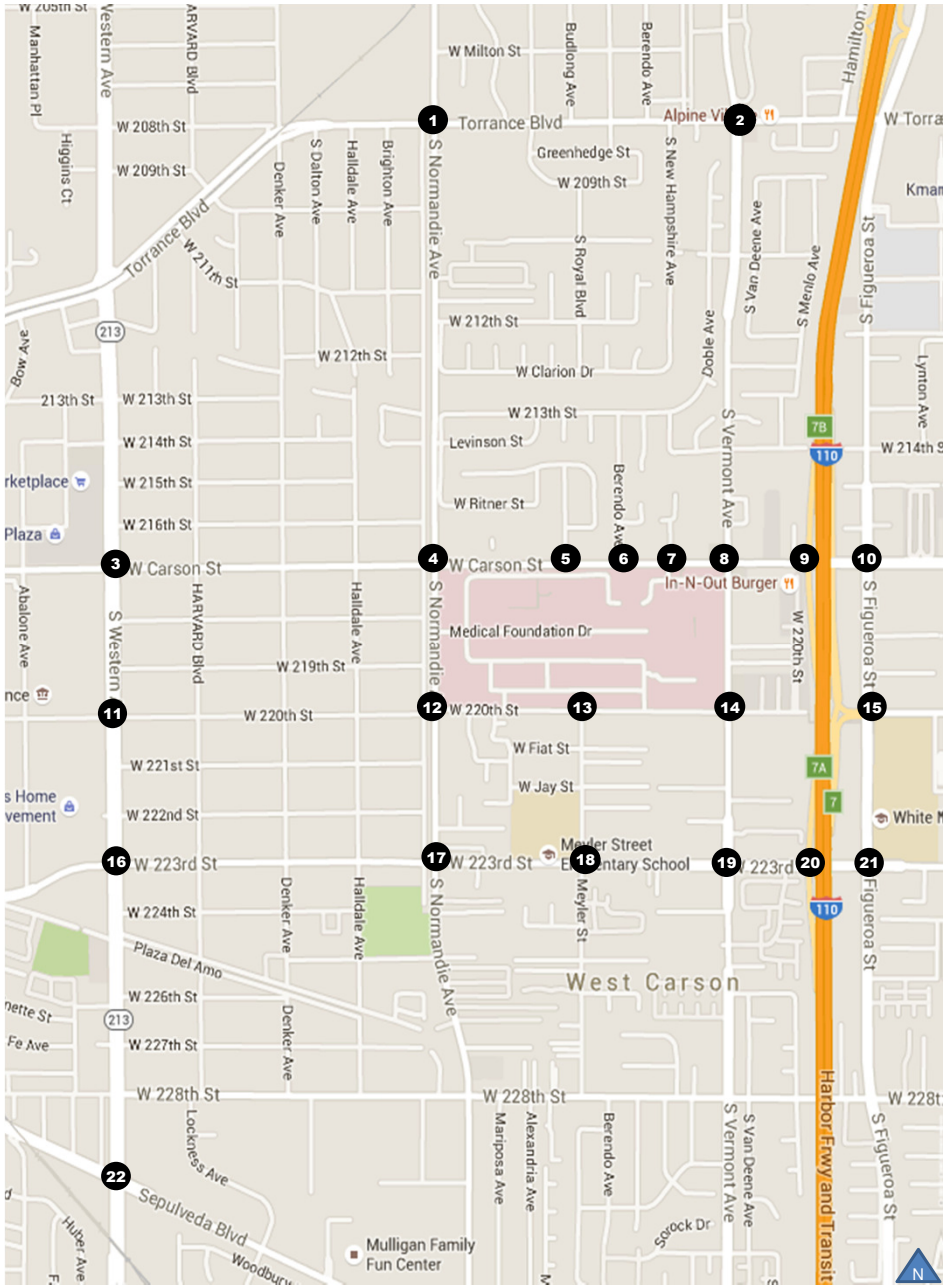


Figure 15
Interim Peak Hour Traffic Volumes



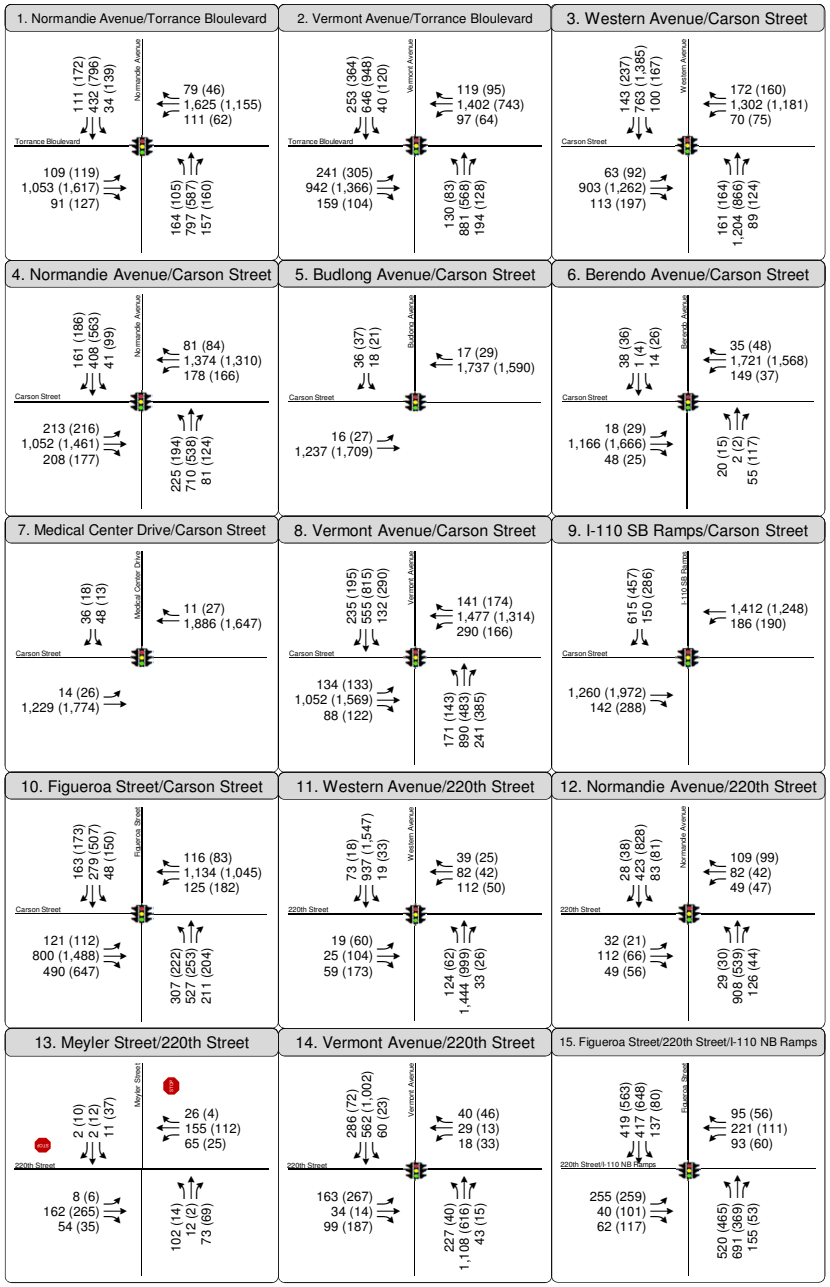
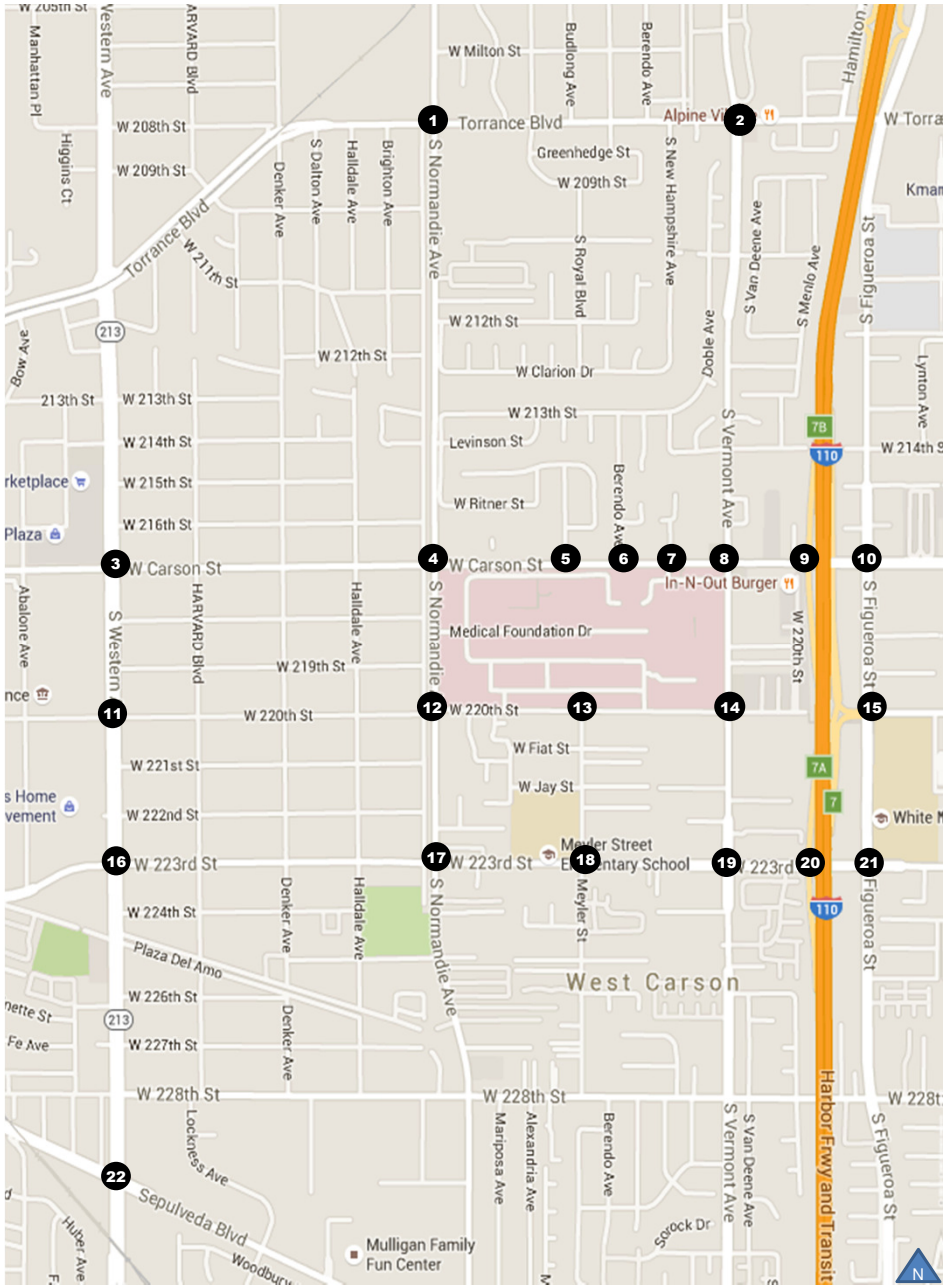


Figure 16
Interim Plus 2023 Project Peak Hour Traffic Volumes



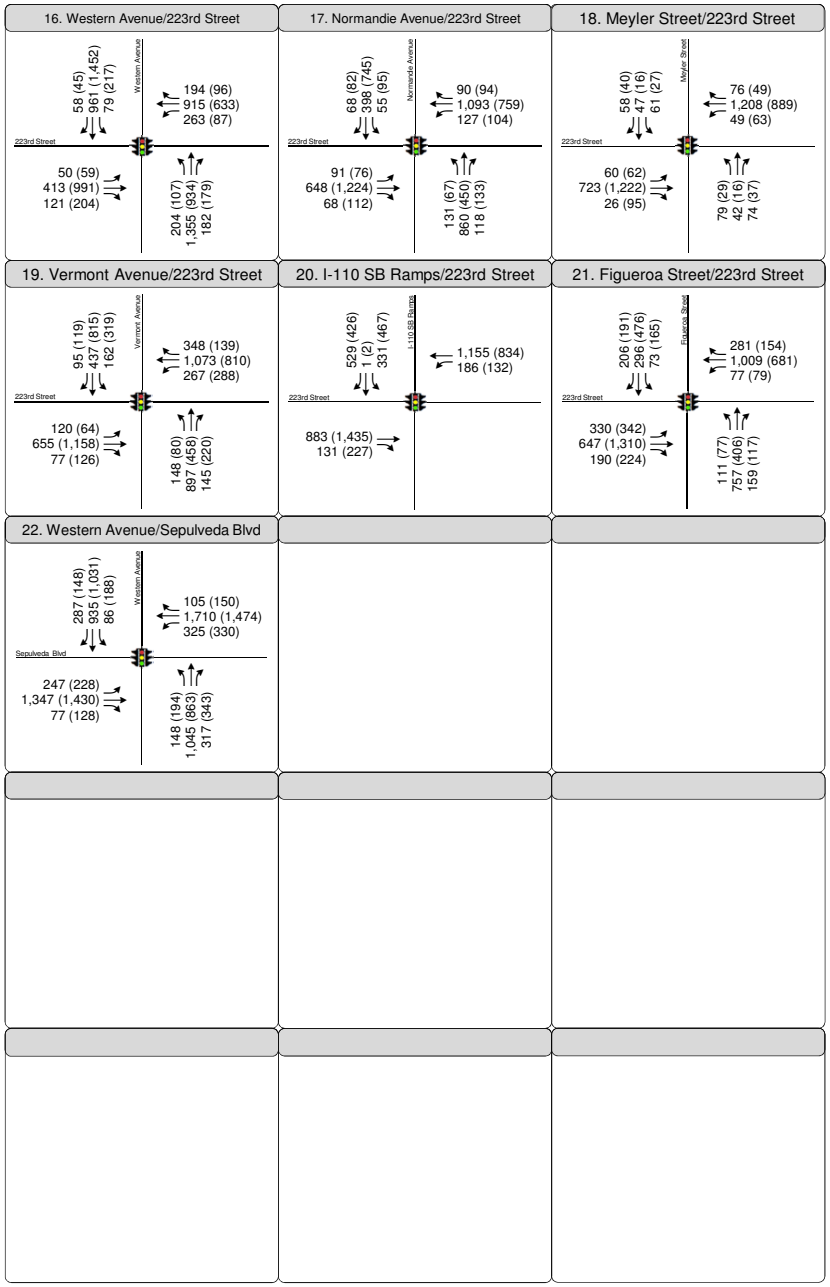


Figure 16
Interim Plus 2023 Project Peak Hour Traffic Volumes

EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE TRAFFIC CONDITIONS

Existing plus 2030 Project plus Cumulative peak hour traffic volumes were developed to determine the projected V/C ratio and LOS for the analyzed intersections within unincorporated Los Angeles County. Figure 17 and Table 9 summarize the levels of service. Poor operating conditions (LOS E or F) are projected at six of the 15 study intersections wholly or partly within Los Angeles County's jurisdiction during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street

CUMULATIVE TRAFFIC CONDITIONS

Cumulative peak hour traffic volumes were developed with an areawide growth factor to determine the projected V/C ratio and LOS for the analyzed intersections within the Cities of Los Angeles, Carson and Torrance. Figure 18 and Table 10 summarize the levels of service. As indicated in Table 8, poor operating conditions (LOS E or F) are projected at 10 of the 11 study intersections during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
11. Western Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
17. Normandie Avenue & 223rd Street

21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

CUMULATIVE PLUS 2030 PROJECT TRAFFIC CONDITIONS

Cumulative plus 2030 Project peak hour traffic volumes were developed to determine the projected V/C ratio and LOS for the analyzed intersections within the Cities of Los Angeles, Carson and Torrance. Figure 19 and Table 10 summarize the levels of service. Poor operating conditions (LOS E or F) are projected at 10 of the 11 study intersections during at least one of the analyzed peak hours, including:

1. Normandie Avenue & Torrance Boulevard
3. Western Avenue & Carson Street
4. Normandie Avenue & Carson Street
10. Figueroa Street & Carson Street
11. Western Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
16. Western Avenue & 223rd Street
17. Normandie Avenue & 223rd Street
21. Figueroa Street & 223rd Street
22. Western Avenue & Sepulveda Boulevard

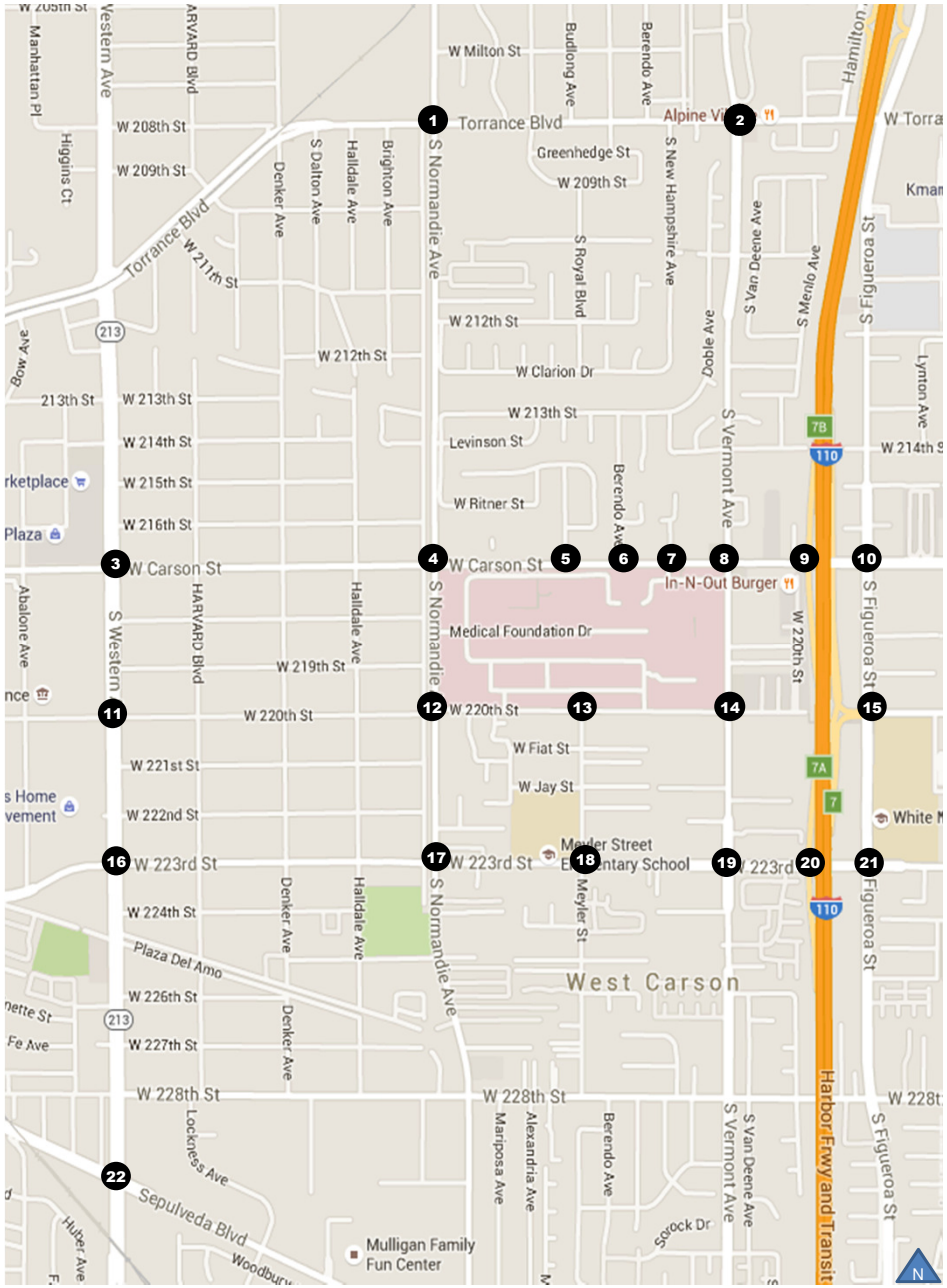
TABLE 9
EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE FOR UNINCORPORATED LOS ANGELES COUNTY
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing plus 2030 Project plus Cumulative		Total Increase in V/C	Cumulative Impact?
						V/C or Delay	LOS	V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.935	E	0.966	E	0.031	YES
					PM	0.936	E	1.000	E	0.064	YES
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.972	E	0.045	YES
					PM	0.880	D	0.900	D	0.020	YES
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.904	E	0.967	E	0.063	YES
					PM	0.930	E	1.038	F	0.108	YES
5	Budlong Avenue	Carson Street	Los Angeles County	ICU	AM	0.570	A	0.669	B	0.099	NO
					PM	0.539	A	0.658	B	0.119	NO
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.675	B	0.100	NO
					PM	0.561	A	0.755	C	0.194	YES
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.632	B	0.755	C	0.123	YES
					PM	0.602	B	0.688	B	0.086	NO
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.982	E	0.077	YES
					PM	0.893	D	1.034	F	0.141	YES
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.941	E	0.127	YES
					PM	0.849	D	0.974	E	0.125	YES
12	Normandie Avenue	220th Street	Los Angeles County	ICU	AM	0.602	B	0.645	B	0.043	NO
					PM	0.481	A	0.530	A	0.049	NO
13	Meyler Street	220th Street	Los Angeles County	ICU	AM	0.382	A	0.473	A	0.091	NO
					PM	0.365	A	0.397	A	0.032	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.656	B	0.729	C	0.073	YES
					PM	0.714	C	0.834	D	0.120	YES
17	Normandie Avenue	223rd Street	Los Angeles County	ICU	AM	0.807	D	0.833	D	0.026	YES
					PM	0.822	D	0.844	D	0.022	YES
18	Meyler Street	223rd Street	Los Angeles County	ICU	AM	0.658	B	0.687	B	0.029	NO
					PM	0.581	A	0.613	B	0.032	NO
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.983	E	0.066	YES
					PM	0.833	D	0.907	E	0.074	YES
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.806	D	0.051	YES
					PM	0.843	D	0.895	D	0.052	YES

Note:

[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all-way stop-controlled.

[b] Project results in the closure of the medical center driveway at Intersection 7.



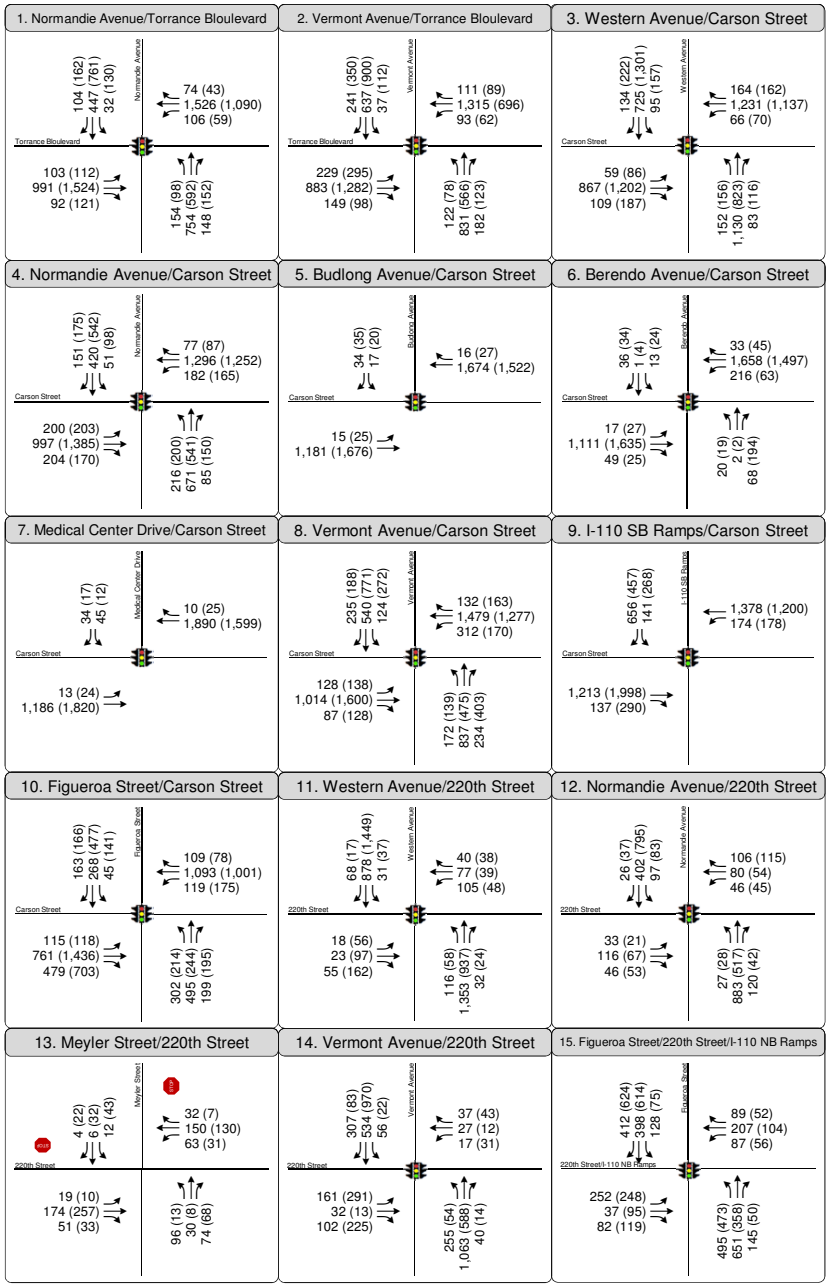
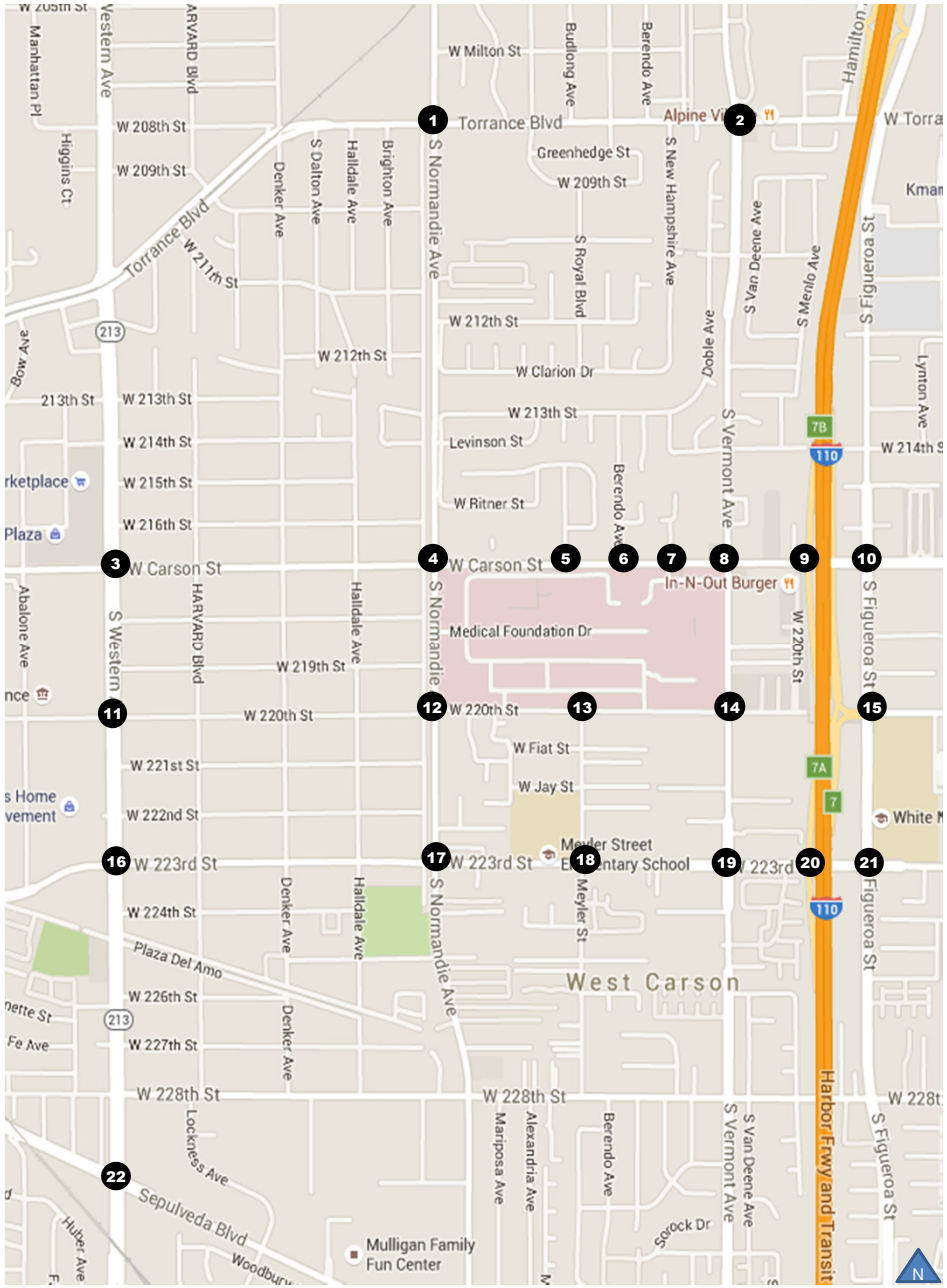


Figure 17
Existing plus 2030 Project plus Cumulative Peak Hour Traffic Volumes



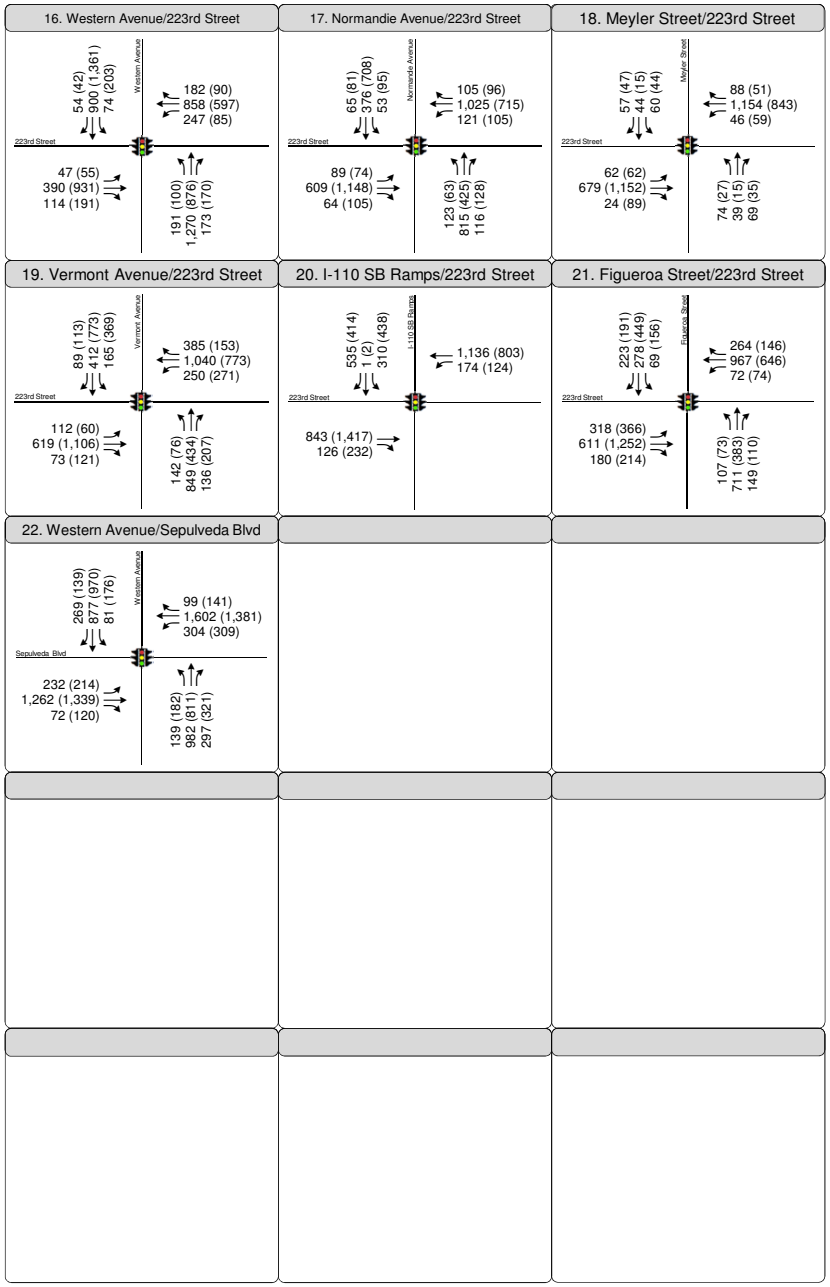
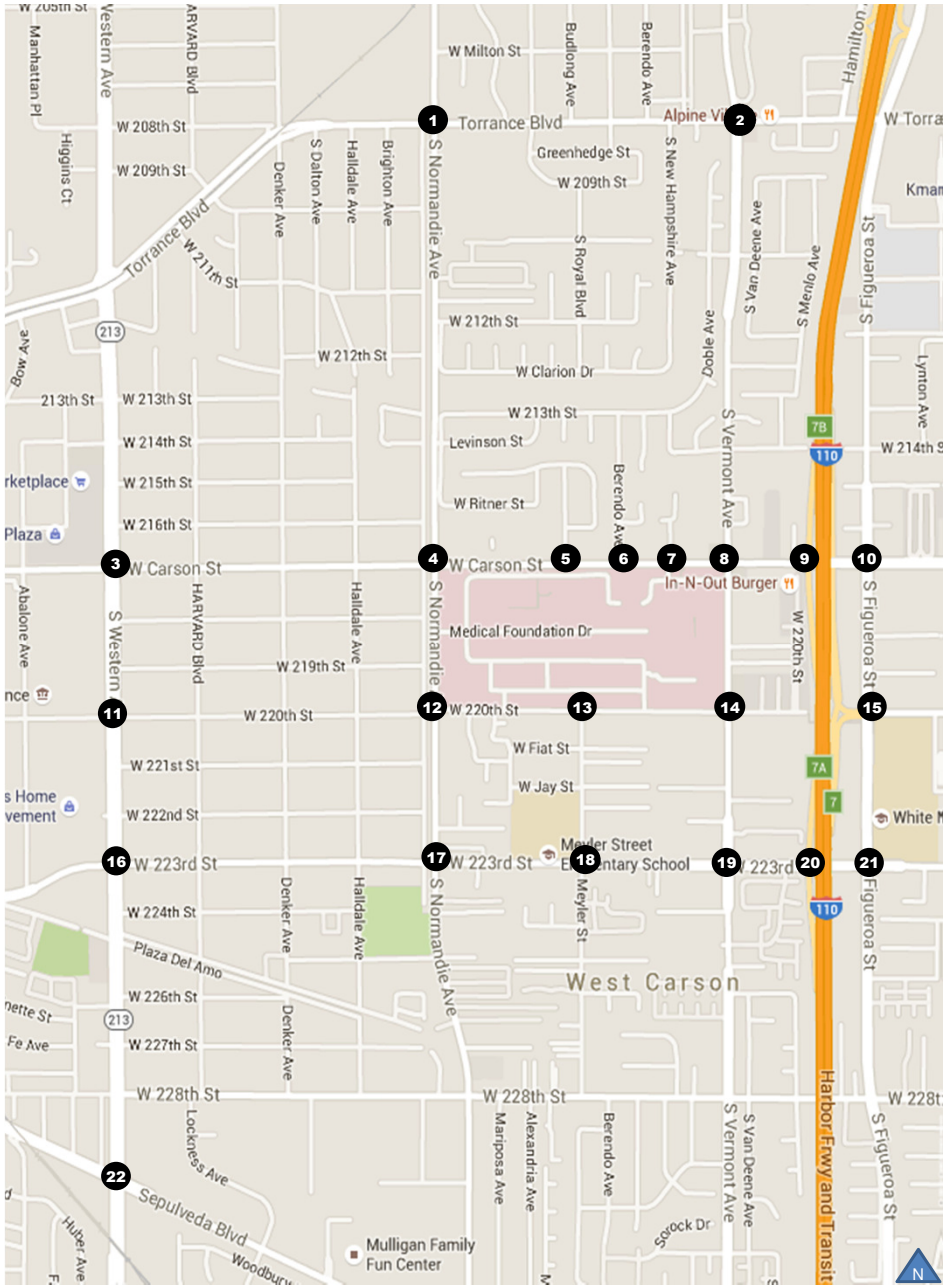


Figure 17
Existing plus 2030 Project plus Cumulative Peak Hour Traffic Volumes

TABLE 10
CUMULATIVE PLUS 2030 PROJECT FOR INCORPORATED CITIES
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative		Cumulative + 2030 Project		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	City of Los Angeles	CMA	AM	1.054	F	1.059	F	0.005	NO
					PM	1.090	F	1.098	F	0.008	NO
3	Western Avenue	Carson Street	City of Los Angeles	CMA	AM	1.076	F	1.081	F	0.005	NO
					PM	1.196	F	1.204	F	0.008	NO
			City of Torrance	ICU	AM	1.085	F	1.089	F	0.004	NO
					PM	1.188	F	1.194	F	0.006	NO
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.910	E	0.933	E	0.023	YES
					PM	1.037	F	1.073	F	0.036	YES
10	Figueroa Street	Carson Street	City of Carson	ICU	AM	0.762	C	0.786	C	0.024	NO
					PM	0.957	E	0.974	E	0.017	NO
11	Western Avenue	220th Street	City of Los Angeles	CMA	AM	0.633	B	0.649	B	0.016	NO
					PM	0.793	C	0.794	C	0.001	NO
			City of Torrance	ICU	AM	0.760	C	0.775	C	0.015	NO
					PM	0.909	E	0.910	E	0.001	NO
12	Normandie Avenue	220th Street	City of Los Angeles	CMA	AM	0.470	A	0.519	A	0.049	NO
					PM	0.345	A	0.359	A	0.014	NO
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	1.024	F	1.054	F	0.030	YES
					PM	1.006	F	1.121	F	0.115	YES
16	Western Avenue	223rd Street	City of Los Angeles	CMA	AM	0.935	E	0.936	E	0.001	NO
					PM	0.974	E	0.978	E	0.004	NO
			City of Torrance	ICU	AM	0.994	E	0.996	E	0.002	NO
					PM	1.029	F	1.034	F	0.005	NO
17	Normandie Avenue	223rd Street	City of Los Angeles	CMA	AM	0.713	C	0.724	C	0.011	NO
					PM	0.805	D	0.817	D	0.012	NO
21	Figueroa Street	223rd Street	City of Carson	ICU	AM	0.939	E	0.956	E	0.017	NO
					PM	0.820	D	0.831	D	0.011	NO
22	Western Avenue	Sepulveda Blvd	City of Los Angeles	CMA	AM	1.054	F	1.054	F	0.000	NO
					PM	1.122	F	1.124	F	0.002	NO
			City of Torrance	ICU	AM	1.067	F	1.067	F	0.000	NO
					PM	1.124	F	1.126	F	0.002	NO



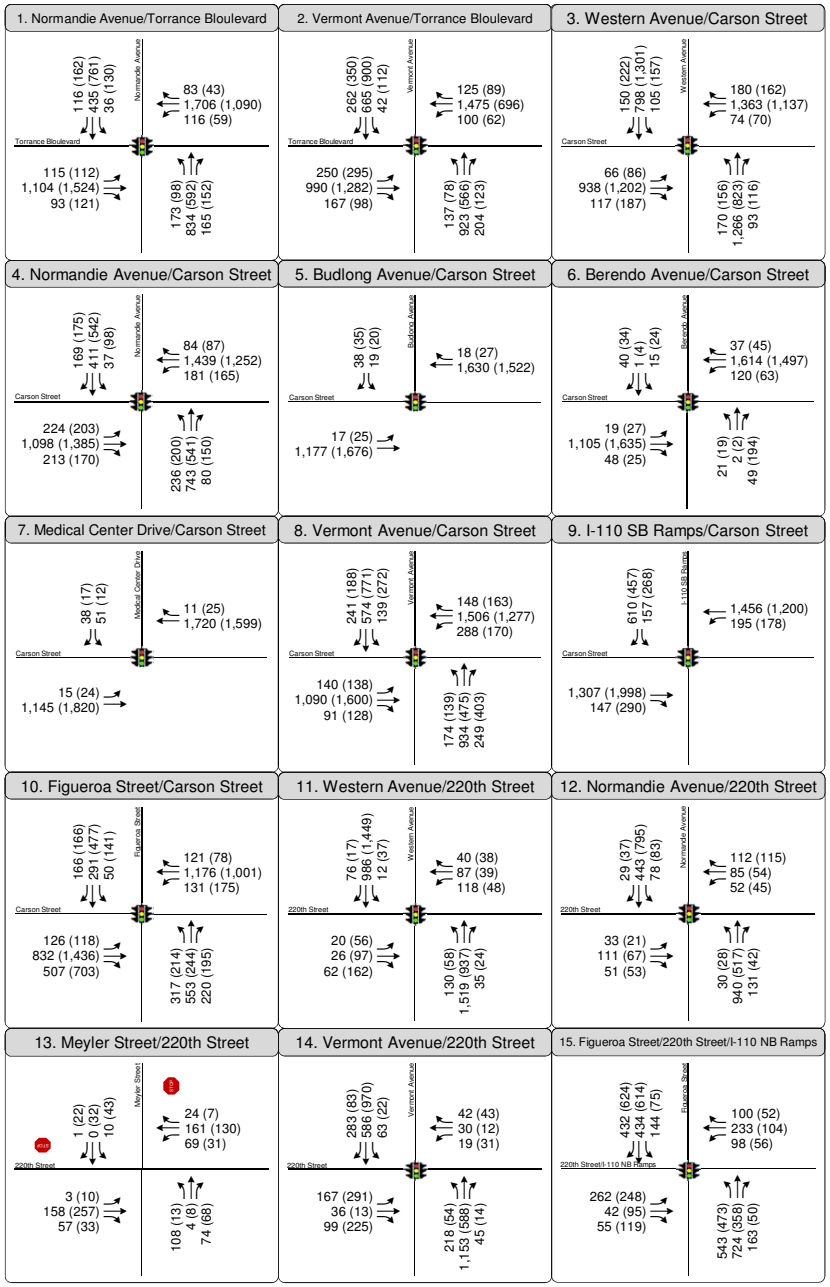
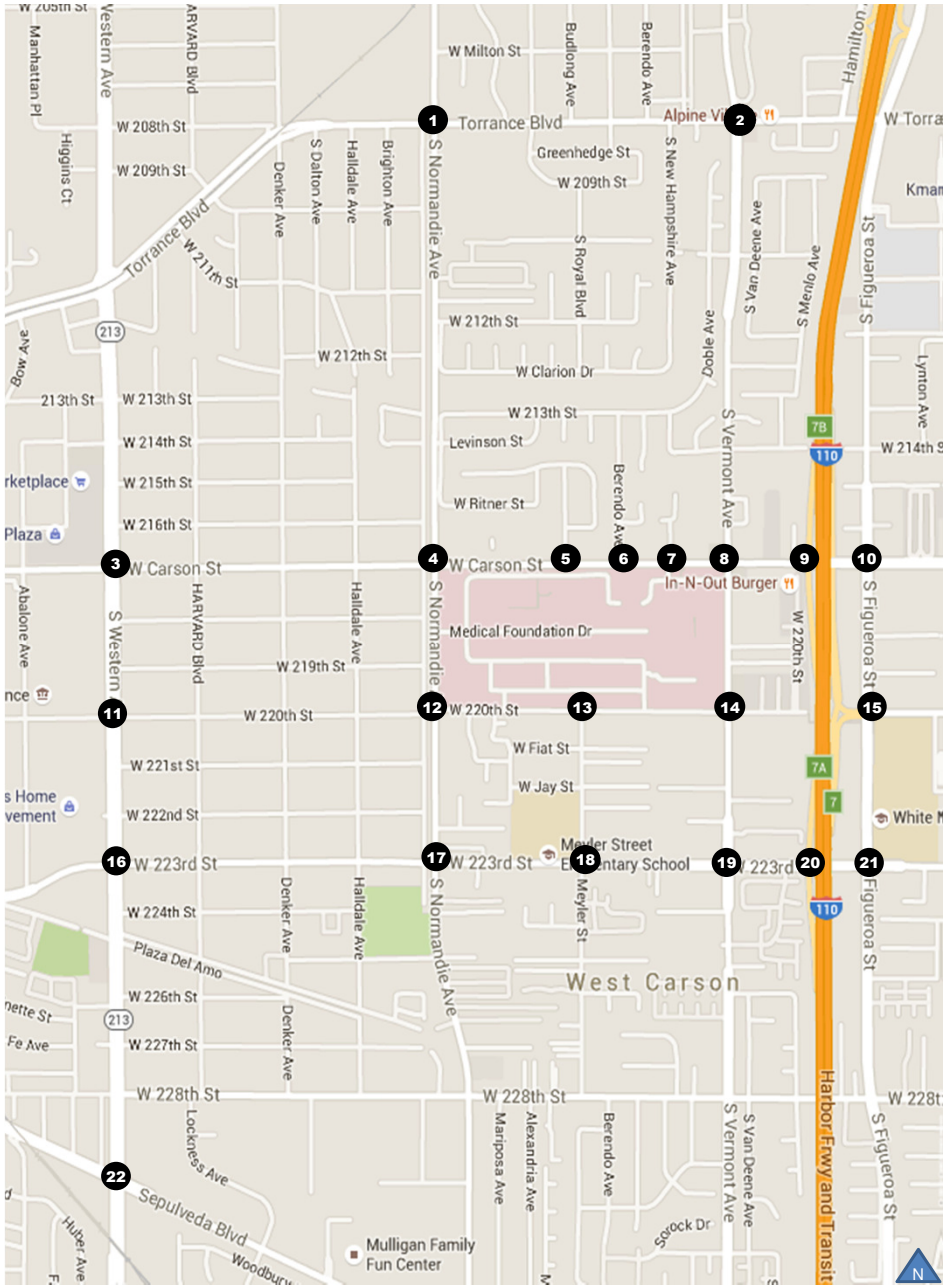


Figure 18
Cumulative Peak Hour Traffic Volumes



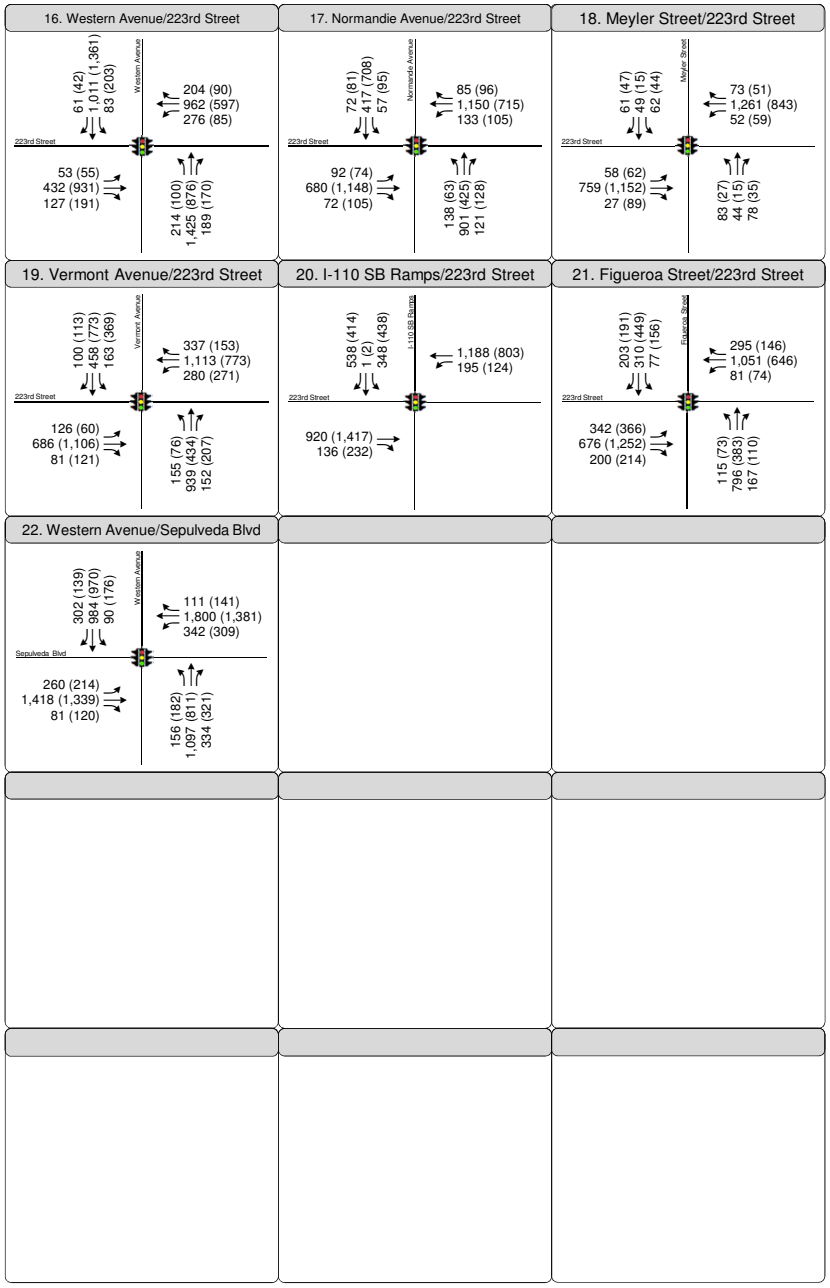
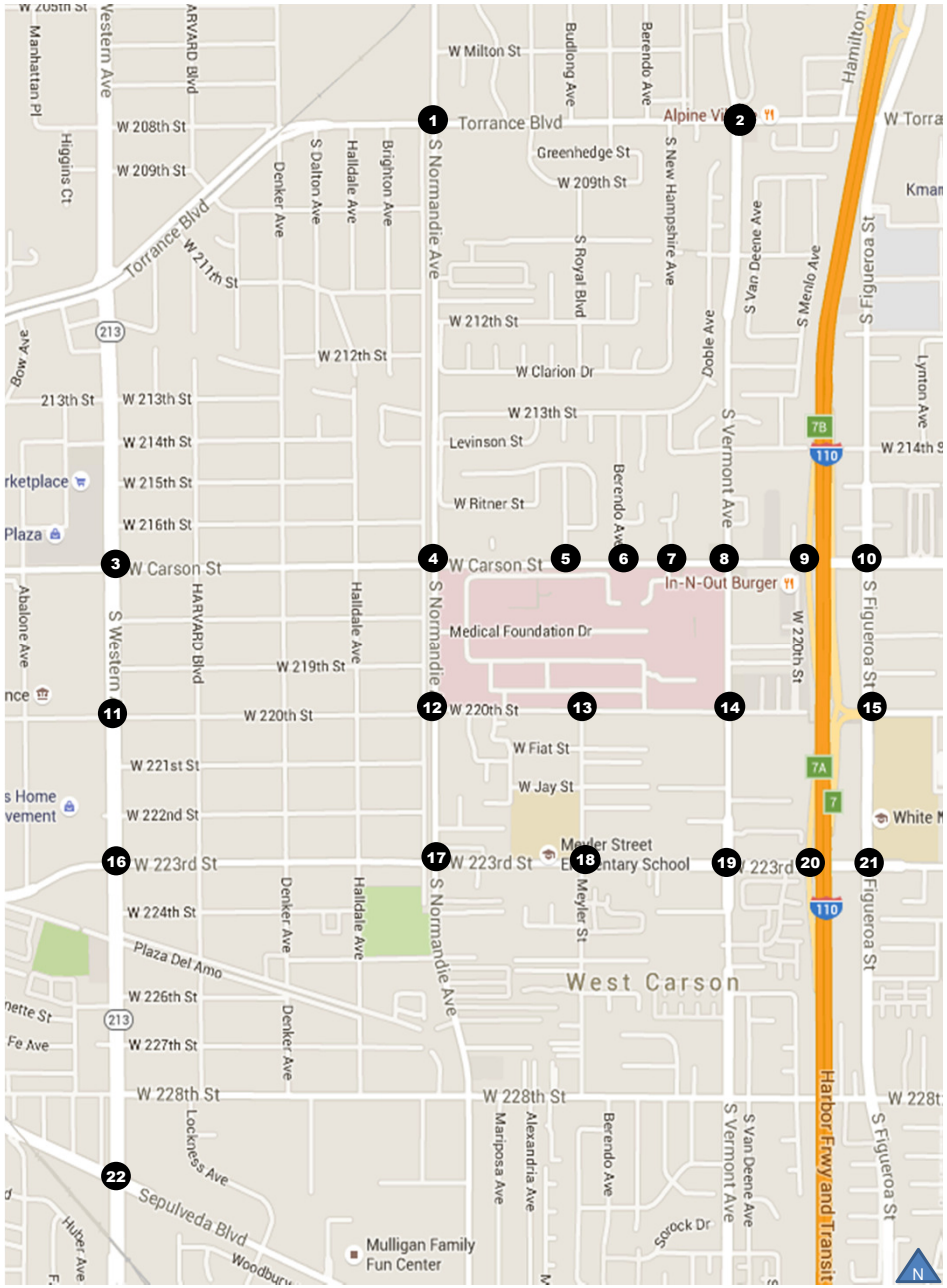


Figure 18
Cumulative Peak Hour Traffic Volumes



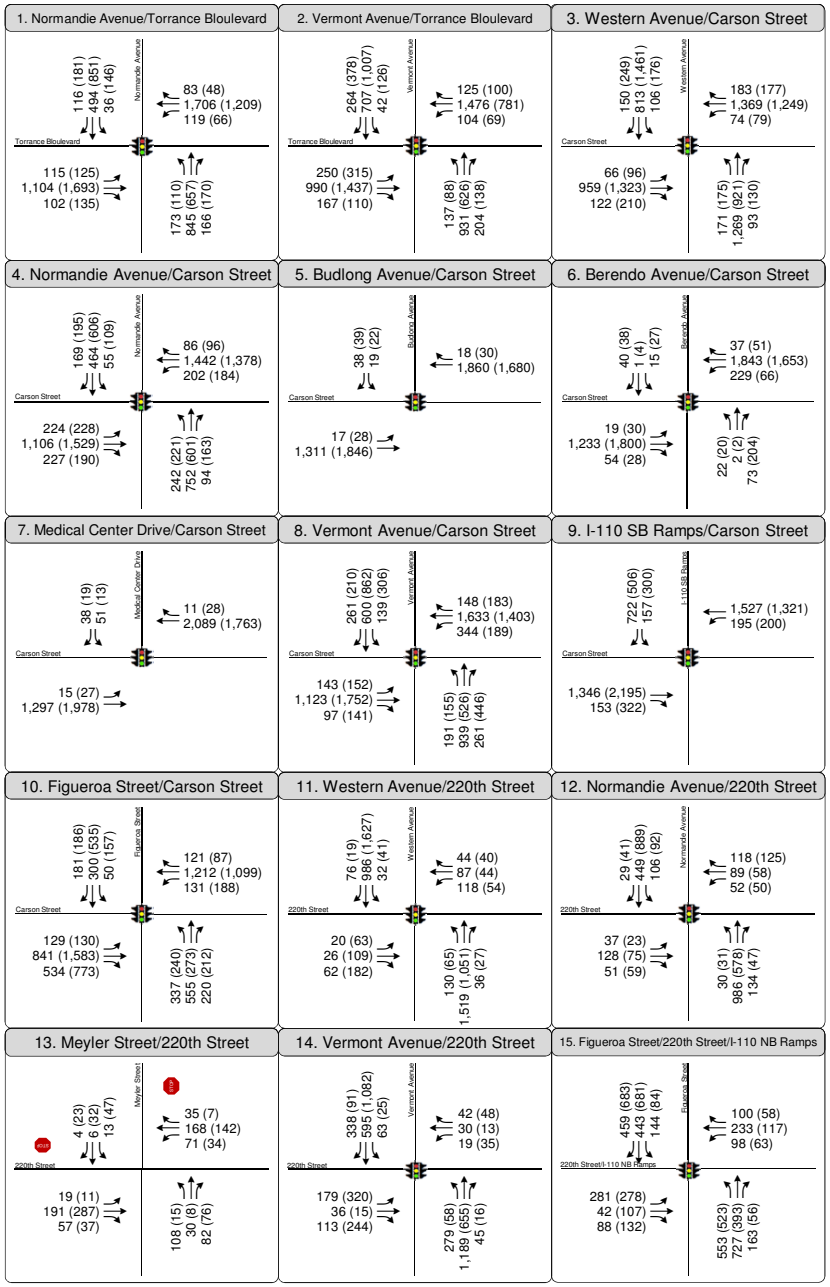
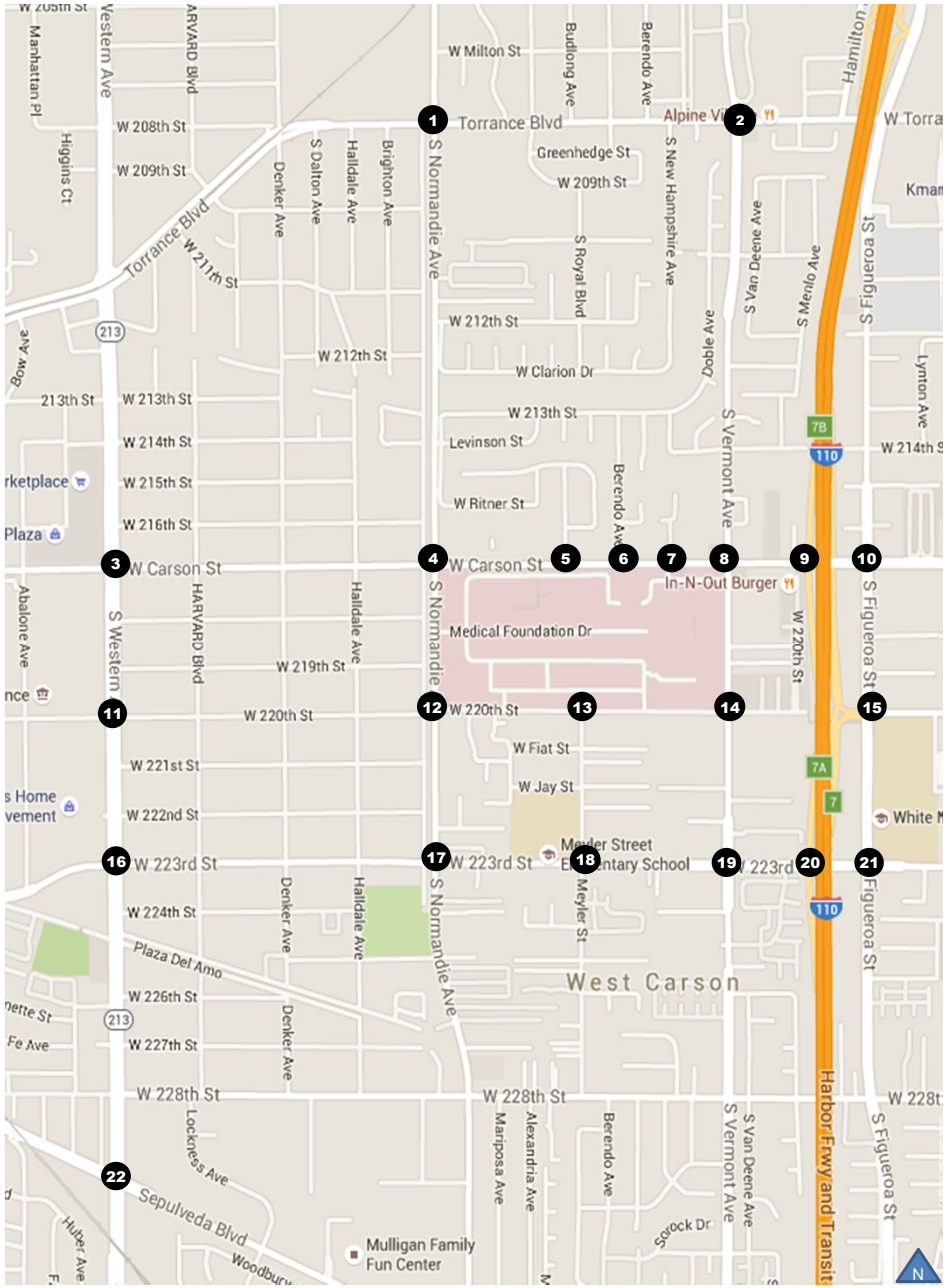


Figure 19
Cumulative Plus Project Peak Hour Traffic Volumes



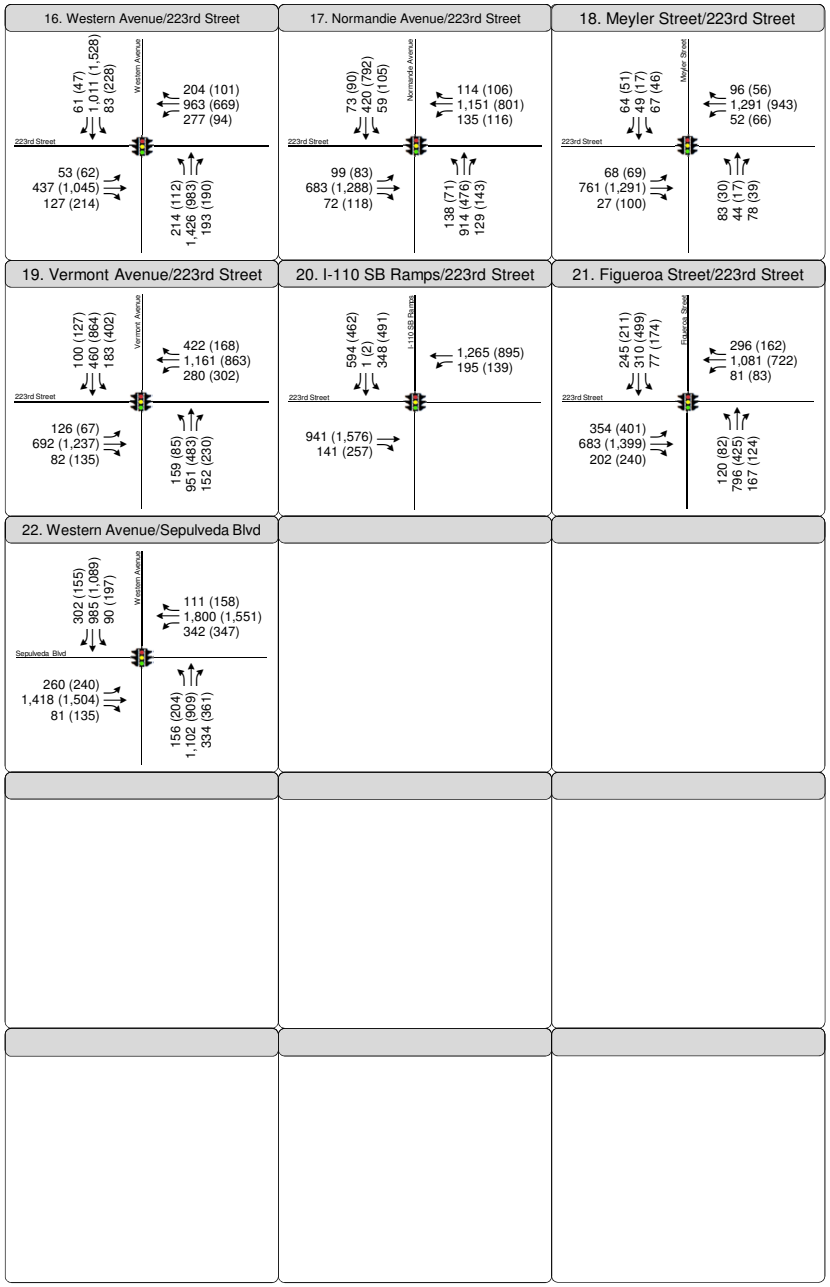


Figure 19
Cumulative Plus Project Peak Hour Traffic Volumes

4. TRAFFIC IMPACT ANALYSIS

This section presents an analysis of the information in the previous chapter to determine the potential traffic impacts of the proposed project on the operating conditions of the surrounding street system. The traffic impact analysis compares the projected LOS at each study intersection under future plus project conditions to the future base conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by local jurisdictions.

SIGNIFICANT TRAFFIC IMPACT CRITERIA

The following chapter provides a description of the transportation performance measures and methodologies used for their calculation by each respective jurisdiction.

COUNTY OF LOS ANGELES

In accordance with Los Angeles County criteria defined in their Traffic Impact Analysis Report Guidelines[6], an impact is considered to be significant if one of the following thresholds is exceeded:

LOS	Final V/C Ratio	Relative Baseline Increase in V/C
C	0.71 - 0.80	equal to or greater than 0.040
D	0.81 - 0.90	equal to or greater than 0.020
E or F	> 0.91	equal to or greater than 0.010

CITY OF CARSON

The City of Carson has created threshold criteria to determine whether the addition of project-generated trips results in a significant impact at a study intersection, and thus requires mitigation. The thresholds of significance have to satisfy the following two criteria:

- The addition of project-generated trips causes an intersection V/C ratio increase of 0.020 or more; and

[6] *Draft Traffic Impact Analysis Report Guidelines* (Los Angeles County Department of Public Works, December 2013).

- Under future plus project conditions, the intersection is projected to operate at LOS E or F (represented by a V/C ratio of 0.901 or greater).

CITY OF LOS ANGELES

The City of Los Angeles has established threshold criteria to determine significant traffic impacts of a project in its jurisdiction[7]. Under the LADOT guidelines, an intersection would be significantly impacted if it experienced an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

LOS	Final V/C Ratio	Project-Related Increase in V/C
C	0.701 - 0.800	equal to or greater than 0.040
D	0.801 - 0.900	equal to or greater than 0.020
E or F	> 0.901	equal to or greater than 0.010

CITY OF TORRANCE

The City of Torrance uses the following thresholds of significance to assess project impacts based on the ICU analysis methodology[8]:

- The project causes a change from LOS D or better to LOS E or F; or
- The project causes a change from LOS E to LOS F; or
- The project increases traffic at the intersection by 2% of capacity (ICU increase ≥ 0.020), causing or worsening LOS E or F (ICU > 0.901).

[7] *Traffic Study Policies and Procedures* (City of Los Angeles Department of Transportation, August 2014). *http://ladot.lacity.org/stellent/groups/departments/@ladot_contributor/documents/contributor_web_content/lacityp_029521.pdf*

[8] *Traffic Impact Analysis Report Torrance Transit Center* (LLG, 2013). http://www.torranceca.gov/PDF/Attachment_5-Traffic_Impact_Analysis.pdf

EXISTING PLUS PROJECT IMPACT ANALYSIS

The Existing plus Project volumes as estimated in the previous chapter were analyzed to determine potential operating conditions and traffic impacts with the addition of incremental project-generated traffic associated with the 2023 Project and 2030 Project scenarios of the Harbor-UCLA Medical Center Master Plan on the existing baseline conditions. Table 4 shows the results of the analysis with 2023 Project trips. After applying the aforementioned significant impact criteria, it was determined that the proposed project would result in significant impacts to the following four study intersections under Existing plus 2023 Project conditions:

8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
19. Vermont Avenue & 223rd Street

Table 5 shows the results of the analysis for Existing plus 2030 Project trips. When examining Existing plus 2030 Project conditions using the aforementioned significant impact criteria, significant impacts would result at the following nine intersections:

4. Normandie Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
14. Vermont Avenue & 220th Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps
17. Normandie Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

Detailed level of service worksheets for all scenarios are provided in Appendix C.

EXISTING PLUS 2023 PROJECT PLUS CUMULATIVE PROJECT IMPACT ANALYSIS

The Existing plus 2023 Project plus Cumulative peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. Table 7 summarizes the Existing plus 2023 Project plus Cumulative. As shown in Table 7, using the criteria for determination of significant impacts, the proposed project would create significant traffic impacts at the following eight analyzed intersections under Existing plus 2023 Project plus Cumulative conditions:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

INTERIM PLUS 2023 PROJECT IMPACT ANALYSIS

The Interim peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections during the projected operating conditions with the addition of the proposed project traffic. Table 8 summarizes the Interim and Interim plus 2023 Project LOS using the appropriate methodology as prescribed by the local city. As shown in Table 8, using the criteria for determination of significant impacts, the proposed project would create a significant traffic impacts at the following analyzed intersection under Interim plus 2023 Project conditions:

15. Figueroa Street and 220th Street/I-110 Northbound Ramps

EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE PROJECT IMPACT ANALYSIS

The Existing plus 2030 Project plus Cumulative peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. Table 9 summarizes the Existing plus 2030 Project plus Cumulative. As shown in Table 9, using the criteria for determination of significant impacts, the proposed project would create significant traffic impacts at the following 11 analyzed intersections under Existing plus 2030 Project plus Cumulative conditions:

1. Normandie Avenue & Torrance Boulevard
2. Vermont Avenue & Torrance Boulevard
4. Normandie Avenue & Carson Street
6. Berendo Avenue & Carson Street
7. Medical Center Drive & Carson Street
8. Vermont Avenue & Carson Street
9. I-110 Southbound Ramps & Carson Street
14. Vermont Avenue & 220th Street
17. Normandie Avenue & 223rd Street
19. Vermont Avenue & 223rd Street
20. I-110 Southbound Ramps & 223rd Street

CUMULATIVE PLUS 2030 PROJECT IMPACT ANALYSIS

The Cumulative peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections during the projected operating conditions with the addition of the proposed project traffic. Table 10 summarizes the Cumulative and Cumulative plus 2030 Project LOS using the appropriate methodology as prescribed by the local city. As shown in Table 10, using the criteria for determination of significant impacts, the proposed project would create significant traffic impacts at the following two analyzed intersections under Cumulative plus 2030 Project conditions:

4. Normandie Avenue & Carson Street
15. Figueroa Street and 220th Street/I-110 Northbound Ramps

SUMMARY OF PROJECT IMPACT ANALYSIS

Table 11 depicts the impacts at all intersections within unincorporated Los Angeles County using the impact criteria from Los Angeles County. Table 12 depicts the impacts at all intersections within the jurisdictions of incorporated cities (City of Los Angeles, City of Torrance, and City of Carson) using the impact criteria from the relevant city. Impacts were found at 12 of the 22 study intersections during either the AM or PM peak hour analysis period of at least one scenario.

TABLE 11
SIGNIFICANT IMPACTS AT UNINCORPORATED LOS ANGELES COUNTY INTERSECTIONS

ID	Intersection	Period	Existing + 2023 Project	Existing plus 2023 Project plus Cumulative	Existing + 2030 Project	Existing plus 2030 Project plus Cumulative
1	Normandie Avenue & Torrance Boulevard	AM	NO	**YES**	NO	**YES**
		PM	NO	**YES**	NO	**YES**
2	Vermont Avenue & Torrance Boulevard	AM	NO	**YES**	NO	**YES**
		PM	NO	NO	NO	**YES**
4	Normandie Avenue & Carson Street	AM	NO	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
5	Budlong Avenue & Carson Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
6	Berendo Avenue & Carson Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	**YES**
7	Medical Center Drive & Carson Street	AM	NO	**YES**	**YES**	**YES**
		PM	NO	NO	NO	NO
8	Vermont Avenue & Carson Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	**YES**	**YES**	**YES**	**YES**
9	I-110 SB Ramps & Carson Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
12	Normandie Avenue & 220th Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
13	Meyler Street & 220th Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
14	Vermont Avenue & 220th Street	AM	NO	NO	**YES**	**YES**
		PM	NO	NO	**YES**	**YES**
17	Normandie Avenue & 223rd Street	AM	NO	NO	**YES**	**YES**
		PM	NO	NO	NO	**YES**
18	Meyler Street & 223rd Street	AM	NO	NO	NO	NO
		PM	NO	NO	NO	NO
19	Vermont Avenue & 223rd Street	AM	**YES**	**YES**	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**
20	I-110 SB Ramps & 223rd Street	AM	NO	NO	**YES**	**YES**
		PM	NO	**YES**	**YES**	**YES**

TABLE 12
SIGNIFICANT IMPACTS AT INCORPORATED CITY INTERSECTIONS

ID	Intersection	Jurisdiction	Period	Existing + 2023 Project	Interim + 2023 Project	Existing + 2030 Project	Cumulative + 2030 Project
1	Normandie Avenue & Torrance Boulevard	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
3	Western Avenue & Carson Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
4	Normandie Avenue & Carson Street	City of Los Angeles	AM	NO	NO	NO	**YES**
			PM	NO	NO	**YES**	**YES**
10	Figueroa Street & Carson Street	City of Carson	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
11	Western Avenue & 220th Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
12	Normandie Avenue & 220th Street	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
15	Figueroa Street & 220th Street/I-110 NB Ramps	City of Carson	AM	NO	NO	**YES**	**YES**
			PM	**YES**	**YES**	**YES**	**YES**
16	Western Avenue & 223rd Street	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
17	Normandie Avenue & 223rd Street	City of Los Angeles	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
21	Figueroa Street & 223rd Street	City of Carson	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO
22	Western Avenue & Sepulveda Blvd	City of Los Angeles & City of Torrance	AM	NO	NO	NO	NO
			PM	NO	NO	NO	NO

MITIGATION MEASURES

The traffic impact analysis determined that the proposed development would generate significant traffic impacts at 12 of the analyzed intersections under future plus project conditions. Tables 13 and 14 summarizes mitigation measures at intersections with significant impacts using Los Angeles County's impact criteria at intersections located within unincorporated Los Angeles County. Tables 15 and 16 summarize mitigation measures at intersections with significant impacts located in incorporated cities using the impact criteria from the respective city. As part of the mitigation process, local planning documents were reviewed from the County and adjacent jurisdictions, including the County's *Bicycle Master Plan*[9], Los Angeles County Municipal Code Guidance on Right-of-Way and Roadway Width Requirements[10], City of Carson General Plan[11] and the City of Los Angeles' *Mobility Plan 2035*[12]. Preliminary concepts from the *West Carson Transit Oriented Development Specific Plan* were also considered. The following is a summary of proposed mitigations.

NORMANDIE AVENUE & TORRANCE BOULEVARD

The proposed project would result in a significant impact at the intersection of Normandie Avenue & Torrance Boulevard (Intersection #1) in the Existing plus 2023 Project plus Cumulative and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as the addition of separate right-turn lanes at the eastbound or westbound approaches, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

VERMONT AVENUE & TORRANCE BOULEVARD

The proposed project would result in a significant impact at the intersection of Vermont Avenue & Torrance Boulevard (Intersection #2) in the Existing plus 2023 Project plus Cumulative and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as additional northbound or southbound through lanes, but were deemed infeasible due to insufficient street right-of-way. Thus, this impact would remain significant and unavoidable.

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[9] *Bicycle Master Plan* (County of Los Angeles, 2012); http://dpw.lacounty.gov/pdd/bike/masterplan.cfm
[10] Los Angeles County Municipal Code (Los Angeles County, updated 2016)
[11] Carson General Plan; http://ci.carson.ca.us/department/communitydevelopment/generalplan.asp
[12] *Mobility Plan 2035* (City of Los Angeles, 2015); https://la2b.org/participate-2/documents/

TABLE 13
EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE WITH MITIGATION FOR UNINCORPORATED LOS ANGELES COUNTY
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+ 2030 Project		Total Increase in V/C	Project Impact?	E+P plus Mitigation		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.904	E	0.925	E	0.021	YES	**No Feasible Mitigation**			
					PM	0.93	E	0.962	E	0.032	YES				
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.642	B	0.067	NO	**No Feasible Mitigation**			
					PM	0.561	A	0.688	B	0.127	NO				
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.632	B	0.721	C	0.089	YES	**No Feasible Mitigation**			
					PM	0.602	B	0.621	B	0.019	NO				
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.946	E	0.041	YES	**No Feasible Mitigation**			
					PM	0.893	D	0.962	E	0.069	YES				
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.907	E	0.093	YES	0.745	C	-0.069	NO
					PM	0.849	D	0.916	E	0.067	YES	0.862	F	0.013	NO
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.656	B	0.720	C	0.064	YES	**No Feasible Mitigation**			
					PM	0.714	C	0.827	D	0.113	YES				
17	Normandie Avenue	223rd Street	Los Angeles County	ICU	AM	0.807	D	0.828	D	0.021	YES	**No Feasible Mitigation**			
					PM	0.822	D	0.834	D	0.012	NO				
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.975	E	0.058	YES	**No Feasible Mitigation**			
					PM	0.833	D	0.886	D	0.053	YES				
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.796	C	0.041	YES	0.713	C	-0.042	NO
					PM	0.843	D	0.873	D	0.03	YES	0.779	E	-0.064	NO

Note:
[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all-way stop-controlled.

TABLE 14
EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE WITH MITIGATION FOR UNINCORPORATED LOS ANGELES COUNTY
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name [a]	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing plus 2030 Project plus Cumulative		Total Increase in V/C	Cumulative Impact?	E+P+C plus Mitigation		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
1	Normandie Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.935	E	0.966	E	0.031	YES	**No Feasible Mitigation**			
					PM	0.936	E	1.000	E	0.064	YES				
2	Vermont Avenue	Torrance Boulevard	Los Angeles County	ICU	AM	0.927	E	0.972	E	0.045	YES	**No Feasible Mitigation**			
					PM	0.88	D	0.900	D	0.020	YES				
4	Normandie Avenue	Carson Street	Los Angeles County	ICU	AM	0.904	E	0.967	E	0.063	YES	**No Feasible Mitigation**			
					PM	0.93	E	1.038	F	0.108	YES				
6	Berendo Avenue	Carson Street	Los Angeles County	ICU	AM	0.575	A	0.675	B	0.100	NO	**No Feasible Mitigation**			
					PM	0.561	A	0.755	C	0.194	YES				
7	Medical Center Drive	Carson Street	Los Angeles County	ICU	AM	0.632	B	0.755	C	0.123	YES	**No Feasible Mitigation**			
					PM	0.602	B	0.688	B	0.086	NO				
8	Vermont Avenue	Carson Street	Los Angeles County	ICU	AM	0.905	E	0.982	E	0.077	YES	**No Feasible Mitigation**			
					PM	0.893	D	1.034	F	0.141	YES				
9	I-110 SB Ramps	Carson Street	Los Angeles County	ICU	AM	0.814	D	0.941	E	0.127	YES	0.780	C	-0.034	NO
					PM	0.849	D	0.974	E	0.125	YES	0.915	E	0.066	YES
14	Vermont Avenue	220th Street	Los Angeles County	ICU	AM	0.656	B	0.729	C	0.073	YES	**No Feasible Mitigation**			
					PM	0.714	C	0.834	D	0.12	YES				
17	Normandie Avenue	223rd Street	Los Angeles County	ICU	AM	0.807	D	0.833	D	0.026	YES	**No Feasible Mitigation**			
					PM	0.822	D	0.844	D	0.022	YES				
19	Vermont Avenue	223rd Street	Los Angeles County	ICU	AM	0.917	E	0.983	E	0.066	YES	**No Feasible Mitigation**			
					PM	0.833	D	0.907	E	0.074	YES				
20	I-110 SB Ramps	223rd Street	Los Angeles County	ICU	AM	0.755	C	0.806	D	0.051	YES	0.719	C	-0.036	NO
					PM	0.843	D	0.895	D	0.052	YES	0.797	C	-0.046	NO

Note:

[a] All Intersections are signalized except for #13, Meyler Street and 220th Street, which is all-way stop-controlled.

[b]

TABLE 15
EXISTING PLUS 2030 PROJECT WITH MITIGATION FOR INCORPORATED CITIES
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Existing		Existing+Project [a]		Project Increase In V/C	Significant Impact?	C+P plus Mitigation		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.763	C	0.785	C	0.022	NO	**No Feasible Mitigation**			
					PM	0.837	D	0.872	D	0.035	YES				
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	0.913	E	0.942	E	0.029	YES	0.907	E	-0.006	NO
					PM	0.886	D	1.000	E	0.114	YES	0.881	D	-0.005	NO

Note:
[a] Project trips are for full build out scenario.

TABLE 16
CUMULATIVE PLUS 2030 PROJECT WITH MITIGATION FOR INCORPORATED CITIES
INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name	Jurisdiction	Analysis Methodology	Analyzed Period	Cumulative (2030)		Cumulative (2030)+Project		Project Increase In V/C	Significant Impact?	C+P plus Mitigation		Project Increase In V/C	Significant Impact?
						V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
4	Normandie Avenue	Carson Street	City of Los Angeles	CMA	AM	0.910	E	0.933	E	0.023	YES	**No Feasible Mitigation**			
					PM	1.037	F	1.073	F	0.036	YES				
15	Figueroa Street	220th Street/I-110 NB Ramps	City of Carson	ICU	AM	1.024	F	1.054	F	0.030	YES	1.017	F	-0.007	NO
					PM	1.006	F	1.121	F	0.115	YES	0.998	E	-0.008	NO

NORMANDIE AVENUE & CARSON STREET

The proposed project would result in a significant impact at the intersection of Normandie Avenue & Carson Street (Intersection #4) in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative, Cumulative plus 2030 Project scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the *West Carson Transit Oriented Development Specific Plan*. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

BERENDO AVENUE & CARSON STREET

The proposed project would result in a significant impact at the intersection of Berendo Avenue & Carson Street (Intersection #6) in the Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the *West Carson Transit Oriented Development Specific Plan*. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

MEDICAL CENTER DRIVE & CARSON STREET

The proposed project would result in a significant impact at the intersection of Medical Center Drive & Carson Street (Intersection #7) in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the *West Carson Transit Oriented Development Specific Plan*. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

VERMONT AVENUE & CARSON STREET

The proposed project would result in a significant impact at the intersection of Vermont Avenue & Carson Street (Intersection #8) in the Existing plus 2023 Project, Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the *West Carson Transit Oriented Development Specific Plan*. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

I-110 SOUTHBOUND RAMPS & CARSON STREET

The proposed project would result in a significant impact at the intersection of Interstate 110 Southbound Ramps & Carson Street (Intersection #9) in the Existing plus 2023 Project, Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative scenarios. This improvement would require coordination with and approval by Caltrans. Because implementation of this improvement is not entirely within the control of the lead agency, and because the improvement would not fully mitigate the identified impacts in all scenarios, this impact would be considered significant and unavoidable.

Proposed Mitigation

The mitigation would involve restriping the southbound approach on the Interstate I-110 off-ramp to convert the left-turn lane to a left-/right-turn lane. As shown in Tables 13 and 14, the implementation of this mitigation measure would reduce the project-related impact to a less than significant level and would reduce the cumulative impact to a less than significant level in the AM peak hour. The impact during the PM peak hour would also be reduced, but not below a significant level.

VERMONT AVENUE & 220TH STREET

The proposed project would result in a significant impact at the intersection of Vermont Avenue & 220th Street (Intersection #14) in the Existing plus 2023 Project, Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as

reconfiguring the eastbound approaches to provide a dedicated left turn-lane but were deemed to conflict with the Los Angeles County *Transit Oriented Districts Access Study*. The study calls for curb extensions at all four crossings to shorten the pedestrian crossing distance. The intersection approaches do not have sufficient space to accommodate both curb extensions and additional lanes. Thus, this impact would remain significant and unavoidable.

220TH STREET/I-110 NORTHBOUND RAMPS & FIGUEROA STREET

The proposed project would result in a significant impact at the intersection of 220th Street/I-110 Northbound Ramps & Figueroa Street (Intersection #15) in the Existing plus 2023 Project, Existing plus 2030 Project, Interim plus 2023 Project, Cumulative plus 2030 Project scenarios using its current lane configuration.

Proposed Mitigation

As stated in the Transportation and Infrastructure Element of the Carson General Plan, Figueroa Street between 223rd Street and Carson Street is planned to be widened to three lanes in each direction. The mitigation would involve striping an additional northbound through lane and restriping of the existing through lane as a through/right-turn lane. The eastbound approach would be restriped from the existing through/left-turn lane and right to a left-turn lane and through/right-turn lane. This improvement would require coordination with and approval by Caltrans and the City of Carson.

As shown in Tables 15 and 16, the implementation of this mitigation measure would reduce the project-related impact and cumulative impact at this intersection to a less than significant level. Because implementation of this improvement is not entirely within the control of the lead agency, this impact would be considered significant and unavoidable.

A mitigation involving modifying the existing raised median and restriping the northbound approach to accommodate a second left-turn lane was also considered. However, this mitigation was deemed to be inconsistent with the existing on-ramp configuration, which provides one general lane and one HOV lane.

NORMANDIE AVENUE & 223RD STREET

The proposed project would result in a significant impact at the intersection of Normandie Avenue & 223rd Street (Intersection #17) in the Existing plus 2030 Project and Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to

provide an additional through lane, but were deemed to conflict with preliminary concepts from the *West Carson Transit Oriented Development Specific Plan*. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

VERMONT AVENUE & 223RD STREET

The proposed project would result in a significant impact at the intersection of Vermont Avenue & 223rd Street (Intersection #19) in the Existing plus 2023 Project, Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration. Intersection improvements to increase the capacity and/or efficiency of the roadway system and to reduce impacts at this intersection to a level below significance were investigated, such as reconfiguring the eastbound and westbound approaches to provide an additional through lane, but were deemed to conflict with preliminary concepts from the *West Carson Transit Oriented Development Specific Plan*. Preliminary concepts call for the addition of bike lanes in each direction. The street does not have sufficient right-of-way to accommodate both new bike lanes and an additional through lanes. Thus, this impact would remain significant and unavoidable.

I-110 SOUTHBOUND RAMPS & 223RD STREET

The proposed project would result in a significant impact at the intersection of Interstate 110 Southbound Ramps & 223rd Street (Intersection #20) in the Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative, Existing plus 2030 Project plus Cumulative scenarios using its current lane configuration.

Proposed Mitigation

The mitigation would involve restriping the eastbound and southbound approaches. The southbound approach would be modified from the existing left-turn/through and right-turn/through lanes to a right-turn lane and left-turn/through/right-turn lane. The eastbound approach would be restriped to change the existing right-turn lane to a through/right-turn lane. Under this mitigation, parking would be removed on 223rd between the Interstate I-110 bridge and Figueroa Street and converted to a dedicated right-turn lane. This improvement would require coordination with and approval by Caltrans.

As shown in Tables 13 and 14, the implementation of this mitigation measure would reduce the project-related impact at this intersection to a less than significant level. Because implementation of this improvement is not entirely within the control of the lead agency, this impact would be considered significant and unavoidable.

EFFECTIVENESS OF PROPOSED MITIGATION MEASURES

A detailed summary of the mitigation measure effectiveness is presented in Tables 13, 14, 15 and 16. The tables identify intersection impacts according to the relevant designated impact criteria and indicate whether each impact can be mitigated.

Implementation of the mitigation measures for the proposed project would be required at the time that the project is implemented.

MITIGATION FUNDING

Fair-share calculations for developer contributions were made for the intersections impacted by project generated traffic where mitigations have been proposed. The calculations were developed by calculating the increase in projected traffic volumes from the existing condition to the cumulative plus project condition; the increase establishes the total amount of projected growth at each location. Next, the project only volumes are divided by the total volume increase at each impacted intersection. This step determines the amount of traffic the project is contributing to the intersection and the approximate proportional contribution towards funding the proposed mitigation measure. The fair share calculations were performed for both the AM and PM peak hours and are shown in Table 17.

TABLE 17

FAIR SHARE INTERSECTION TRAFFIC CONTRIBUTION

ID	Intersection	A.M. Peak Hour					P.M. Peak Hour					Fair Share Contribution
		Existing Traffic	2030 Projected Traffic [a]	Project Only Traffic	Total New Traffic	Project % of New Traffic	Existing Traffic	2030 Projected Traffic [a]	Project Only Traffic	Total New Traffic	Project % of New Traffic	
9	I-110 SB Ramps & Carson Street	3,260	3,699	228	439	51.9%	3,686	4,391	277	705	39.3%	51.9%
15	Figueroa Street & 220th Street/I-110 NB Ramps	2,806	3,331	101	525	19.2%	2,490	3,175	213	685	31.1%	31.1%
20	I-110 SB Ramps & 223rd Street	2,915	3,125	159	210	75.7%	3,167	3,430	168	263	63.9%	75.7%

[a] Intersections within County of Los Angeles jurisdiction include 2030 traffic projections without an areawide growth rate. Intersections wholly outside of County of Los Angeles jurisdiction include 2030 projected traffic with an areawide growth rate.

TRANSPORTATION DEMAND MANAGEMENT

The existing Harbor-UCLA Medical Center, like other large employment sites, maintains a program of employee travel behavior monitoring and incentives to reduce single-occupant vehicle commute trips. Collectively known as Travel Demand Management (TDM), these programs aim to reduce traffic congestion and the impacts associated with heavy traffic by providing incentives and other measures to encourage alternative travel arrangements between work and home. Among the measures now in place at the site are:

- Transit information center
- Rideshare matching services
- Guaranteed ride home/Guaranteed return trip
- Commuter choice program
- Bi-monthly newsletters, flyers or announcements to employees
- New hire orientation and periodic events
- Compressed work week and flex time schedules
- Off-peak rideshare program
- Bicycle racks, lockers and showers
- Telecommuting
- Vanpool program
- Preferential parking for those who rideshare
- Expanding the current menu of incentives and disincentives could reduce vehicle trips during the peak hours and thus reduce the severity of the impacts identified. The County-owned medical facility is somewhat different from many other land uses in that it operates on a 24-hour schedule and employees have shifts that begin and end throughout the day, including many that are outside of the typical peak periods when transit service is most extensive. Because the effectiveness of these measures cannot be guaranteed, however, TDM cannot reduce impacts below the significant and unavoidable threshold. Among the additional TDM measures that could be considered for implementation as development of the master plan project proceeds are:
    - Parking pricing
    - Transit pass subsidy
    - On-site sales of transit passes and tokens
    - Direct financial awards for ridesharing

DRIVEWAY QUEUEING ANALYSIS

A queueing analysis was conducted to assess the adequacy of the available storage space for westbound left-turns approaching the proposed new driveway on Carson Street west of Budlong Avenue. Figure 2 and Figure 7 show the approximate location of the driveway. Existing eastbound left-turn volumes from Carson Street onto Budlong Avenue are approximately 25 vehicles in the AM peak hour and 15 vehicles in the PM peak hour. The proposed westbound left-turn lane could occupy space now occupied by a center two-way left-turn lane and by the transitional taper to the existing eastbound left-turn lane onto Budlong Street, which could be shortened to accommodate projected westbound left vehicles at the project driveway. Exact location of the driveway will be determined in consultation with Los Angeles County staff. For the analysis, a protected/permitted phase was assumed for westbound left vehicles at the driveway.

The Synchro traffic analysis software was used to implement the HCM methodology to calculate the 95th percentile queues and compare them with the available vehicle storage for westbound left turns into the project site. Traffic signal-related information such as phasing and timing plans (minimum green, maximum green, etc.) were developed for each scenario in Synchro and informed by volumes for each scenario and existing signal timing information for other intersections on Carson Street in this area.

Table 18 presents a summary of the queuing analysis for Existing plus 2030 Project and Cumulative plus 2030 Project conditions at build-out for the AM and PM peak hours. The longest westbound 95th percentile queue is estimated to be six vehicles, requiring approximately 150 feet of storage. Providing a westbound left-turn lane of sufficient length would require shortening the eastbound left-turn lane onto Budlong Avenue, which appears feasible due to the modest left-turn volumes that it serves. Detailed queue calculations are provided in Appendix D.

TABLE 18
PEAK HOUR WESTBOUND LEFT TURN 95TH PERCENTILE QUEUES
AT PROPOSED NEW CARSON STREET DRIVEWAY

	Analyzed Period	WBL Queue (ft)	WBL Queue (vehicles) [a]
Existing + Project	AM	119	5
	PM	45	2
Cumulative Without Ambient + Project	AM	133	6
	PM	72	3

[a] Each car is assumed to use 25 feet when in queue.

5. REGIONAL TRANSPORTATION IMPACT ANALYSIS

This chapter presents an analysis of potential project impacts on the regional transportation system in terms of vehicular and transit service impacts. This analysis was conducted in accordance with the transportation impact analysis (TIA) procedures outlined in *2010 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, October 2010). The Congestion Management Program (CMP) requires that, when an environmental impact report (EIR) is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use these facilities.

In addition, after extensive coordination with Caltrans, further analyses of state facilities were conducted to determine the potential project impacts. An analysis was conducted for freeway mainline segments, freeway ramp queueing and a signalized intersection involving Caltrans-controlled facilities.

REGIONAL TRAFFIC IMPACT ANALYSIS

CRITERIA FOR ANALYSIS

The CMP guidelines state that the first issue addressed be the determination of the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are:

- All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The CMP traffic impact analysis guidelines establish that a significant project impact occurs when the proposed project increases traffic demand on a CMP facility by 2% or more of capacity (V/C 0.02), causing or worsening LOS F (V/C > 1.00).

ARTERIAL MONITORING STATION ANALYSIS

The CMP arterial monitoring stations nearest to the project study area are:

- Western Avenue & Carson Street (City of Torrance)
- Western Avenue & 190th Street (City of Torrance)
- Western Avenue & Sepulveda Boulevard (City of Torrance)
- Pacific Coast Highway & Western Avenue (City of Los Angeles)
- Pacific Coast Highway & Figueroa Street (City of Los Angeles)
- Artesia Boulevard & Vermont Avenue (City of Gardena)

Based on the project trip generation estimates and a review of the net project-generated AM and PM peak hour traffic volumes shown in Figures 8 and 9, the proposed project would add 50 or more vehicle trips through one of the CMP arterial monitoring stations, Western Avenue & Carson Street. Fewer than 50 trips will be added to all other arterial monitoring stations during the AM or PM analysis periods. Therefore, no further analysis of is required for the CMP arterial intersections with the exception of Western Avenue & Carson Street. Per CMP Impact Analysis guidelines, intersection LOS calculations can be completed using either ICU or CMA methodology. Table 10 depicts the results of both CMA and ICU methodologies for Western Avenue & Carson Street in the Full Buildout plus Project scenario. Because the incremental change in V/C at this location would not increase by 2%, CMP arterial intersection impacts are considered to be less than significant for the project. Because no impact would occur under the longest-term Cumulative plus 2030 Project scenario, it is concluded that no impact would occur under the any other scenarios.

FREEWAY MAINLINE MONITORING STATION ANALYSIS

This section presents an analysis of potential project impacts on the regional transportation system. This analysis was conducted in accordance with the transportation impact analysis procedures outlined in the CMP. The nearest CMP mainline freeway monitoring locations nearest to the project site are:

- I-110 at Wilmington, south of "C" Street (Station 1045)
- I-110 at Manchester Boulevard (Station 1046)
- I-405 at Santa Fe Avenue (Station 1066)
- I-405 south of I-110 (Station 1067)

- I-405 north of Inglewood Avenue (Station 1068)
- SR 91 east of Alameda Street/Santa Fe Avenue (Station 1033)

Results are depicted in Table 19 and Table 20 for the AM and PM peak hours, respectively, under Existing, Cumulative and Cumulative plus 2030 Project conditions. The project does not add more than 150 trips at any station location, and the V/C does not increase by 2% or more. Therefore, CMP freeway impacts are considered to be less than significant.

REGIONAL TRANSIT IMPACT ANALYSIS

Potential increases in transit person trips generated by the proposed project were estimated as follows. Section D.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle ridership (AVR) factor of 1.4 in order to estimate the number of person trips to and from the project and then provides guidelines regarding the percentage of person trips assigned to public transit depending on the type of use (commercial versus residential) and the proximity to transit services. Since the project site is located within ¼ mile of a designated CMP transit corridor, the CMP guidelines provide that approximately 7% of total person trips generated might use public transit to travel to and from the site.

Based on the trip generation for the 2023 Project shown in Table 3A, the proposed project is estimated to generate 1,822 daily net trips, 225 net AM peak hour tips, and 221 net PM peak hour trips before transit credits and bike/walk credits are applied. Applying the CMP guidelines by converting the vehicle trips to person trips by multiplying by a 1.4 AVR (225 net AM peak hour trips x 1.4 = 315 and 221 net PM peak hour trips x 1.4 = 310) and applying a 7% transit use (315 net AM peak hour person trips x 7% = 22 and 310 net PM peak hour person trips x 7% = 22), would result in approximately 22 new transit person trips during the weekday AM peak hour and 22 new transit person trips during the weekday PM peak hour in the 2023 Project scenario.

TABLE 19
CMP AM PEAK HOUR EXISTING AND CUMULATIVE FREEWAY ANALYSIS

Freeway Segments	Direction	# of Lanes	Capacity [a]	Existing			Cumulative			2030 Project Trips	Cumulative plus 2030 Project				
				Peak Hour Volume [b]	D/C Ratio	LOS [c]	Peak Hour Volume	D/C Ratio	LOS [c]		Peak Hour Volume	D/C Ratio	LOS [c]	Project-related D/C change	Significant Impact [d]
Harbor Freeway (I-110)															
Harbor Freeway (I-110)	NB	4	8,000	3,025	0.378	B	3,088	0.386	B	52	3,141	0.393	B	0.007	NO
at Wilmington, south of "C" Street	SB	4	8,000	4,235	0.529	B	4,323	0.54	B	11	4,334	0.542	C	0.002	NO
- CMP Station 1045															
Harbor Freeway (I-110)	NB	6	12,000	11,794	0.983	E	12,652	1.054	F(0)	12	12,664	1.055	F(0)	0.001	NO
at Manchester Bl	SB	6	12,000	11,115	0.926	D	11,924	0.994	E	78	12,002	1	E	0.006	NO
- CMP Station 1046															
San Diego Freeway (I-405)															
San Diego Freeway (I-405)	NB	5	10,000	12,549	1.255	F(1)	15,171	1.517	F(3)	52	15,223	1.522	F(3)	0.005	NO
Santa Fe Ave	SB	5	10,000	9,384	0.938	E	11,345	1.135	F(0)	8	11,353	1.135	F(0)	0.000	NO
-CMP Station 1066															
San Diego Freeway (I-405)	NB	5	10,000	11,227	1.123	F(0)	12,045	1.205	F(0)	0	12,045	1.205	F(0)	0.000	NO
s/o RTE 110; Carson Scales	SB	5	10,000	9,682	0.968	E	10,387	1.039	F(0)	0	10,387	1.039	F(0)	0.000	NO
-CMP Station 1067															
San Diego Freeway (I-405)	NB	5	10,000	11,476	1.148	F(0)	11,917	1.192	F(0)	15	11,932	1.193	F(0)	0.001	NO
n/o Inglewood Ave	SB	5	10,000	8,551	0.855	D	8,880	0.888	D	78	8,958	0.896	D	0.008	NO
-CMP Station 1068															
Artesia Freeway (SR 91)															
Artesia Freeway (SR 91)	EB	6	12,000	8,048	0.671	C	9,669	0.806	D	13	9,682	0.807	D	0.001	NO
e/o Alameda St/Santa Fe Ave	WB	6	12,000	10,767	0.897	D	12,935	1.078	F(0)	80	13,014	1.085	F(0)	0.007	NO
-CMP Station 1033															

Note:

[a] Capacity assumes 2,000 vehicles/hour/lane based on analysis contained in 2010 Congestion Management Program, Metro, 2010.

[b] 2015 Volume obtained from CMP 2009 Data, factored to 2015 conditions using CMP growth rate for the RSA that contains freeway census station.

[c] Freeway Segment LOS methodology taken from 2010 CMP, Metro, 2010.

[d] CMP defines significant freeway impact as change in D/C ratio of 0.02 or more when a freeway segment is at LOS F (D/C ratio > 1.00).

TABLE 20
CMP PM PEAK HOUR EXISTING AND CUMULATIVE FREEWAY ANALYSIS

Freeway Segments	Direction	# of Lanes	Capacity [a]	Existing			Cumulative			2030 Project Trips	Cumulative plus 2030 Project				
				Peak Hour Volume [b]	D/C Ratio	LOS [c]	Peak Hour Volume	D/C Ratio	LOS [c]		Peak Hour Volume	D/C Ratio	LOS [c]	Project-related D/C change	Significant Impact [d]
Harbor Freeway (I-110)															
Harbor Freeway (I-110)	NB	4	8,000	3,090	0.386	B	3,587	0.448	B	17	3,604	0.451	B	0.003	NO
at Wilmington, south of "C" Street	SB	4	8,000	4,223	0.528	B	4,799	0.600	C	56	4,855	0.607	C	0.007	NO
- CMP Station 1045															
Harbor Freeway (I-110)	NB	6	12,000	11,781	0.982	E	12,827	1.069	F(0)	62	12,889	1.074	F(0)	0.005	NO
at Manchester Bl	SB	6	12,000	11,954	0.996	E	13,036	1.086	F(0)	26	13,062	1.089	F(0)	0.003	NO
- CMP Station 1046															
San Diego Freeway (I-405)															
San Diego Freeway (I-405)	NB	5	10,000	9,167	0.917	D	10,393	1.039	F(0)	16	10,409	1.041	F(0)	0.002	NO
Santa Fe Ave	SB	5	10,000	11,021	1.102	F(0)	12,367	1.237	F(0)	41	12,408	1.241	F(0)	0.004	NO
-CMP Station 1066															
San Diego Freeway (I-405)	NB	5	10,000	9,682	0.968	E	10,921	1.092	F(0)	0	10,921	1.092	F(0)	0.000	NO
s/o RTE 110; Carson Scales	SB	5	10,000	11,639	1.164	F(0)	13,006	1.301	F(1)	0	13,006	1.301	F(1)	0.000	NO
-CMP Station 1067															
San Diego Freeway (I-405)	NB	5	10,000	8,734	0.873	D	9,518	0.952	E	78	9,596	0.96	E	0.008	NO
n/o Inglewood Ave	SB	5	10,000	10,562	1.056	F(0)	11,476	1.148	F(0)	24	11,500	1.15	F(0)	0.002	NO
-CMP Station 1068															
Artesia Freeway (SR 91)															
Artesia Freeway (SR 91)	EB	6	12,000	16,532	1.378	F(2)	19,893	1.658	F(3)	65	19,958	1.663	F(3)	0.005	NO
e/o Alameda St/Santa Fe Ave	WB	6	12,000	6,526	0.544	C	7,887	0.657	C	25	7,912	0.659	C	0.002	NO
-CMP Station 1033															

Note:

[a] Capacity assumes 2,000 vehicles/hour/lane based on analysis contained in 2010 Congestion Management Program, Metro, 2010.

[b] 2015 Volume obtained from CMP 2009 Data, factored to 2015 conditions using CMP growth rate for the RSA that contains freeway census station.

[c] Freeway Segment LOS methodology taken from 2010 CMP, Metro, 2010.

[d] CMP defines significant freeway impact as change in D/C ratio of 0.02 or more when a freeway segment is at LOS F (D/C ratio > 1.00).

Based on the trip generation for the 2030 Project shown in Table 3B, the proposed project is expected to generate 7,409 daily net trips, 714 net AM peak hour tips, and 818 net PM peak hour trips before internal capture, transit credits and bike/walk credits are applied. Applying the CMP guidelines by converting the vehicle trips to person trips by multiplying by a 1.4 AVR (714 net AM peak hour trips x 1.4 = 1,000 and 818 net PM peak hour trips x 1.4 = 1,145) and applying a 7% transit use (1,000 net AM peak hour person trips x 7% = 70 and 1,145 net PM peak hour person trips x 7% = 80), would result in approximately 70 new transit person trips during the weekday AM peak hour and 80 new transit person trips during the weekday PM peak hour in the 2030 Project scenario.

Within ¼ mile of the project site, Metro operates one local line and two express lines; Carson Circuit operates two local lines; Torrance Transit operates two local lines and one rapid line; and Gardena Municipal Bus operates one local line.

The project location is served by numerous established local and regional transit routes with peak period headways of between 10 and 40 minutes. The bus services have an approximate capacity of approximately 1,840 persons during the peak hours based on a seating capacity of 40 persons for a standard bus and 30 persons for a shuttle bus and a policy load factor of 1.0. The proposed project would utilize less than 5% of available transit capacity during the peak hours.

ANALYSIS OF STATE HIGHWAY SYSTEM

RAMP QUEUEING ANALYSIS

A freeway ramp queuing analysis was conducted at six freeway ramp terminal intersections in the project vicinity in response to a request from Caltrans:

- I-110 Northbound Off-Ramp at 220th Street/Figueroa Street (Exit 7)
- I-110 Southbound Off-Ramp at Carson Street (Exist 7B)
- I-110 Southbound Off-Ramp at 223rd Street (Exit 7B)
- I-405 Northbound Off-Ramp at Carson Street (Exit 34)
- I-405 Northbound Off-Ramp at Wilmington Avenue (Exit 33B)
- I-405 Southbound Off-Ramp at East Carson Street (Exit 34)

The Synchro traffic analysis software was used to implement the HCM methodology to calculate the 95th percentile queues at and compare them with the available vehicle storage on these ramps. Traffic signal-related information such as phasing and timing plans (minimum green, maximum green, gap, etc.) were obtained for each location and the morning and evening peak hour traffic volumes from this study were used. Additional detail such as turn pocket lengths and ramp lengths was coded based on scaled distances from on-line aerial photographs. Following consultation between county staff and Caltrans staff, it was agreed that for the purposes of this study of this project, an impact would be considered adverse if the off-ramp queue extends beyond the length of the ramp itself onto the mainline of the freeway during the peak arrival period. Detailed queue calculations are provided in Appendix D.

Table 20 presents a summary of the ramp queuing analysis for Existing, Cumulative and Cumulative plus 2030 Project conditions. The queue does not exceed the ramp length in any of the scenarios; therefore, no adverse impacts are identified.

FREEWAY MAINLINE ANALYSIS

Morning and afternoon peak hour analysis of six selected freeway mainline segments in the project vicinity was conducted in response to a request from Caltrans:

- I-110 at 228th Street
- I-110 at El Segundo Boulevard
- I-405 at I-710
- I-405 south of I-110
- I-405 north of Western Avenue
- SR-91 at Avalon Boulevard

Because PeMS data was not available for some nearby segments, existing traffic volume data was obtained from the 2013 Caltrans Traffic Census Program, the most recent year when data was available for all relevant segments (http://traffic-counts.dot.ca.gov/), and increased by 0.73%/year to represent future conditions. Project-generated trips were assigned to the regional freeway system as described in Chapter 3. The freeway level of service methodology described in the *Highway Capacity Manual* was used to determine the vehicle density on each analyzed segment (passenger cars per mile per lane) by direction and the corresponding level of service. The level of service definitions used for freeway mainline segments are shown in Table 21.

TABLE 21
PEAK HOUR OFF-RAMP INTERSECTION 95TH PERCENTILE QUEUES

Ramp	Cross Street	Ramp Length	Ramp Turn Lanes at Intersection			Existing				Cumulative				Cumulative plus 2030 Project				Queue Exceeds Storage?
			# of Lanes	Move	Length	AM Queue		PM Queue		AM Queue		PM Queue		AM Queue		PM Queue		
						Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	Lane (ft)	Max (ft)	
I-110 SB Ramps	Carson Street	980	2	Left Right	980 380	130 640	640 [a]	250 350	350	150 770	770 [a]	280 520	520 [a]	150 970	970 [a]	280 580	580 [a]	NO
220th Street/I-110 NB Ramps	Figueroa Street	1,150	2	Through/Left Right	1,150 525	570 0	570 [a]	710 30	710 [a]	640 0	640 [a]	790 50	790 [a]	680 20	680 [a]	810 60	810 [a]	NO
I-110 SB Ramps	223rd Street	930	2	Through/Left Through/Right	930 390	360 [b]	360	340 [b]	340	440 [b]	440 [a]	440 [b]	440	530 [b]	530 [a]	480 [b]	480 [a]	NO
I-405 SB Ramps	Carson Street	1,120	2	Left Right	1,120 660	40 50	50	40 40	40	50 60	60	40 50	50	50 60	60	40 50	50	NO
I-405 NB Ramps	Carson Street	1,200	2	Through/Left Right	630 1,200	30 0	30	40 0	40	30 0	30	40 0	40	30 0	30	40 0	40	NO
I-405 NB Ramps	Wilmington Avenue	1,350	3	Left Left Right	900 1,350 450	440 [b] 360	440	400 [b] 60	400	530 [b] 490	530	480 [b] 120	480	550 [b] 490	550	490 [b] 120	490	NO

Notes:

[a]: 95th percentile volume exceeds capacity, queue may be longer.

[b] Queue same as in adjacent lane.

TABLE 22
LEVEL OF SERVICE DEFINITIONS FOR
FREEWAY MAINLINE AND
MULTILANE HIGHWAY SEGMENT ANALYSES

LOS Criteria for Freeway Segments [1]

Level of Service	Density Range (pc/mi/ln)*
A	0-11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45

Note:

* pc/mi/ln denotes passenger cars per mile per lane

Source: Highway Capacity Manual, Exh. 23-3, Transportation Research Board, 2010.

Guide for the Preparation of Traffic Impact Studies (Caltrans, December 2002) states that

> The level of service (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). Caltrans endeavors to maintain a target LOS at the transition between LOS 'C' and LOS 'D' on State highway facilities. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

The surrounding freeways (I-405, I-710, SR-91, and I-110) are operating at or near capacity during the peak period. When additional traffic trips are assigned to those freeways, existing LOS should be maintained.

Following consultation between county staff and Caltrans staff, it was agreed that for the purposes of this study of this project, an impact would be considered adverse if the analyzed freeway segment were found to operate at LOS F with the addition of project-related traffic and if the increase were equal to or greater than 50 trips.

Existing and Existing plus 2030 Project freeway segment analysis is presented in Table 23, and Cumulative and Cumulative plus 2030 Project freeway segment analysis is presented in Table 24. As shown, using this methodology, adverse impacts are identified on the following three freeway segments:

Existing plus 2030 Project:

- I-405 at I-710 – northbound in the AM peak hour (52 project-added trips)

Cumulative plus 2030 Project:

- I-110 at 228th Street – northbound in the AM peak hour (52 project-added trips)
- I-110 at El Segundo Boulevard – southbound in the AM peak hour (78 project-added trips)
- I-405 at I-710 – northbound in the AM peak hour (52 project-added trips)

To address these adverse impacts three potential measures were investigated:

- Reduce project-generated traffic by reducing the building program or by implementing a more effective TDM program sufficient to reduce estimated trips by 1% to avoid two of the adverse impacts identified or 6% to avoid all three of the adverse impacts identified. The effectiveness of the ongoing programs varies from year to year, however, and it is not possible to guarantee that specific measures would be effective in perpetuity.

- Add mainline freeway capacity to address existing and cumulative conditions. This would be beyond the ability of any individual project to implement, due to the potential need to acquire right-of-way and the magnitude of the cost.

TABLE 23
EXISTING PEAK HOUR FREEWAY SEGMENT ANALYSIS

Name [a]	Peak Hour	Existing				2030 Project Trips		Existing plus Project				Change in Density		Project Impact? [b]	
		Northbound		Southbound				Northbound		Southbound					
		Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Northbound	Southbound	Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Northbound	Southbound	Northbound	Southbound
I-110 at 228th Street	AM	37.0	E	22.9	C	52	11	37.5	E	22.9	C	0.5	0.0	NO	NO
	PM	23.1	C	33.7	D	17	56	23.2	C	34.1	D	0.1	0.4	NO	NO
I-110 at El Segundo Blvd	AM	27.0	D	36.9	E	12	78	27.0	D	37.5	E	0.0	0.6	NO	NO
	PM	26.1	D	37.4	E	62	26	26.4	D	37.6	E	0.3	0.2	NO	NO
I-405 JCT. RTE 710	AM	47.5	F	27.4	D	52	8	48.0	F	27.4	D	0.5	0.0	YES	NO
	PM	28.5	D	43.8	E	16	41	28.5	D	44.2	E	0.0	0.4	NO	NO
I-405 S/O JCT RTE 110, Carson Scales	AM	33.9	D	28.2	D	0	0	33.9	D	28.2	D	0.0	0.0	NO	NO
	PM	26.0	C	37.9	E	0	0	26.0	C	37.9	E	0.0	0.0	NO	NO
I-405 N/O Western Avenue; Van Ness Avenue	AM	30.8	D	29.0	D	15	78	30.8	D	29.3	D	0.0	0.3	NO	NO
	PM	27.5	D	31.8	D	78	24	27.9	D	31.9	D	0.4	0.1	NO	NO

Name [a]	Peak Hour	Existing				2030 Project Trips		Existing plus Project				Change in Density		Project Impact? [b]	
		Eastbound		Westbound				Eastbound		Westbound					
		Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Eastbound	Westbound	Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Eastbound	Westbound	Northbound	Westbound
SR 91 at Avalon Boulevard Interchange	AM	21.9	C	28.7	D	13	80	21.9	C	29.1	D	0.0	0.4	NO	NO
	PM	26.1	D	19.9	C	65	25	26.4	D	20.0	C	0.3	0.1	NO	NO

Notes:
* pc/mi/ln denotes passenger cars per mile per lane
[a] Analyzed using Freeway methodology from *Highway Capacity Manual,* Transportation Research Board, 2010.
[b] After discussion with Caltrans staff, Impact Criteria was defined as mainline LOS F and more than 50 project trips.

TABLE 24
CUMULATIVE PEAK HOUR FREEWAY SEGMENT ANALYSIS

Name [a]	Peak Hour	Cumulative				2030 Project Trips		Cumulative plus Project				Change in Density		Project Impact? [b]	
		Northbound		Southbound				Northbound		Southbound					
		Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Northbound	Southbound	Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Northbound	Southbound	Northbound	Southbound
I-110 at 228th Street	AM	45.4	F	25.6	C	52	11	46.0	F	25.7	C	0.6	0.1	YES	NO
	PM	24.6	C	37.0	E	17	56	24.7	C	37.5	E	0.1	0.5	NO	NO
I-110 at El Segundo Blvd	AM	31.3	D	45.5	F	12	78	31.4	D	46.3	F	0.1	0.8	NO	YES
	PM	28.2	D	41.8	E	62	26	28.5	D	42.0	E	0.3	0.2	NO	NO
I-405 JCT. RTE 710	AM	63.0	F	31.8	D	52	8	63.9	F	31.9	D	0.9	0.1	YES	NO
	PM	30.9	D	50.0	F	16	41	31.0	D	50.4	F	0.1	0.4	NO	NO
I-405 S/O JCT RTE 110, Carson Scales	AM	40.9	E	32.6	D	0	0	40.9	E	32.6	D	0.0	0.0	NO	NO
	PM	26.0	C	42.2	E	0	0	26.0	C	42.2	E	0.0	0.0	NO	NO
I-405 N/O Western Avenue; Van Ness Avenue	AM	36.1	E	33.6	D	15	78	36.2	E	34.1	D	0.1	0.5	NO	NO
	PM	29.7	D	34.7	D	78	24	30.0	D	34.9	D	0.3	0.2	NO	NO

Name [a]	Peak Hour	Cumulative				2030 Project Trips		Cumulative plus Project				Change in Density		Project Impact? [b]	
		Eastbound		Westbound				Eastbound		Westbound					
		Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Eastbound	Westbound	Density (pc/mi/ln)*	LOS	Density (pc/mi/ln)*	LOS	Eastbound	Westbound	Northbound	Westbound
SR 91 at Avalon Boulevard Interchange	AM	24.4	C	33.2	D	13	80	24.4	C	33.7	D	0.0	0.5	NO	NO
	PM	28.0	D	21.1	C	65	25	28.3	D	21.2	C	0.3	0.1	NO	NO

Notes:
* pc/mi/ln denotes passenger cars per mile per lane
[a] Analyzed using Freeway methodology from *Highway Capacity Manual,* Transportation Research Board, 2010.
[b] After discussion with Caltrans staff, Impact Criteria was defined as mainline LOS F and more than 50 project trips.

- Contribute to implementation of Caltrans' projects to address congestion in the study area, which would contribute to minimizing the impact associated with the proposed development. However, there are no specific improvements identified for implementation. Thus, no fair-share contribution can be calculated or made.

Because the potential measures described above were each found to be infeasible, the project's incremental impacts on poor cumulative conditions on identified segments would be considered unavoidable.

STATE ARTERIAL ANALYSIS

Analysis of the arterial intersection of Western Avenue (State Route 213) & Carson Street was conducted using the HCM methodology in response to a request from Caltrans. The traffic signal timing plan provided by LADOT was used in this analysis. Caltrans, LADOT and the City of Torrance have jointly agreed to modify the signal in the near term at this location by implementing protected left-turn phasing on the eastbound and westbound approaches.

The discussion above regarding Caltrans' MOEs for freeway mainline segments also applies to arterial intersections. However, following consultation between county staff and Caltrans staff, it was agreed that for the purposes of this study of this project, an impact would be considered adverse if the analyzed intersection were found to operate at LOS F with the addition of project-related traffic and if the increase were equal to or greater than 50 trips. The results of this analysis under Existing conditions without and with the project, Interim without and with the project, and Cumulative without and with the project are presented in Table 25. Detailed level of service worksheets are provided in Appendix E.

The intersection is operating at LOS E under Existing and Existing plus 2030 Project conditions. Under Interim and Cumulative conditions in both the AM and PM peak hours the intersection is projected to decline to LOS F without or with the addition of project traffic.

TABLE 25
PEAK HOUR HIGHWAY CAPACITY MANUAL INTERSECTION ANALYSIS

Scenario	Time Period	Without Project Delay	Without Project LOS	Plus 2030 Project [b] Delay	Plus 2030 Project [b] LOS	Project Trips	Project Delay	Adverse Impact [c]
Existing	AM	66.4	E	67.8	E	55	1.4	NO
	PM	65.8	E	69.9	E	73	4.1	NO
Interim [d]	AM	93.6	F	93.7	F	17	0.1	NO
	PM	116.4	F	117.5	F	20	1.1	NO
Cumulative [d]	AM	105.7	F	106.9	F	55	1.2	YES
	PM	133.6	F	138.2	F	73	4.6	YES

[a] Analyzed using Freeway methodology from *Highway Capacity Manual,* Transportation Research Board, 2010.
[b] Project trips for Existing and Cumulative (2030) with areawide growth are for 2030 Project.
Project Trips for Interim (2023) with areawide growth are for 2023 Project.
[c] After discussion with Caltrans staff, Impact Criteria was defined as intersection operating at LOS F and more than 50 project trips.
[d] Includes protected left-turn phases for eastbound and westbound approaches.

6. CONCLUSIONS

This study was undertaken to evaluate the potential traffic impacts of the proposed Harbor-UCLA Medical Center Project. The following summarizes the results of this analysis:

- The proposed project would be built in two phases, a 2023 Project phase and a 2030 Project phase. The project would include increases in administrative office space, retail, central utilities and outpatient facilities for the hospital. It would also include an expanding LA Biomed campus and a new Bioscience campus.
- The 2023 Project phase would include the net addition of six hospital beds and 57,082 sf of new hospital-related structures. It would also include 17,746 sf of new space for LA Biomed and 112,500 sf of new space for the Bioscience campus.
- The 2030 Project phase would include the net addition of six hospital beds and 149,226 sf of new hospital related structures. It would also include 130,246 sf of new space for LA Biomed and 250,000 sf of new space for the Bioscience campus.
- The study analyzed 22 intersections and five directional freeway segments in the vicinity of the project.
- The project would generate an estimated net external 1,620 daily trips, including 200 trips (166 inbound/34 outbound) during the AM peak hour and 197 trips (33 inbound/164 outbound) during the PM peak hour in the 2023 Project phase. During the 2030 Project phase, the project would generate an estimated net external 6,598 daily trips, including 637 trips (523 inbound/114 outbound) during the AM peak hour and 732 trips (169 inbound/563 outbound).
- The project analyzed five scenarios using the County's methodology: Existing, Existing plus 2023 Project, Existing plus 2030 Project, Existing plus 2023 Project plus Cumulative and Existing plus 2023 Project plus Cumulative.
- The project analyzed seven scenarios using the local municipal methodology: Existing, Existing plus 2023 Project, Existing plus 2030 Project, Interim, Cumulative, Interim plus 2023 Project, Cumulative plus 2030 Project.
- The LOS analysis determined that the proposed project would significantly impact traffic at 12 intersections. Mitigation measures were identified for three intersections but because these locations are partially or wholly controlled by Caltrans, implementation is not entirely within the County's control. There impacts are considered significant and unavoidable.
- Analyses of potential impacts on the regional transportation system conducted in accordance with CMP requirements determined that the project would not have a significant impact on CMP monitoring intersections, freeway mainline segments or transit.

- Analyses of potential impacts on the regional transportation in accordance with Caltrans found a project impact on Interstate 405 northbound in the AM peak hour, and cumulative impacts on Interstate 110 northbound and southbound in the AM peak hour. Options for addressing the impacts were identified, but the impact will unmitigated because there are no existing projects that identified by Caltrans that would lower the impact below the significance threshold.
- No queueing impacts were found at freeway off-ramps.

REFERENCES

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Carson General Plan Update (City of Carson, amended August 2013); http://ci.carson.ca.us/department/communitydevelopment/generalplan.asp

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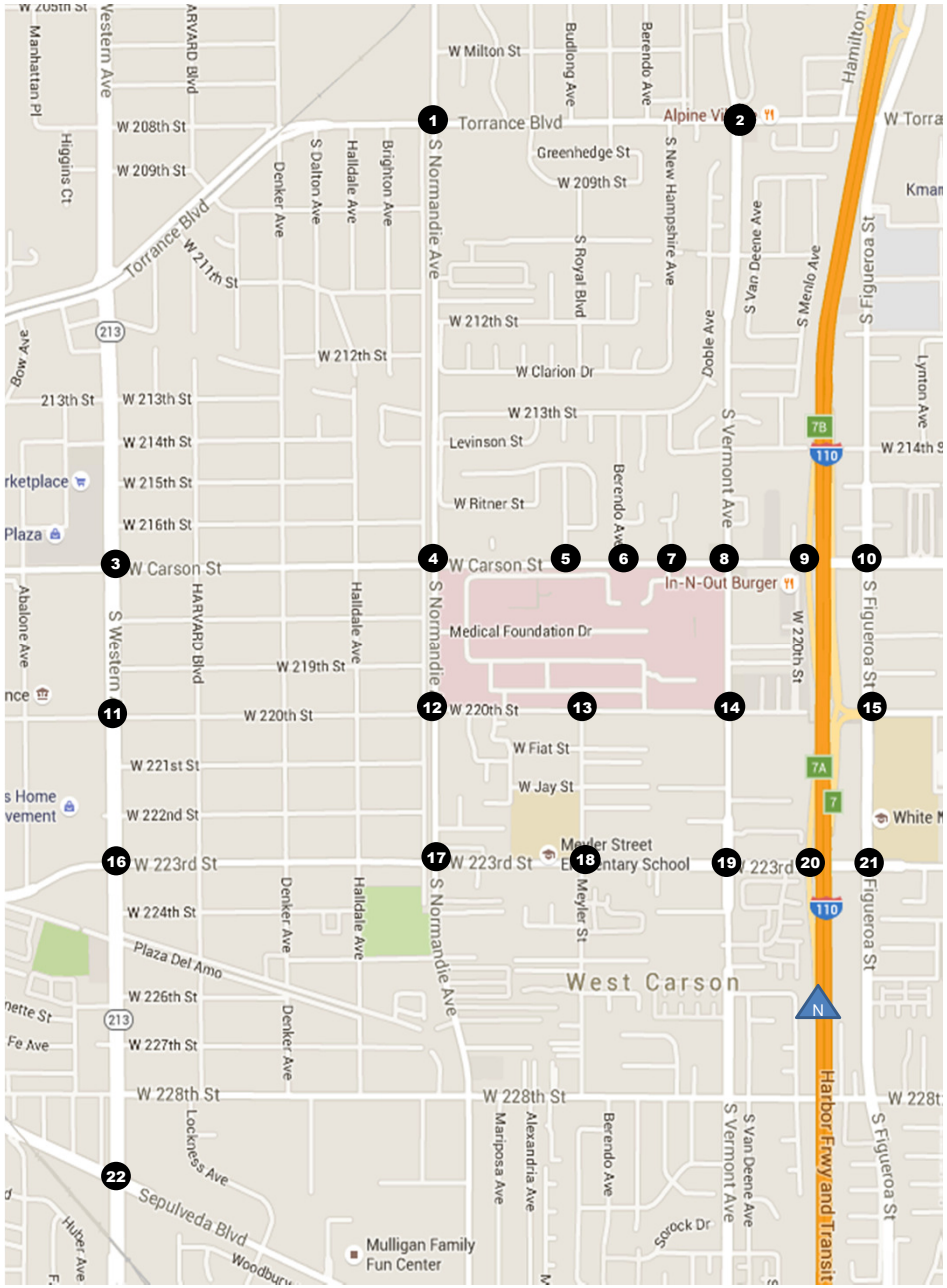
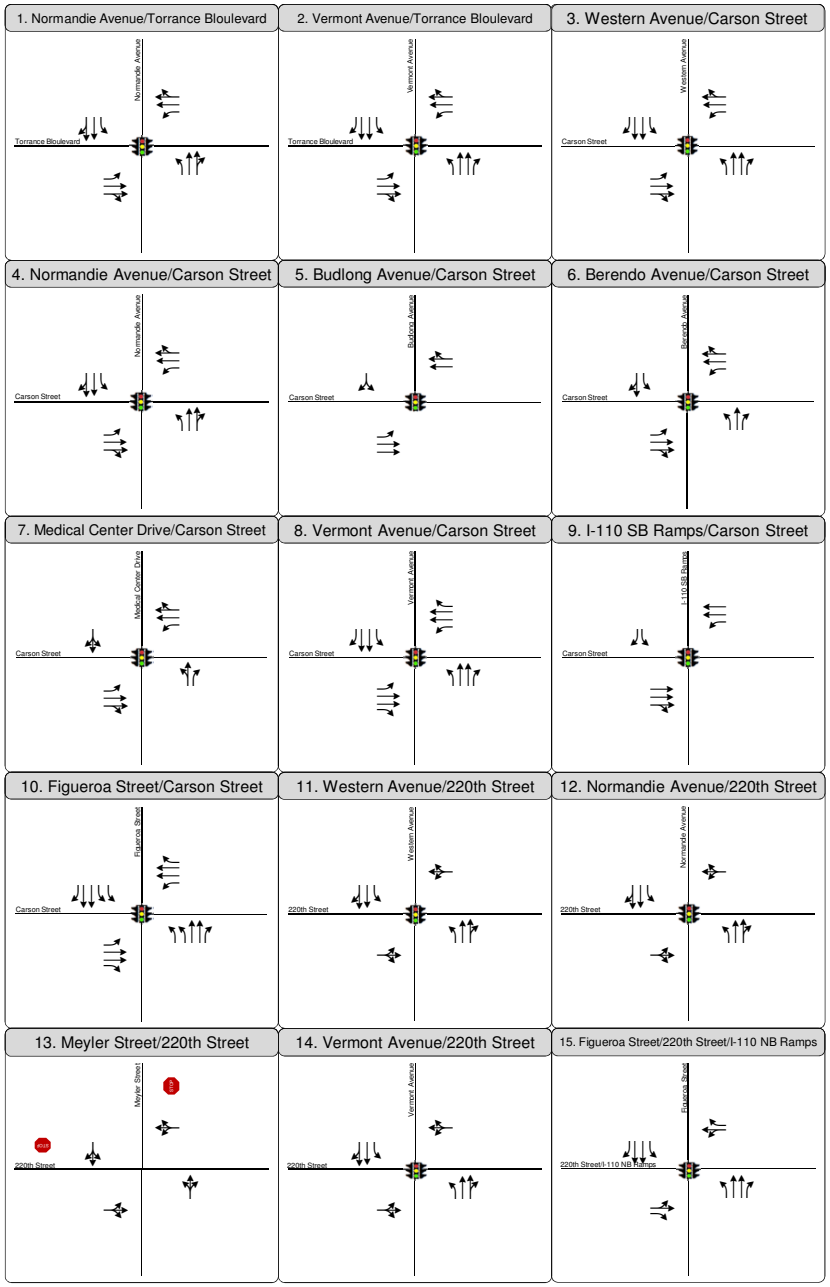
APPENDIX A: INTERSECTION LANE CONFIGURATIONS





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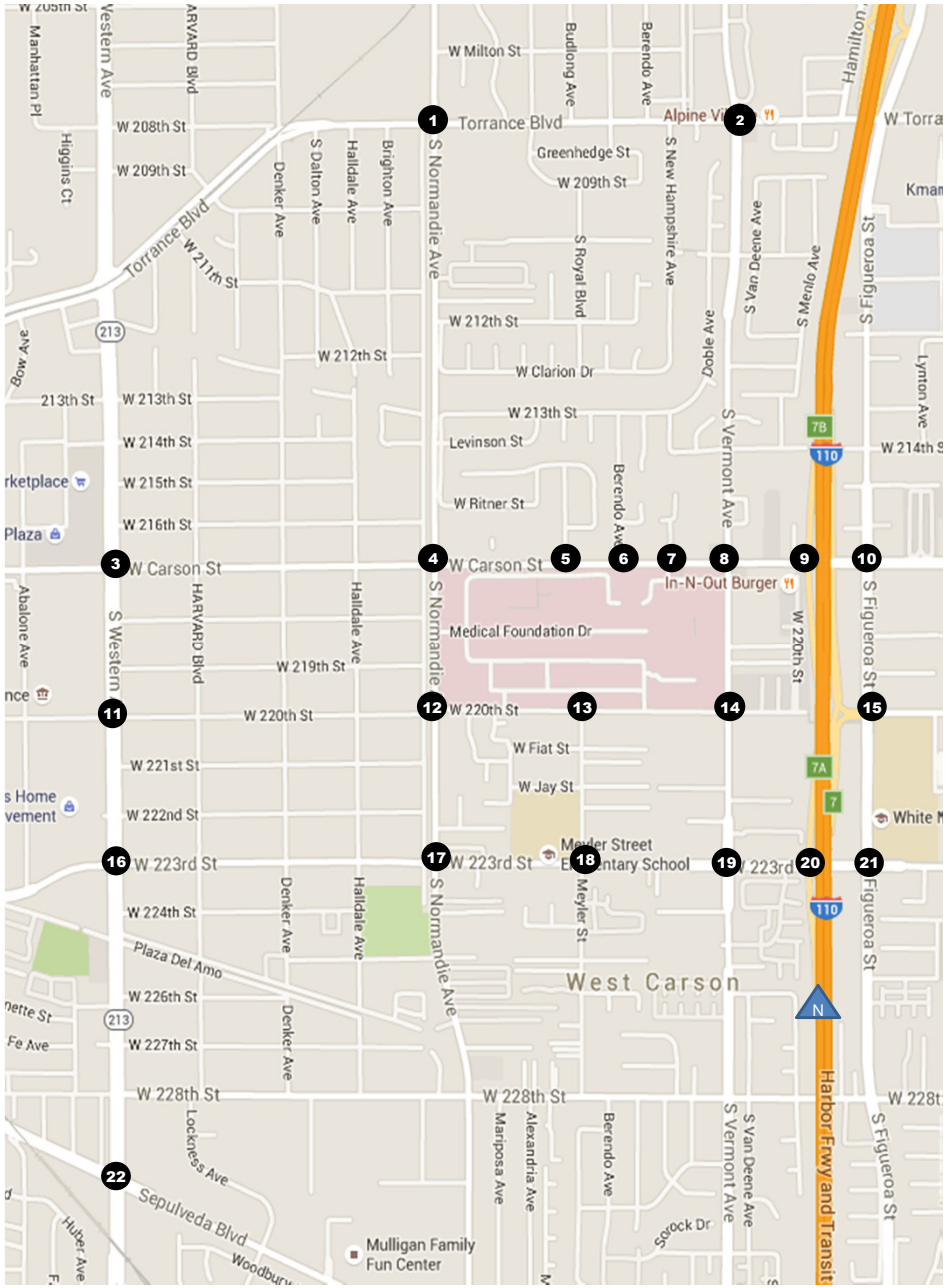

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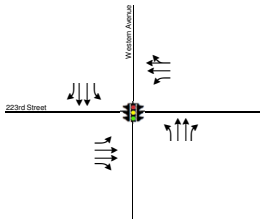	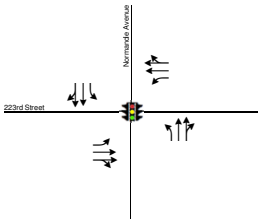	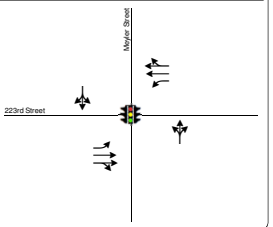
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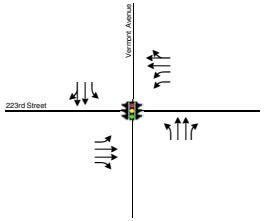	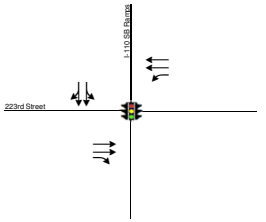	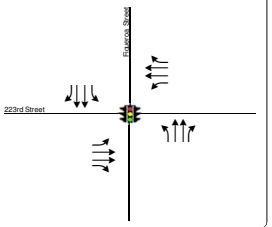
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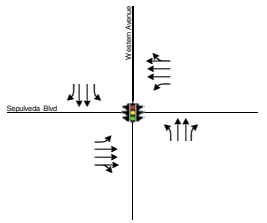		

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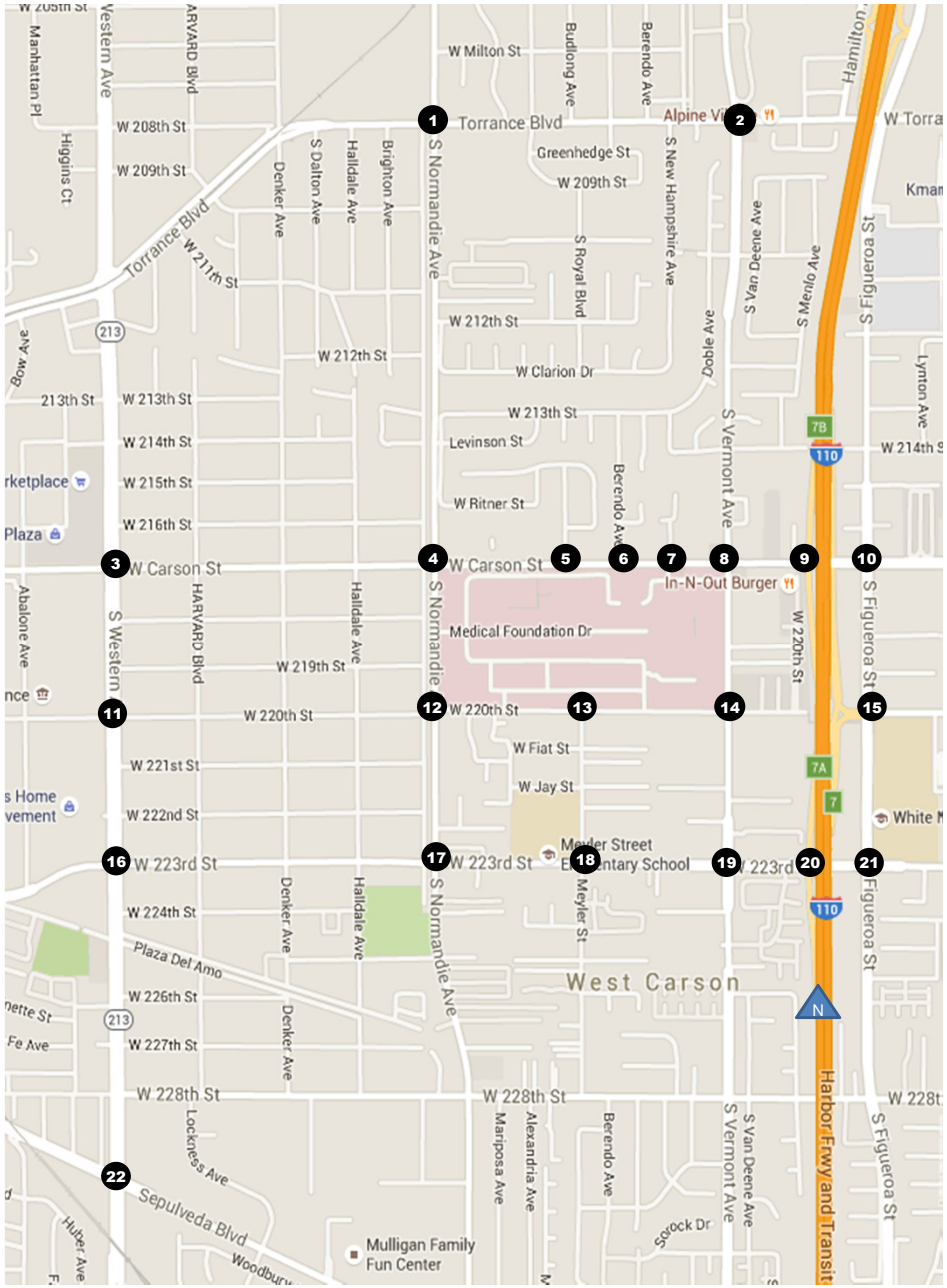

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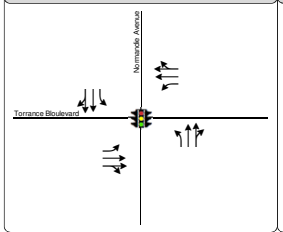

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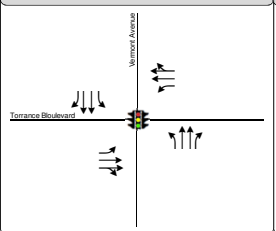

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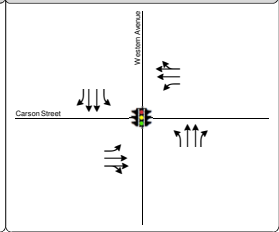

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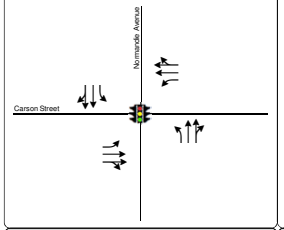

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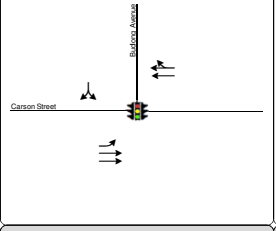

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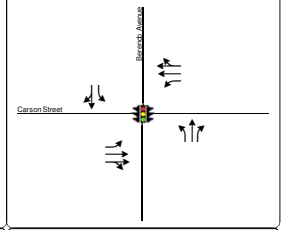

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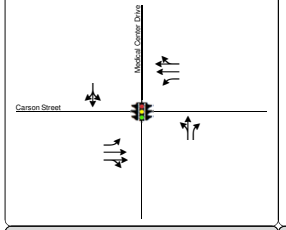

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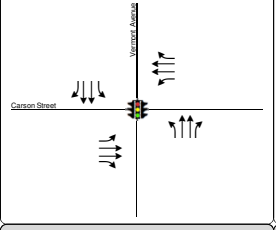

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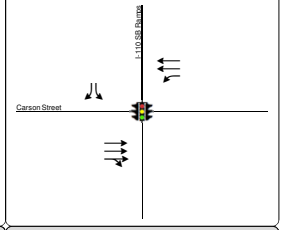

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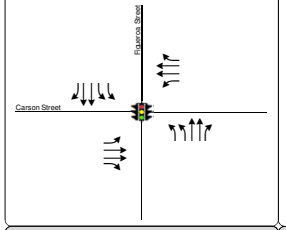

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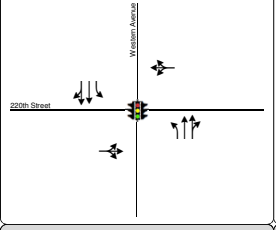

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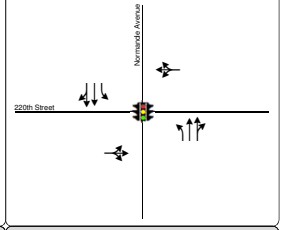

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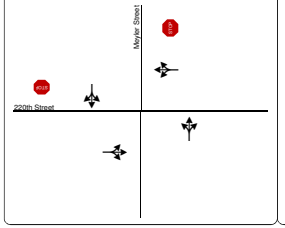

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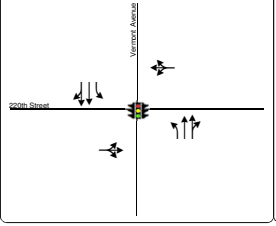

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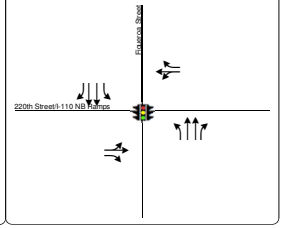

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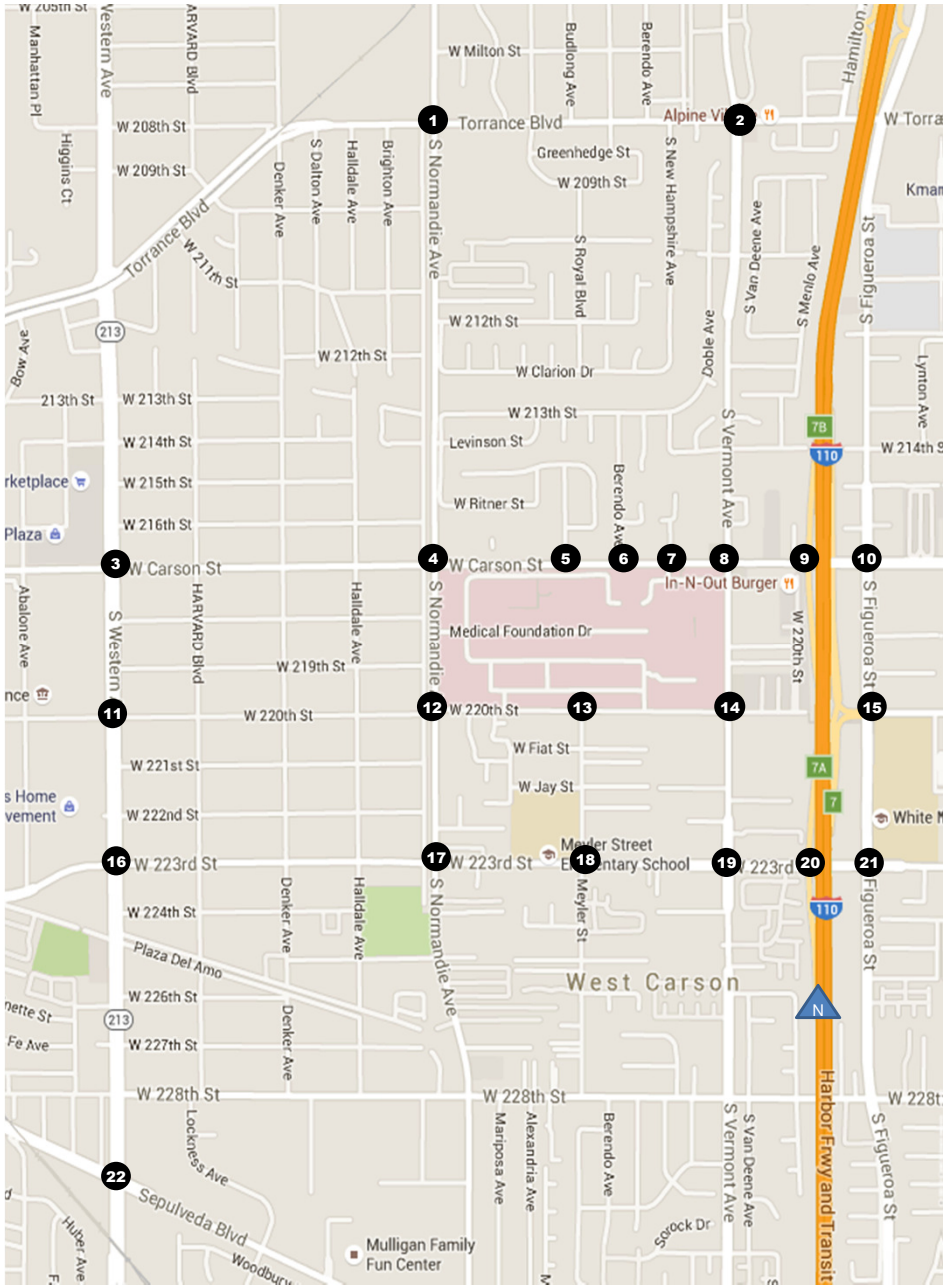

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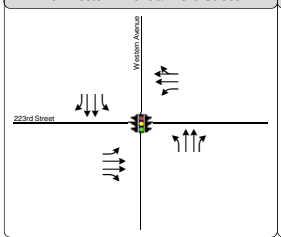	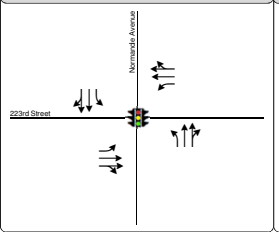	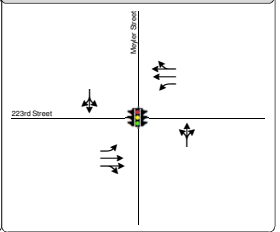
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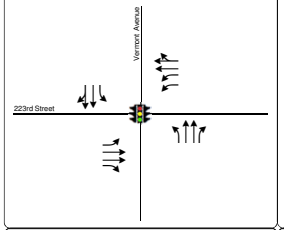	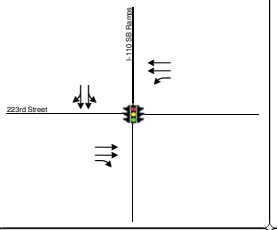	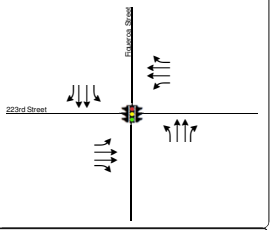
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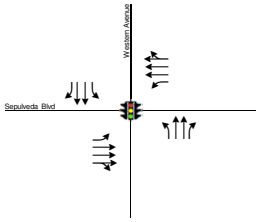		

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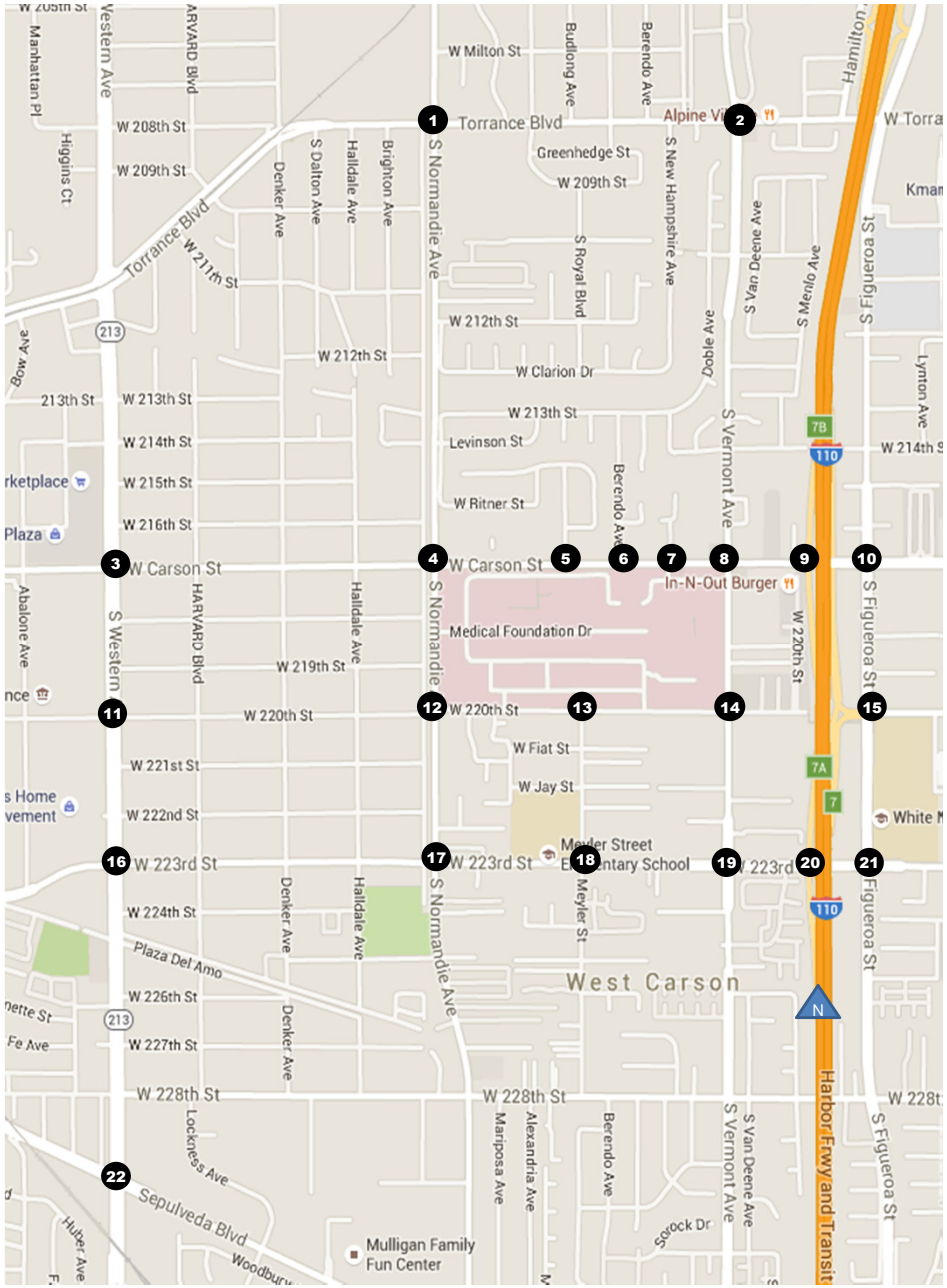

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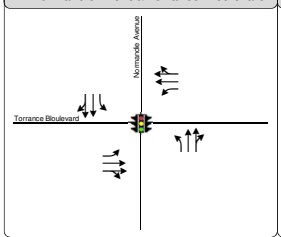

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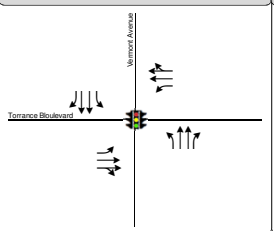

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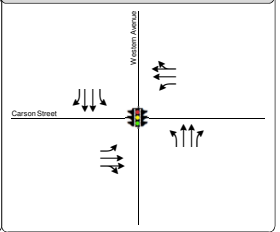

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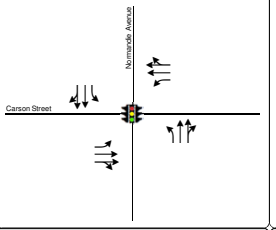

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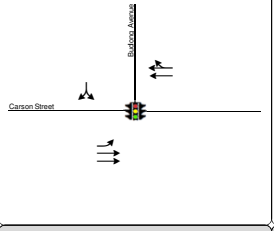

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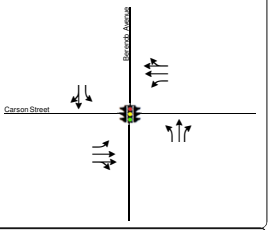

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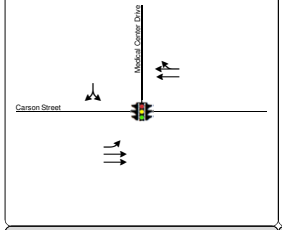

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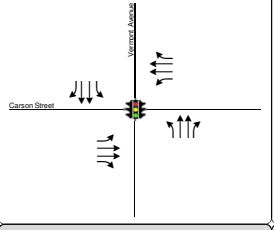

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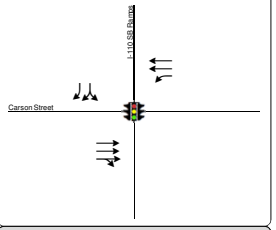

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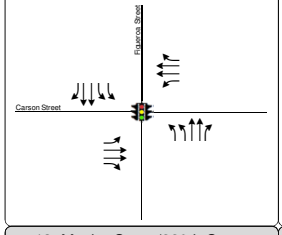

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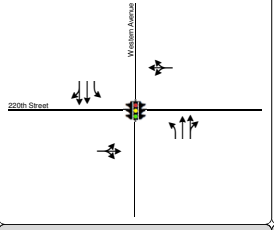
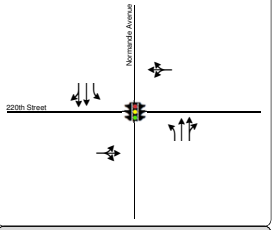
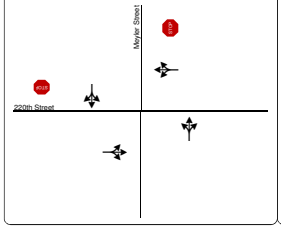


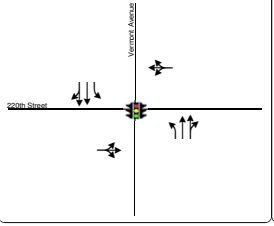
12. Normandie Avenue/220th Street



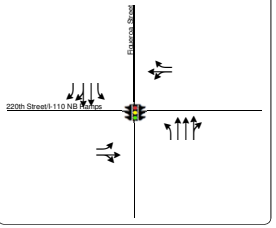
13. Meyler Street/220th Street



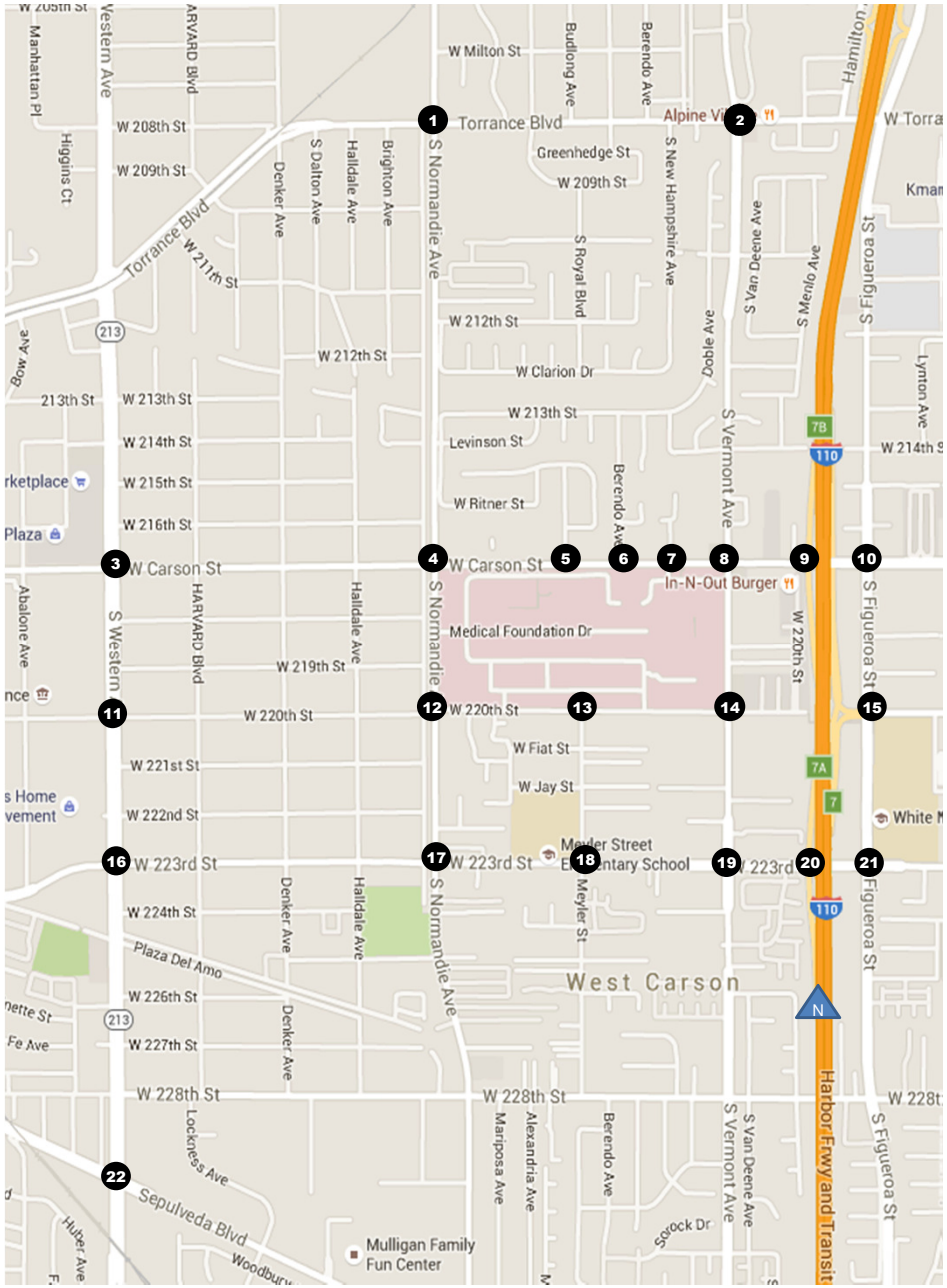
14. Vermont Avenue/220th Street

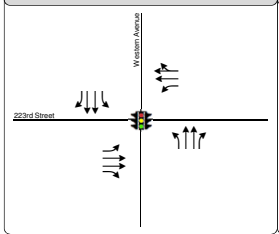
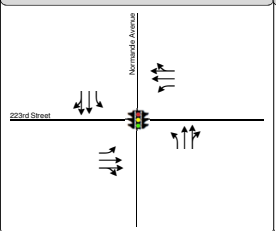
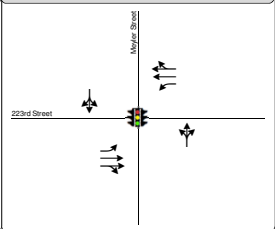
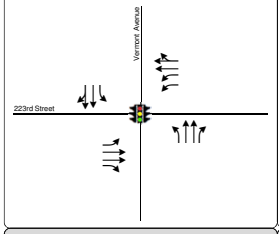
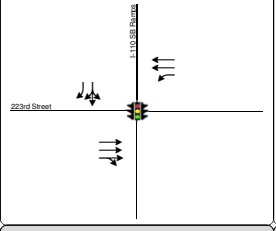
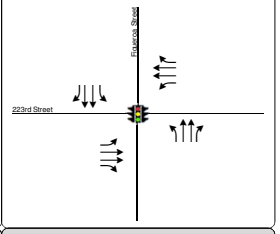
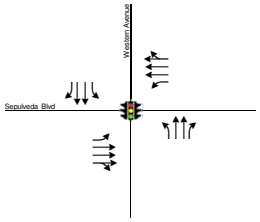


15. Figueroa Street/220th Street/I-110 NB Ramps

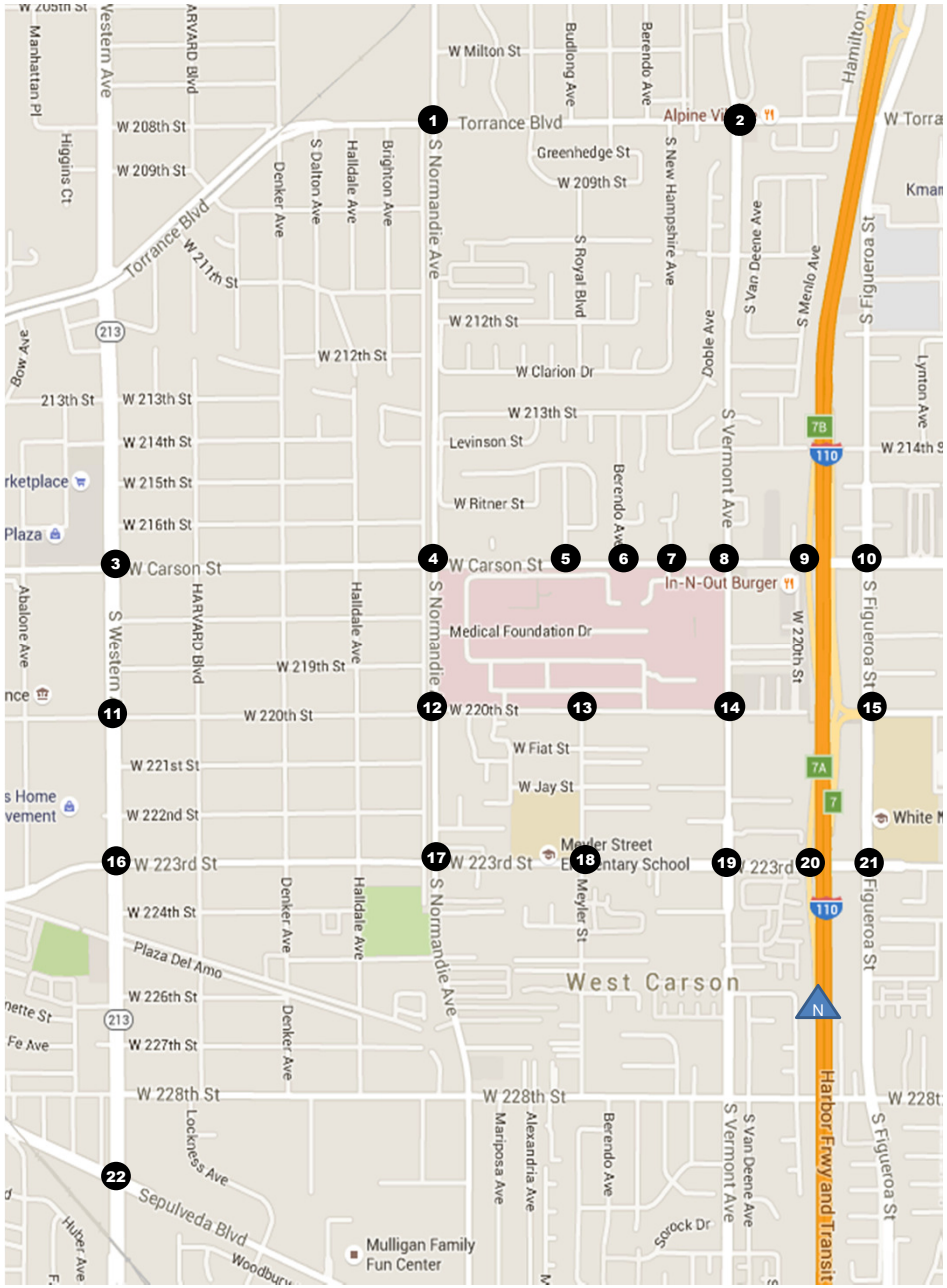


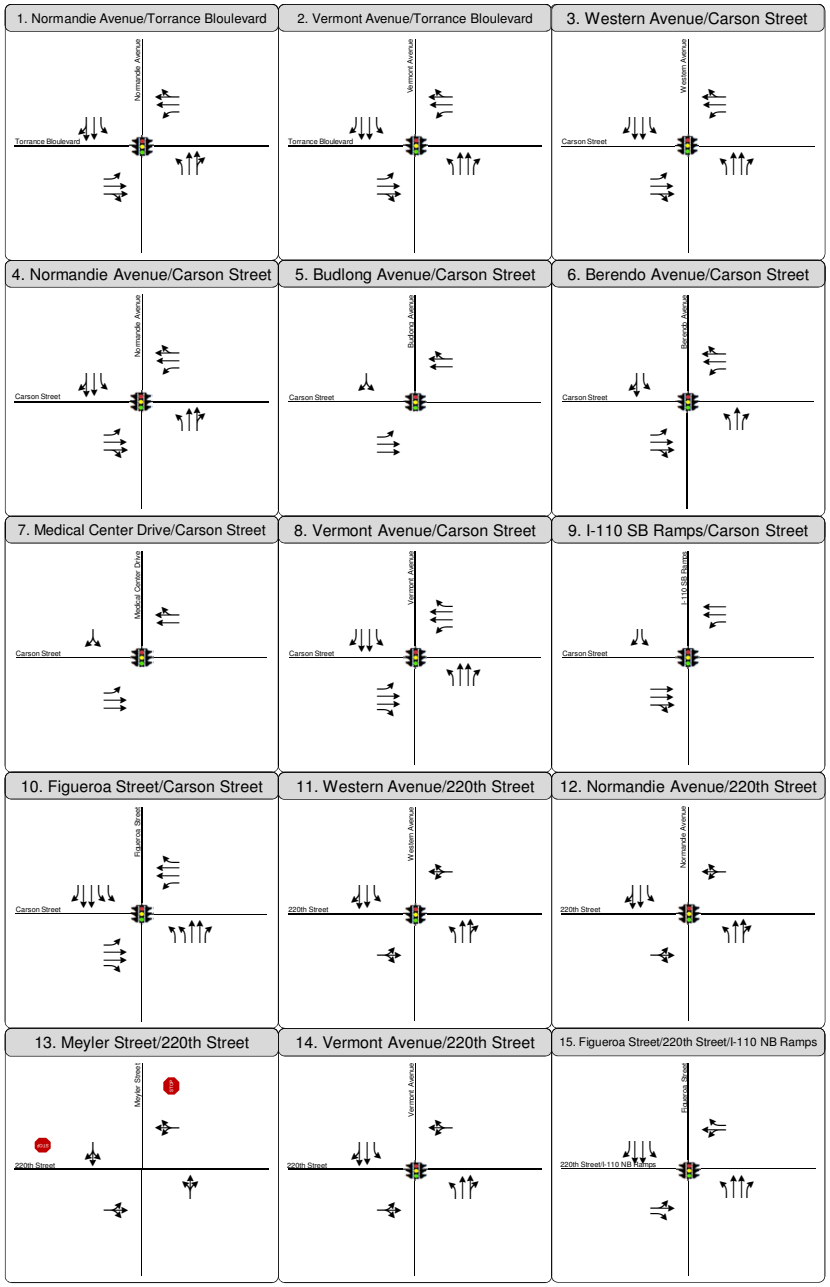
Future Lane Configurations Used for City Analysis (No De-Facto Right Turns)



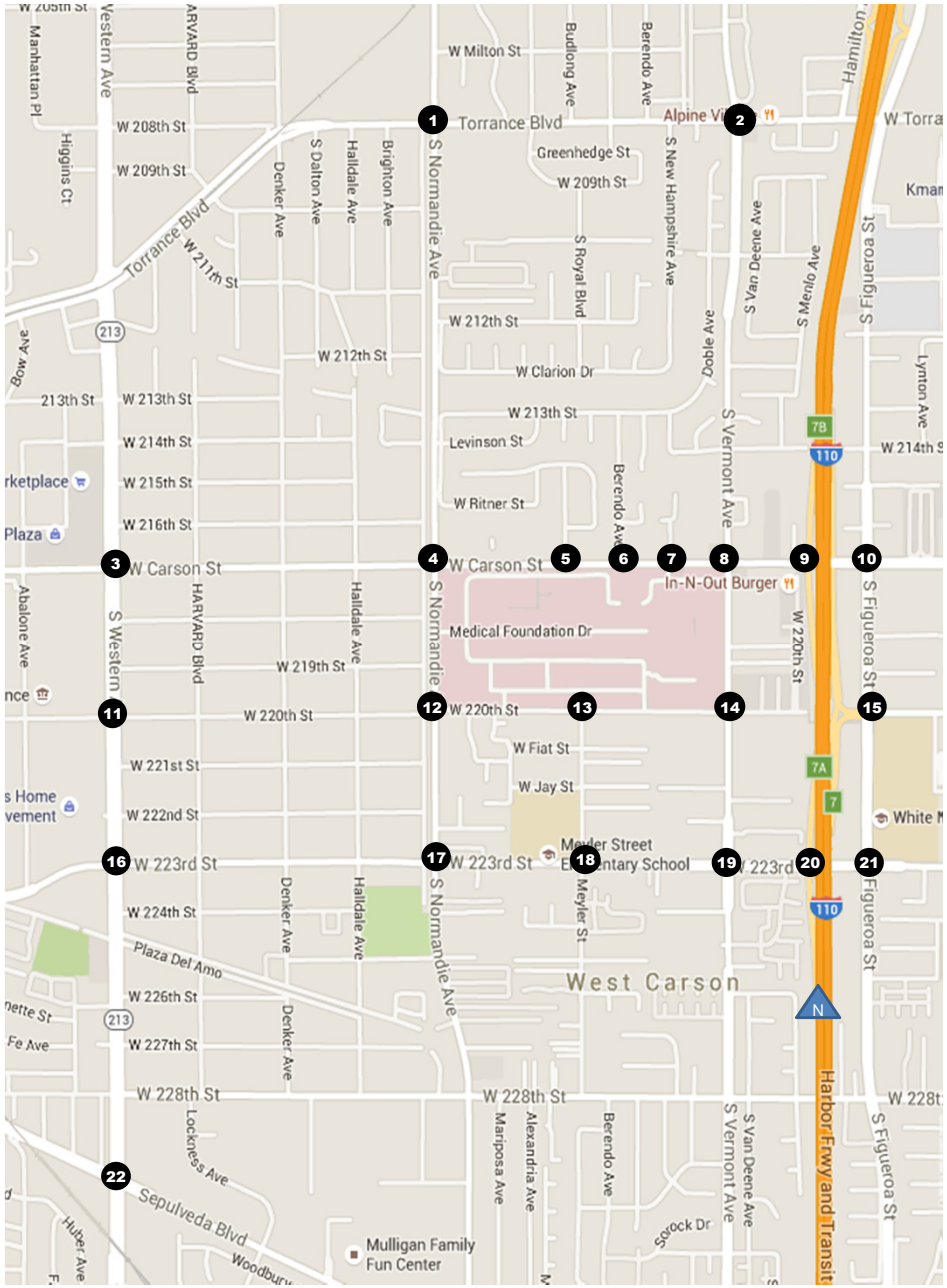
16. Western Avenue/223rd Street	17. Normandie Avenue/223rd Street	18. Meyler Street/223rd Street
		
19. Vermont Avenue/223rd Street	**20. I-110 SB Ramps/223rd Street**	**21. Figueroa Street/223rd Street**
		
22. Western Avenue/Sepulveda Blvd		
		

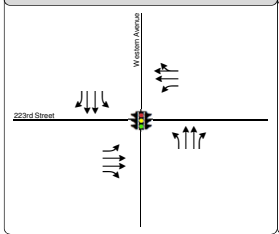
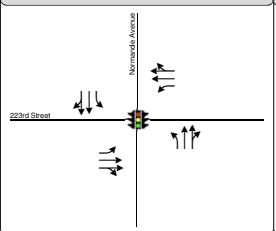
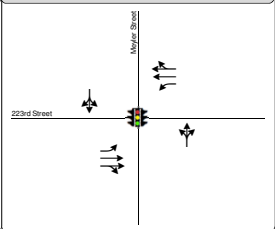
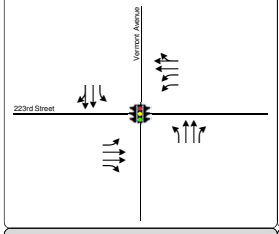
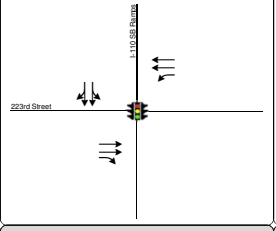
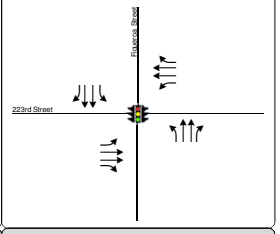
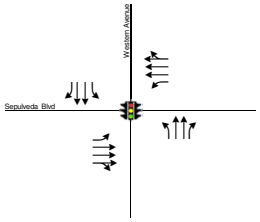
Future Lane Configurations Used for City Analysis (No De-Facto Right Turns)





Future Lane Configurations Used for City Analysis (With De-Facto Right Turns)



16. Western Avenue/223rd Street	17. Normandie Avenue/223rd Street	18. Meyler Street/223rd Street
		
19. Vermont Avenue/223rd Street	**20. I-110 SB Ramps/223rd Street**	**21. Figueroa Street/223rd Street**
		
22. Western Avenue/Sepulveda Blvd		
		

Future Lane Configurations Used for City Analysis (With De-Facto Right Turns)

APPENDIX B: INTERSECTION TRAFFIC COUNTS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-003 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			Torrance Blvd			Torrance Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	17	123	22	4	43	10	15	154	8	26	288	23	733
7:15 AM	34	154	35	12	81	10	28	204	17	28	329	15	947
7:30 AM	37	197	40	5	100	21	21	243	20	21	380	21	1106
7:45 AM	42	193	36	6	124	26	22	233	23	31	351	17	1104
8:00 AM	29	176	35	13	82	27	22	246	21	28	383	23	1085
8:15 AM	46	170	36	8	76	27	30	193	13	23	347	13	982
8:30 AM	26	135	21	9	81	13	26	191	12	25	366	22	927
8:45 AM	36	162	47	9	85	26	17	169	16	18	304	11	900
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	267	1310	272	66	672	160	181	1633	130	200	2748	145	7784
APPROACH %'s :	14.44%	70.85%	14.71%	7.35%	74.83%	17.82%	9.31%	84.00%	6.69%	6.47%	88.85%	4.69%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	154	736	147	32	382	101	95	915	77	103	1461	74	4277
PEAK HR FACTOR :		0.946			0.825			0.940			0.944		0.967

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-003 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			Torrance Blvd			Torrance Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	26	127	30	34	120	20	21	298	24	16	203	8	927
4:15 PM	16	90	34	23	116	25	29	322	31	18	231	14	949
4:30 PM	28	162	37	34	155	29	18	318	33	12	212	16	1054
4:45 PM	26	123	43	32	157	39	25	374	22	14	223	9	1087
5:00 PM	19	146	35	29	170	46	24	346	26	12	233	9	1095
5:15 PM	29	131	42	34	196	41	27	323	26	19	261	8	1137
5:30 PM	24	130	29	35	206	26	30	330	37	13	246	17	1123
5:45 PM	26	138	35	33	175	39	37	316	45	14	207	18	1083
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	194	1047	285	254	1295	265	211	2627	244	118	1816	99	8455
APPROACH %'s :	12.71%	68.61%	18.68%	14.00%	71.39%	14.61%	6.85%	85.24%	7.92%	5.80%	89.33%	4.87%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	98	530	149	130	729	152	106	1373	111	58	963	43	4442
PEAK HR FACTOR :		0.962			0.933			0.944			0.924		0.977

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-004 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

AM

NS/EW Streets:	Vermont Ave			Vermont Ave			Torrance Blvd			Torrance Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	12	188	34	5	85	44	38	142	10	6	244	17	825
7:15 AM	18	183	27	1	94	52	32	205	20	18	314	28	992
7:30 AM	20	227	41	9	160	42	40	254	28	27	339	27	1214
7:45 AM	37	226	46	9	156	54	42	229	56	26	339	36	1256
8:00 AM	36	184	57	11	131	44	50	212	55	17	306	25	1128
8:15 AM	29	176	38	8	119	45	40	171	8	19	319	23	995
8:30 AM	20	155	23	11	110	46	36	181	14	21	299	18	934
8:45 AM	12	132	27	7	85	36	43	165	14	24	271	20	836
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	184	1471	293	61	940	363	321	1559	205	158	2431	194	8180
APPROACH %'s :	9.45%	75.51%	15.04%	4.47%	68.91%	26.61%	15.40%	74.77%	9.83%	5.68%	87.35%	6.97%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	122	813	182	37	566	185	172	866	147	89	1303	111	4593
PEAK HR FACTOR :		0.904			0.900			0.906			0.937		0.914

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-004 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

PM

NS/EW Streets:	Vermont Ave			Vermont Ave			Torrance Blvd			Torrance Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	26	140	22	17	137	41	37	300	35	5	173	22	955
4:15 PM	28	135	19	15	170	44	25	315	15	16	168	13	963
4:30 PM	15	105	25	15	173	47	32	335	20	14	175	21	977
4:45 PM	26	133	32	21	198	58	51	314	25	13	180	21	1072
5:00 PM	10	104	22	28	214	57	48	311	22	15	160	21	1012
5:15 PM	20	127	40	40	253	59	24	322	26	14	167	25	1117
5:30 PM	22	120	26	23	198	55	43	312	23	18	182	22	1044
5:45 PM	19	109	30	25	235	54	32	311	29	12	159	13	1028
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	166	973	216	184	1578	415	292	2520	195	107	1364	158	8168
APPROACH %'s :	12.25%	71.81%	15.94%	8.45%	72.49%	19.06%	9.71%	83.80%	6.48%	6.57%	83.73%	9.70%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	78	484	120	112	863	229	166	1259	96	60	689	89	4245
PEAK HR FACTOR :		0.893			0.855			0.975			0.944		0.950

UTURNS

	NB	SB	EB	WB
4:00 PM	1	0	0	1
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
	NB	SB	EB	WB
TOTAL VOLUMES :	1	0	0	1

CONTROL : Signalized

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Torrance
N/S: Western Avenue
E/W: Carson Street
Weather: Clear

File Name : TORWECAAM
Site Code : 01415295
Start Date : 5/27/2015
Page No : 1

Groups Printed- Passenger Vehicles - Dual Wheel - Buses

	Western Avenue Southbound				Carson Street Westbound				Western Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	120	11	143	23	185	31	239	27	271	13	311	12	118	6	136	829
07:15 AM	18	141	18	177	29	232	39	300	35	274	26	335	9	128	17	154	966
07:30 AM	18	196	29	243	23	311	36	370	38	261	15	314	12	152	13	177	1104
07:45 AM	23	196	49	268	11	290	37	338	40	271	25	336	14	232	39	285	1227
Total	71	653	107	831	86	1018	143	1247	140	1077	79	1296	47	630	75	752	4126
08:00 AM	29	164	29	222	17	249	27	293	40	283	16	339	16	190	28	234	1088
08:15 AM	23	154	26	203	15	271	53	339	32	308	27	367	16	171	23	210	1119
08:30 AM	34	135	30	199	20	258	41	319	51	283	26	360	13	145	9	167	1045
08:45 AM	22	149	24	195	17	260	47	324	45	265	16	326	11	197	37	245	1090
Total	108	602	109	819	69	1038	168	1275	168	1139	85	1392	56	703	97	856	4342
09:00 AM	23	129	16	168	20	202	33	255	37	226	22	285	16	150	32	198	906
09:15 AM	20	160	26	206	19	202	31	252	30	198	20	248	11	157	21	189	895
09:30 AM	23	157	25	205	18	190	32	240	44	201	27	272	20	125	27	172	889
09:45 AM	20	137	36	193	21	186	25	232	42	170	20	232	16	142	24	182	839
Total	86	583	103	772	78	780	121	979	153	795	89	1037	63	574	104	741	3529
Grand Total	265	1838	319	2422	233	2836	432	3501	461	3011	253	3725	166	1907	276	2349	11997
Apprch %	10.9	75.9	13.2		6.7	81	12.3		12.4	80.8	6.8		7.1	81.2	11.7		
Total %	2.2	15.3	2.7	20.2	1.9	23.6	3.6	29.2	3.8	25.1	2.1	31	1.4	15.9	2.3	19.6	
Passenger Vehicles	256	1760	314	2330	219	2742	423	3384	454	2950	246	3650	160	1858	266	2284	11648
% Passenger Vehicles	96.6	95.8	98.4	96.2	94	96.7	97.9	96.7	98.5	98	97.2	98	96.4	97.4	96.4	97.2	97.1
Dual Wheel	5	76	5	86	14	61	7	82	7	58	7	72	6	31	10	47	287
% Dual Wheel	1.9	4.1	1.6	3.6	6	2.2	1.6	2.3	1.5	1.9	2.8	1.9	3.6	1.6	3.6	2	2.4
Buses	4	2	0	6	0	33	2	35	0	3	0	3	0	18	0	18	62
% Buses	1.5	0.1	0	0.2	0	1.2	0.5	1	0	0.1	0	0.1	0	0.9	0	0.8	0.5

	Western Avenue Southbound				Carson Street Westbound				Western Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	18	196	29	243	23	311	36	370	38	261	15	314	12	152	13	177	1104
07:45 AM	23	196	49	268	11	290	37	338	40	271	25	336	14	232	39	285	1227
08:00 AM	29	164	29	222	17	249	27	293	40	283	16	339	16	190	28	234	1088
08:15 AM	23	154	26	203	15	271	53	339	32	308	27	367	16	171	23	210	1119
Total Volume	93	710	133	936	66	1121	153	1340	150	1123	83	1356	58	745	103	906	4538
% App. Total	9.9	75.9	14.2		4.9	83.7	11.4		11.1	82.8	6.1		6.4	82.2	11.4		
PHF	.802	.906	.679	.873	.717	.901	.722	.905	.938	.912	.769	.924	.906	.803	.660	.795	.925

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(951) 268-6268

City of Torrance
N/S: Western Avenue
E/W: Carson Street
Weather: Clear

File Name : TORWECAPM
Site Code : 01415295
Start Date : 5/27/2015
Page No : 1

Groups Printed- Passenger Vehicles - Dual Wheel - Buses

	Western Avenue Southbound				Carson Street Westbound				Western Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	43	226	43	312	15	195	33	243	32	178	33	243	28	224	42	294	1092
03:15 PM	29	222	40	291	19	206	32	257	25	162	37	224	19	243	47	309	1081
03:30 PM	36	264	33	333	13	214	33	260	35	233	36	304	19	206	42	267	1164
03:45 PM	33	228	43	304	19	238	39	296	30	210	37	277	22	229	46	297	1174
Total	141	940	159	1240	66	853	137	1056	122	783	143	1048	88	902	177	1167	4511
04:00 PM	35	312	35	382	16	153	29	198	40	215	34	289	20	194	37	251	1120
04:15 PM	32	267	39	338	37	198	27	262	34	186	23	243	22	211	46	279	1122
04:30 PM	28	342	46	416	13	180	28	221	39	219	38	296	14	206	44	264	1197
04:45 PM	34	279	47	360	20	212	39	271	38	181	28	247	24	261	44	329	1207
Total	129	1200	167	1496	86	743	123	952	151	801	123	1075	80	872	171	1123	4646
05:00 PM	39	325	51	415	16	223	26	265	49	216	31	296	18	239	46	303	1279
05:15 PM	41	338	67	446	16	252	31	299	28	182	21	231	21	251	51	323	1299
05:30 PM	40	353	55	448	18	223	26	267	36	214	36	286	21	229	42	292	1293
05:45 PM	33	289	62	384	14	243	32	289	35	185	32	252	12	217	36	265	1190
Total	153	1305	235	1693	64	941	115	1120	148	797	120	1065	72	936	175	1183	5061
Grand Total	423	3445	561	4429	216	2537	375	3128	421	2381	386	3188	240	2710	523	3473	14218
Apprch %	9.6	77.8	12.7		6.9	81.1	12		13.2	74.7	12.1		6.9	78	15.1		
Total %	3	24.2	3.9	31.2	1.5	17.8	2.6	22	3	16.7	2.7	22.4	1.7	19.1	3.7	24.4	
Passenger Vehicles	414	3393	553	4360	212	2501	370	3083	417	2317	385	3119	229	2655	519	3403	13965
% Passenger Vehicles	97.9	98.5	98.6	98.4	98.1	98.6	98.7	98.6	99	97.3	99.7	97.8	95.4	98	99.2	98	98.2
Dual Wheel	8	36	8	52	4	20	3	27	4	35	1	40	10	38	4	52	171
% Dual Wheel	1.9	1	1.4	1.2	1.9	0.8	0.8	0.9	1	1.5	0.3	1.3	4.2	1.4	0.8	1.5	1.2
Buses	1	16	0	17	0	16	2	18	0	29	0	29	1	17	0	18	82
% Buses	0.2	0.5	0	0.4	0	0.6	0.5	0.6	0	1.2	0	0.9	0.4	0.6	0	0.5	0.6

	Western Avenue Southbound				Carson Street Westbound				Western Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	34	279	47	360	20	212	39	271	38	181	28	247	24	261	44	329	1207
05:00 PM	39	325	51	415	16	223	26	265	49	216	31	296	18	239	46	303	1279
05:15 PM	41	338	67	446	16	252	31	299	28	182	21	231	21	251	51	323	1299
05:30 PM	40	353	55	448	18	223	26	267	36	214	36	286	21	229	42	292	1293
Total Volume	154	1295	220	1669	70	910	122	1102	151	793	116	1060	84	980	183	1247	5078
% App. Total	9.2	77.6	13.2		6.4	82.6	11.1		14.2	74.8	10.9		6.7	78.6	14.7		
PHF	.939	.917	.821	.931	.875	.903	.782	.921	.770	.918	.806	.895	.875	.939	.897	.948	.977

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-001 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 3.5	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	22	73	6	6	45	22	44	178	29	20	234	12	691
7:15 AM	27	135	15	9	73	27	34	157	41	40	272	14	844
7:30 AM	48	144	18	5	92	38	48	226	46	32	309	11	1017
7:45 AM	66	185	15	10	130	42	37	209	53	44	295	21	1107
8:00 AM	52	182	27	10	67	41	73	264	49	51	283	21	1120
8:15 AM	43	149	11	8	69	26	36	188	39	34	299	22	924
8:30 AM	25	110	24	12	69	31	40	216	33	40	321	23	944
8:45 AM	37	90	18	21	60	25	49	170	29	43	242	12	796
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	320	1068	134	81	605	252	361	1608	319	304	2255	136	7443
APPROACH %'s :	21.02%	70.17%	8.80%	8.64%	64.50%	26.87%	15.78%	70.28%	13.94%	11.28%	83.67%	5.05%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	209	660	71	33	358	147	194	887	187	161	1186	75	4168
PEAK HR FACTOR :		0.883			0.739			0.821			0.988		0.930

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
NB	SB	EB	WB
0	0	0	2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-001 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 3.5	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	42	151	38	25	130	29	33	263	29	27	215	18	1000
4:15 PM	30	96	26	22	100	26	53	303	33	49	244	12	994
4:30 PM	43	142	33	20	124	24	34	251	31	35	189	10	936
4:45 PM	37	118	28	19	106	34	40	251	43	38	223	17	954
5:00 PM	49	149	38	23	119	34	45	259	46	33	225	21	1041
5:15 PM	44	100	23	23	125	48	42	283	29	46	264	18	1045
5:30 PM	39	124	31	28	127	40	44	279	32	40	245	17	1046
5:45 PM	38	116	12	18	146	40	68	347	56	34	285	20	1180
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	322	996	229	178	977	275	359	2236	299	302	1890	133	8196
APPROACH %'s :	20.81%	64.38%	14.80%	12.45%	68.32%	19.23%	12.40%	77.26%	10.33%	12.99%	81.29%	5.72%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	170	489	104	92	517	162	199	1168	163	153	1019	76	4312
PEAK HR FACTOR :		0.808			0.945			0.812			0.920		0.914

UTURNS	NB	SB	EB	WB
	0	0	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	1	0	1
	0	0	0	0
	0	0	1	1
	NB	SB	EB	WB
	0	1	1	3

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-002 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Budlong Ave			Budlong Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	1	2	0	0	2	0	
7:00 AM	0	0	0	9	0	1	0	173	0	0	252	1	436
7:15 AM	0	0	0	2	0	7	3	191	0	0	360	2	565
7:30 AM	0	0	0	6	0	7	4	225	0	0	326	1	569
7:45 AM	0	0	0	6	0	14	3	245	0	0	350	2	620
8:00 AM	0	0	0	0	0	5	4	256	0	0	326	4	595
8:15 AM	0	0	0	5	0	8	4	231	0	0	354	9	611
8:30 AM	0	0	0	3	0	5	1	207	0	0	343	0	559
8:45 AM	0	0	0	5	0	1	3	224	0	0	309	3	545
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	36	0	48	22	1752	0	0	2620	22	4500
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	42.86%	0.00%	57.14%	1.24%	98.76%	0.00%	0.00%	99.17%	0.83%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	17	0	34	15	957	0	0	1356	16	2395
PEAK HR FACTOR :	0.000			0.638			0.935			0.945			0.966

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-002 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Budlong Ave			Budlong Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL
4:00 PM	0	0	0	7	0	6	5	339	0	0	269	6	632
4:15 PM	0	0	0	2	0	4	6	319	0	0	281	6	618
4:30 PM	0	0	0	4	0	3	5	314	0	0	257	9	592
4:45 PM	0	0	0	7	0	9	7	287	0	0	299	4	613
5:00 PM	0	0	0	6	0	9	2	321	0	0	306	6	650
5:15 PM	0	0	0	2	0	9	8	305	0	0	301	6	631
5:30 PM	0	0	0	8	0	7	6	312	0	0	308	8	649
5:45 PM	0	0	0	4	0	10	9	349	0	0	304	7	683
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	40	0	57	48	2546	0	0	2325	52	5068
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	41.24%	0.00%	58.76%	1.85%	98.15%	0.00%	0.00%	97.81%	2.19%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	20	0	35	25	1287	0	0	1219	27	2613
PEAK HR FACTOR :		0.000			0.917			0.916			0.986		0.956

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-003 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Berendo Ave			Berendo Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	0	0	4	2	1	8	1	168	10	33	249	3	479
7:15 AM	5	0	4	4	1	7	1	184	8	31	344	5	594
7:30 AM	4	1	6	2	0	13	3	210	14	29	308	4	594
7:45 AM	7	0	10	3	0	10	4	235	11	33	339	4	656
8:00 AM	4	0	8	2	0	7	6	243	8	35	323	4	640
8:15 AM	4	1	15	4	0	7	3	217	13	26	344	10	644
8:30 AM	4	1	11	4	1	12	4	198	11	13	335	15	609
8:45 AM	3	5	17	4	0	7	5	215	8	15	293	9	581
TOTAL VOLUMES :	NL 31	NT 8	NR 75	SL 25	ST 3	SR 71	EL 27	ET 1670	ER 83	WL 215	WT 2535	WR 54	TOTAL 4797
APPROACH %'s :	27.19%	7.02%	65.79%	25.25%	3.03%	71.72%	1.52%	93.82%	4.66%	7.67%	90.41%	1.93%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	19	2	44	13	1	36	17	893	43	107	1341	33	2549
PEAK HR FACTOR :	0.813			0.735			0.927			0.974			0.971

UTURNS	NB	SB	EB	WB
	0	0	0	2
	0	0	0	1
	0	0	0	0
	0	0	0	3
	0	0	1	4
	0	0	0	4
	0	0	0	0
	0	0	1	4
	NB 0	SB 0	EB 2	WB 18

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-003 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Berendo Ave			Berendo Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	4	1	19	7	1	12	4	332	10	7	258	9	664
4:15 PM	1	2	24	2	1	12	8	309	6	5	271	13	654
4:30 PM	5	1	20	13	0	11	6	302	7	7	257	18	647
4:45 PM	10	1	23	12	0	8	7	271	6	8	283	8	637
5:00 PM	0	1	32	4	0	10	8	328	3	6	308	9	709
5:15 PM	3	0	16	10	2	8	6	283	3	7	296	15	649
5:30 PM	2	1	13	6	1	9	4	322	7	9	305	14	693
5:45 PM	7	0	16	4	1	7	9	315	10	6	291	7	673
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	32	7	163	58	6	77	52	2462	52	55	2269	93	5326
APPROACH %'s :	15.84%	3.47%	80.69%	41.13%	4.26%	54.61%	2.03%	95.95%	2.03%	2.28%	93.88%	3.85%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	12	2	77	24	4	34	27	1248	23	28	1200	45	2724
PEAK HR FACTOR :		0.689			0.775			0.957			0.970		0.961

UTURNS	NB	SB	EB	WB
	0	0	0	1
	0	0	0	0
	0	0	0	2
	0	0	1	2
	0	0	0	0
	0	0	0	3
	0	0	0	0
	0	0	0	1
	NB	SB	EB	WB
	0	0	1	9

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-004 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Medical Center Dwy			Medical Center Dwy			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	6	0	25	6	0	3	0	167	5	41	285	1	539
7:15 AM	12	1	22	12	0	9	1	183	9	36	350	2	637
7:30 AM	13	0	47	16	0	7	4	210	6	46	339	1	689
7:45 AM	5	1	20	10	1	9	1	257	2	43	375	4	728
8:00 AM	4	0	27	9	0	9	7	226	7	56	359	1	705
8:15 AM	6	0	20	10	0	9	1	235	1	37	363	4	686
8:30 AM	13	0	19	10	0	7	1	212	8	47	349	4	670
8:45 AM	7	1	23	9	2	11	4	218	11	54	298	3	641
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	66	3	203	82	3	64	19	1708	49	360	2718	20	5295
APPROACH %'s :	24.26%	1.10%	74.63%	55.03%	2.01%	42.95%	1.07%	96.17%	2.76%	11.62%	87.73%	0.65%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	28	1	114	45	1	34	13	928	16	182	1436	10	2808
PEAK HR FACTOR :		0.596			0.870			0.920			0.964		0.964

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-004 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Medical Center Dwy			Medical Center Dwy			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	10	0	40	2	0	3	1	355	6	30	250	9	706
4:15 PM	7	0	38	2	1	1	3	331	2	27	290	7	709
4:30 PM	9	0	46	2	0	3	5	328	7	24	267	7	698
4:45 PM	7	0	37	2	0	2	3	318	5	26	301	7	708
5:00 PM	7	0	32	4	0	7	4	337	6	22	299	6	724
5:15 PM	7	0	21	4	0	2	5	311	1	21	310	6	688
5:30 PM	3	0	23	3	0	6	7	331	5	28	320	4	730
5:45 PM	8	0	28	1	0	2	8	323	2	15	313	9	709
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	58	0	265	20	1	26	36	2634	34	193	2350	55	5672
APPROACH %'s :	17.96%	0.00%	82.04%	42.55%	2.13%	55.32%	1.33%	97.41%	1.26%	7.43%	90.45%	2.12%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	25	0	104	12	0	17	24	1302	14	86	1242	25	2851
PEAK HR FACTOR :		0.827			0.659			0.965			0.961		0.976

UTURNS				
NB	SB	EB	WB	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	1	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
NB	SB	EB	WB	
0	0	1	0	

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-005 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Vermont Ave			Vermont Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
7:00 AM	23	121	37	23	74	38	24	167	15	79	277	35	913
7:15 AM	23	210	43	22	89	46	24	159	20	75	322	30	1063
7:30 AM	30	204	71	34	124	53	31	225	24	81	304	29	1210
7:45 AM	43	263	74	34	163	53	22	236	19	54	317	40	1318
8:00 AM	37	181	42	27	108	52	36	228	17	61	325	39	1153
8:15 AM	45	176	35	29	92	52	35	192	21	60	304	24	1065
8:30 AM	27	111	43	22	84	44	32	215	9	45	333	34	999
8:45 AM	24	136	42	22	87	48	43	173	17	52	293	31	968
TOTAL VOLUMES :	NL 252	NT 1402	NR 387	SL 213	ST 821	SR 386	EL 247	ET 1595	ER 142	WL 507	WT 2475	WR 262	TOTAL 8689
APPROACH %'s :	12.35%	68.69%	18.96%	15.00%	57.82%	27.18%	12.45%	80.39%	7.16%	15.63%	76.29%	8.08%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	155	824	222	124	487	210	124	881	81	256	1250	132	4746
PEAK HR FACTOR :		0.790			0.821			0.966			0.964		0.900

UTURNS

NB	SB	EB	WB
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
NB 0	SB 1	EB 0	WB 1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-005 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Vermont Ave			Vermont Ave			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
4:00 PM	28	109	87	34	111	43	24	341	36	31	242	37	1123
4:15 PM	38	105	67	54	151	41	21	309	30	38	230	37	1121
4:30 PM	24	95	91	57	146	37	33	319	29	41	242	25	1139
4:45 PM	33	110	89	54	179	46	22	302	28	43	257	31	1194
5:00 PM	31	100	95	69	167	40	38	347	28	23	266	52	1256
5:15 PM	30	104	89	80	207	43	24	274	18	46	240	35	1190
5:30 PM	39	101	72	69	187	50	29	307	35	40	259	45	1233
5:45 PM	19	83	68	70	188	43	25	298	21	37	267	37	1156
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	242	807	658	487	1336	343	216	2497	225	299	2003	299	9412
APPROACH %'s :	14.18%	47.28%	38.55%	22.48%	61.68%	15.84%	7.35%	84.99%	7.66%	11.50%	77.01%	11.50%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	133	415	345	272	740	179	113	1230	109	152	1022	163	4873
PEAK HR FACTOR :		0.962			0.902			0.879			0.972		0.970

UTURNS	NB	SB	EB	WB
	0	0	0	1
	0	0	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	1
	0	0	0	1
	0	0	0	1
	NB	SB	EB	WB
	0	0	0	5

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-006 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	I-110 SB Ramps			I-110 SB Ramps			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 1	ST 0	SR 1	EL 0	ET 3	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	0	0	0	18	0	164	0	195	26	23	233	0	659
7:15 AM	0	0	0	30	0	184	0	190	24	37	251	0	716
7:30 AM	0	0	0	37	0	137	0	287	30	69	310	0	870
7:45 AM	0	0	0	39	0	134	0	305	40	42	320	0	880
8:00 AM	0	0	0	29	0	121	0	266	34	32	300	0	782
8:15 AM	0	0	0	27	0	146	0	216	27	31	281	0	728
8:30 AM	0	0	0	30	0	162	0	272	29	31	236	0	760
8:45 AM	0	0	0	30	0	161	0	201	21	20	231	0	664
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	240	0	1209	0	1932	231	285	2162	0	6059
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	16.56%	0.00%	83.44%	0.00%	89.32%	10.68%	11.65%	88.35%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	132	0	538	0	1074	131	174	1211	0	3260
PEAK HR FACTOR :	0.000			0.963			0.873			0.914			0.926

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-006 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	I-110 SB Ramps			I-110 SB Ramps			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 1	ST 0	SR 1	EL 0	ET 3	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	0	0	0	53	0	117	0	422	51	30	213	0	886
4:15 PM	0	0	0	59	0	94	0	369	50	31	209	0	812
4:30 PM	0	0	0	52	0	102	0	421	66	40	236	0	917
4:45 PM	0	0	0	67	0	110	0	388	67	42	221	0	895
5:00 PM	0	0	0	52	0	93	0	449	68	34	238	0	934
5:15 PM	0	0	0	67	0	107	0	356	58	53	225	0	866
5:30 PM	0	0	0	62	0	95	0	391	68	49	261	0	926
5:45 PM	0	0	0	82	1	105	0	404	67	42	260	0	961
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	494	1	823	0	3200	495	321	1863	0	7197
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	37.48%	0.08%	62.44%	0.00%	86.60%	13.40%	14.70%	85.30%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	263	1	400	0	1600	261	178	984	0	3687
PEAK HR FACTOR :		0.000			0.883			0.900			0.937		0.959

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-007 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Figueroa St			Figueroa St			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 2	NR 0	SL 2	ST 2	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	39	96	25	9	35	20	9	127	78	11	209	18	676
7:15 AM	46	118	22	14	64	35	25	99	91	8	206	23	751
7:30 AM	59	137	48	6	83	33	15	158	138	25	286	22	1010
7:45 AM	104	135	60	10	97	53	42	182	137	31	209	36	1096
8:00 AM	69	125	38	12	40	35	23	167	82	25	244	22	882
8:15 AM	50	91	25	10	38	27	32	138	92	14	222	18	757
8:30 AM	41	60	21	11	54	29	27	148	94	10	170	9	674
8:45 AM	37	65	18	11	50	25	21	136	90	12	185	15	665
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	445	827	257	83	461	257	194	1155	802	136	1731	163	6511
APPROACH %'s :	29.10%	54.09%	16.81%	10.36%	57.55%	32.08%	9.02%	53.70%	37.28%	6.70%	85.27%	8.03%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	282	488	171	38	258	148	112	645	449	95	961	98	3745
PEAK HR FACTOR :		0.787			0.694			0.835			0.866		0.854

UTURNS	NB	SB	EB	WB
	0	2	0	0
	0	4	0	0
	0	0	0	0
	0	0	2	0
	0	4	0	6
	0	4	0	0
	0	4	2	0
	NB	SB	EB	WB
TOTAL VOLUMES :	0	18	4	6

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-007 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Figueroa St			Figueroa St			Carson St			Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 2	NR 0	SL 2	ST 2	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
4:00 PM	48	56	31	26	74	24	27	265	165	28	177	15	936
4:15 PM	44	66	45	30	64	36	38	248	153	19	169	16	928
4:30 PM	42	57	37	26	91	40	29	279	150	21	190	10	972
4:45 PM	60	56	33	39	77	40	28	293	143	27	165	12	973
5:00 PM	52	56	35	30	110	39	17	309	156	25	191	16	1036
5:15 PM	54	51	23	30	126	43	33	270	128	23	181	19	981
5:30 PM	49	57	39	39	105	38	24	287	136	31	212	18	1035
5:45 PM	52	67	41	32	127	41	26	322	145	24	213	17	1107
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	401	466	284	252	774	301	222	2273	1176	198	1498	123	7968
APPROACH %'s :	34.84%	40.49%	24.67%	18.99%	58.33%	22.68%	6.05%	61.92%	32.03%	10.89%	82.35%	6.76%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	207	231	138	131	468	161	100	1188	565	103	797	70	4159
PEAK HR FACTOR :		0.900			0.950			0.940			0.929		0.939

UTURNS	NB	SB	EB	WB
	0	2	0	0
	0	4	0	0
	0	4	0	2
	0	6	0	0
	0	2	2	0
	0	2	6	2
	0	6	0	0
	0	6	2	2
	NB	SB	EB	WB
TOTAL VOLUMES :	0	32	10	6

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5805-001 **Day:** Wednesday

City: Carson **Date:** 12/2/2015

AM

NS/EW Streets:	Western Ave			Western Ave			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	12	319	6	5	135	5	3	2	5	11	7	7	517
7:15 AM	24	344	6	1	196	12	5	3	10	15	6	7	629
7:30 AM	30	322	4	4	251	15	3	5	12	45	26	5	722
7:45 AM	38	363	11	2	223	24	5	6	23	29	27	14	765
8:00 AM	24	319	10	4	206	17	5	9	10	15	18	10	647
8:15 AM	18	360	4	1	164	11	7	3	9	11	12	8	608
8:30 AM	27	364	2	2	172	29	4	2	9	5	12	7	635
8:45 AM	33	351	6	1	159	14	8	4	13	17	15	2	623
9:00 AM	13	243	6	1	178	10	11	7	13	6	6	8	502
9:15 AM	19	263	2	4	178	19	12	4	17	5	11	9	543
9:30 AM	15	213	0	3	165	15	11	3	16	8	7	8	464
9:45 AM	16	246	3	2	184	18	8	3	19	6	8	4	517
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	269	3707	60	30	2211	189	82	51	156	173	155	89	7172
APPROACH %'s :	6.67%	91.85%	1.49%	1.23%	90.99%	7.78%	28.37%	17.65%	53.98%	41.49%	37.17%	21.34%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	116	1348	31	11	876	68	18	23	55	104	77	36	2763
PEAK HR FACTOR :		0.907			0.884			0.706			0.714		0.903

UTURNS

NB	SB	EB	WB
0	0		
0	0		
1	1		
1	0		
1	1		
0	0		
0	0		
0	1		
1	0		
0	1		
1	0		
1	0		
NB	SB	EB	WB
6	4	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5805-001 **Day:** Wednesday

City: Carson **Date:** 12/2/2015

PM

NS/EW Streets:	Western Ave			Western Ave			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
3:00 PM	18	233	1	6	296	11	13	17	38	11	7	4	655
3:15 PM	13	243	7	3	304	20	17	25	37	9	9	4	691
3:30 PM	20	237	5	2	272	16	17	23	44	12	8	2	658
3:45 PM	22	252	7	6	334	12	10	12	37	8	11	3	714
4:00 PM	9	236	11	3	339	12	18	22	37	5	12	3	707
4:15 PM	20	242	4	8	324	13	16	7	48	7	9	3	701
4:30 PM	12	238	5	5	331	12	17	21	35	10	9	2	697
4:45 PM	22	252	6	11	323	5	13	14	39	13	6	1	705
5:00 PM	13	232	6	7	343	7	17	33	42	15	17	8	740
5:15 PM	14	243	6	8	377	5	14	20	34	13	5	3	742
5:30 PM	11	212	6	6	356	2	17	31	40	10	7	4	702
5:45 PM	20	234	5	9	370	3	8	13	46	9	10	4	731
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	194	2854	69	74	3969	118	177	238	477	122	110	41	8443
APPROACH %'s :	6.22%	91.56%	2.21%	1.78%	95.39%	2.84%	19.84%	26.68%	53.48%	44.69%	40.29%	15.02%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	58	921	23	30	1446	17	56	97	162	47	39	19	2915
PEAK HR FACTOR :		0.952			0.957			0.856			0.656		0.982

UTURNS

NB	SB	EB	WB
1	0		
1	0		
0	0		
1	1		
1	0		
0	1		
0	0		
0	1		
1	1		
1	1		
0	1		
0	1		
NB	SB	EB	WB
6	7	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-008 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	2	103	13	9	56	2	3	10	4	3	6	15	226
7:15 AM	1	157	23	11	77	2	5	4	11	2	3	14	310
7:30 AM	5	184	22	14	98	12	9	27	13	8	22	24	438
7:45 AM	13	238	58	28	111	9	6	46	11	10	27	34	591
8:00 AM	5	222	27	19	87	5	10	20	8	21	20	26	470
8:15 AM	2	190	10	8	88	0	4	6	10	7	7	16	348
8:30 AM	2	151	6	9	87	0	8	9	5	5	6	15	303
8:45 AM	5	112	10	10	77	3	1	5	10	2	10	10	255
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	35	1357	169	108	681	33	46	127	72	58	101	154	2941
APPROACH %'s :	2.24%	86.93%	10.83%	13.14%	82.85%	4.01%	18.78%	51.84%	29.39%	18.53%	32.27%	49.20%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	25	834	117	69	384	26	29	99	42	46	76	100	1847
PEAK HR FACTOR :		0.790			0.809			0.675			0.782		0.781

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-008 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	7	129	11	12	153	6	5	13	8	12	10	19	385
4:15 PM	3	118	5	10	157	11	2	11	12	11	11	13	364
4:30 PM	7	118	6	10	171	8	1	16	10	16	11	20	394
4:45 PM	5	122	4	14	179	7	7	12	12	8	8	19	397
5:00 PM	5	114	5	19	186	11	2	11	9	13	6	22	403
5:15 PM	3	131	9	16	190	11	2	13	10	9	11	19	424
5:30 PM	6	120	14	17	171	8	8	22	13	9	10	26	424
5:45 PM	9	133	13	22	211	6	8	15	18	13	8	17	473
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	45	985	67	120	1418	68	35	113	92	91	75	155	3264
APPROACH %'s :	4.10%	89.79%	6.11%	7.47%	88.29%	4.23%	14.58%	47.08%	38.33%	28.35%	23.36%	48.29%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	23	498	41	74	758	36	20	61	50	44	35	84	1724
PEAK HR FACTOR :		0.906			0.908			0.762			0.906		0.911

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-001 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

AM

NS/EW Streets:	Meyler St			Meyler St			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	7	5	4	0	1	1	2	21	4	4	11	4	64
7:15 AM	8	3	7	1	0	2	0	24	4	5	22	6	82
7:30 AM	10	0	18	1	0	0	2	35	17	15	37	0	135
7:45 AM	42	3	30	1	0	0	1	45	21	28	41	9	221
8:00 AM	35	1	13	4	0	0	0	38	10	13	31	6	151
8:15 AM	9	0	5	3	0	1	0	23	3	5	34	6	89
8:30 AM	6	4	5	4	1	2	1	13	1	4	28	5	74
8:45 AM	2	0	7	2	0	0	1	18	2	9	20	4	65
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	119	16	89	16	2	6	7	217	62	83	224	40	881
APPROACH %'s :	53.13%	7.14%	39.73%	66.67%	8.33%	25.00%	2.45%	75.87%	21.68%	23.92%	64.55%	11.53%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	96	4	66	9	0	1	3	141	51	61	143	21	596
PEAK HR FACTOR :	0.553			0.625			0.728			0.721			0.674

UTURNS

	NB	SB	EB	WB
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	1	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL VOLUMES :	0	0	1	0

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-001 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

PM

NS/EW Streets:	Meyler St			Meyler St			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	2	0	17	15	3	1	1	35	11	7	23	1	116
4:15 PM	4	1	27	10	1	1	0	34	6	4	16	1	105
4:30 PM	3	0	10	21	9	2	2	41	4	9	26	1	128
4:45 PM	6	0	13	10	1	2	0	33	6	9	24	0	104
5:00 PM	4	0	11	16	2	1	2	49	10	2	27	1	125
5:15 PM	3	0	14	7	0	4	2	43	6	5	36	0	120
5:30 PM	1	0	19	4	1	0	1	91	11	3	21	0	152
5:45 PM	5	0	21	4	1	0	0	63	6	11	12	2	125
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	28	1	132	87	18	11	8	389	60	50	185	6	975
APPROACH %'s :	17.39%	0.62%	81.99%	75.00%	15.52%	9.48%	1.75%	85.12%	13.13%	20.75%	76.76%	2.49%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	13	0	65	31	4	5	5	246	33	21	96	3	522
PEAK HR FACTOR :	0.750			0.526			0.689			0.732			0.859

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
1	0	0	1
NB	SB	EB	WB
1	0	1	1

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-009 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Vermont Ave			Vermont Ave			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	58	156	8	11	76	61	20	1	10	2	1	9	413
7:15 AM	30	233	6	15	91	70	30	5	9	2	4	8	503
7:30 AM	49	246	9	16	141	57	45	8	25	6	10	14	626
7:45 AM	67	322	12	10	137	78	38	8	28	4	13	12	729
8:00 AM	48	218	13	15	129	47	36	11	26	5	0	3	551
8:15 AM	34	212	18	11	113	42	18	8	10	1	2	10	479
8:30 AM	28	148	13	20	93	27	28	3	13	0	3	4	380
8:45 AM	19	162	6	11	99	33	20	7	14	1	3	6	381
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	333	1697	85	109	879	415	235	51	135	21	36	66	4062
APPROACH %'s :	15.74%	80.24%	4.02%	7.77%	62.65%	29.58%	55.82%	12.11%	32.07%	17.07%	29.27%	53.66%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	194	1019	40	56	498	252	149	32	88	17	27	37	2409
PEAK HR FACTOR :		0.781			0.896			0.862			0.675		0.826

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	0
2	0	0	0
2	0	0	0
0	2	0	0
0	4	0	0
0	0	0	0
0	2	0	0
NB	SB	EB	WB
4	8	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-009 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Vermont Ave			Vermont Ave			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	14	130	5	7	153	22	60	4	30	13	4	11	453
4:15 PM	8	126	9	9	182	21	41	1	20	7	4	9	437
4:30 PM	9	102	4	3	173	22	70	2	31	1	4	16	437
4:45 PM	8	154	2	5	217	20	60	4	36	4	4	9	523
5:00 PM	5	126	2	8	211	10	63	2	37	12	4	11	491
5:15 PM	14	135	5	5	236	14	48	3	43	9	1	14	527
5:30 PM	7	129	5	4	242	20	64	4	40	6	3	9	533
5:45 PM	8	125	3	5	223	10	44	4	31	3	5	10	471
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	73	1027	35	46	1637	139	450	24	268	55	29	89	3872
APPROACH %'s :	6.43%	90.48%	3.08%	2.52%	89.85%	7.63%	60.65%	3.23%	36.12%	31.79%	16.76%	51.45%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	34	544	14	22	906	64	235	13	156	31	12	43	2074
PEAK HR FACTOR :		0.902			0.932			0.935			0.796		0.973

UTURNS	NB	SB	EB	WB
	0	2	0	0
	0	0	0	0
	0	0	0	0
	0	4	0	0
	0	0	0	0
	2	0	0	0
	0	0	0	0
	0	0	0	0
TOTAL VOLUMES :	2	6	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-010 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Figueroa St			Figueroa St			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 0.5	WT 0.5	WR 1	TOTAL
7:00 AM	116	100	8	10	38	72	40	3	18	13	65	11	494
7:15 AM	125	106	26	28	60	86	53	6	5	22	61	12	590
7:30 AM	97	172	40	47	106	102	45	14	11	19	52	30	735
7:45 AM	117	195	53	52	130	101	74	6	18	23	48	28	845
8:00 AM	134	142	26	1	70	90	61	11	13	23	46	19	636
8:15 AM	110	92	2	5	41	98	67	4	24	4	46	8	501
8:30 AM	110	64	7	5	64	101	70	6	23	12	38	9	509
8:45 AM	94	46	3	3	43	103	56	9	26	11	33	12	439
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	903	917	165	151	552	753	466	59	138	127	389	129	4749
APPROACH %'s :	45.49%	46.20%	8.31%	10.37%	37.91%	51.72%	70.29%	8.90%	20.81%	19.69%	60.31%	20.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	473	615	145	128	366	379	233	37	47	87	207	89	2806
PEAK HR FACTOR :		0.845			0.771			0.809			0.948		0.830

UTURNS

NB	SB	EB	WB
0	2	0	0
2	4	0	0
6	4	0	0
20	2	0	0
4	0	0	0
0	2	0	0
2	2	0	0
2	2	0	0
NB	SB	EB	WB
36	18	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-010 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Figueroa St			Figueroa St			220th St			220th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 0.5	WT 0.5	WR 1	TOTAL
4:00 PM	102	77	13	11	108	167	59	15	22	7	26	11	618
4:15 PM	104	67	23	12	88	132	78	24	27	10	17	10	592
4:30 PM	103	76	5	17	90	147	49	23	21	12	28	13	584
4:45 PM	100	69	20	17	115	130	69	19	16	7	15	14	591
5:00 PM	112	72	15	20	128	141	60	20	25	11	22	14	640
5:15 PM	88	64	10	5	131	113	54	31	21	10	27	10	564
5:30 PM	95	73	13	15	125	103	59	23	29	17	27	16	595
5:45 PM	111	78	12	35	161	118	69	21	28	18	28	12	691
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	815	576	111	132	946	1051	497	176	189	92	190	100	4875
APPROACH %'s :	54.26%	38.35%	7.39%	6.20%	44.43%	49.37%	57.66%	20.42%	21.93%	24.08%	49.74%	26.18%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	406	287	50	75	545	475	242	95	103	56	104	52	2490
PEAK HR FACTOR :		0.924			0.872			0.932			0.883		0.901

UTURNS

NB	SB	EB	WB
2	2	0	0
2	2	0	0
2	0	0	0
2	4	0	0
4	6	0	0
0	0	0	0
2	8	0	0
0	6	0	0
NB	SB	EB	WB
14	28	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5805-002 **Day:** Wednesday

City: Carson **Date:** 12/2/2015

AM

NS/EW Streets:	Western Ave			Western Ave			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	23	266	31	6	120	8	9	60	12	51	127	52	765
7:15 AM	32	330	43	15	194	7	5	73	18	57	166	46	986
7:30 AM	50	290	49	20	271	12	11	76	27	79	238	44	1167
7:45 AM	49	352	54	16	262	15	12	87	25	50	199	49	1170
8:00 AM	49	282	38	28	189	10	8	127	34	67	225	54	1111
8:15 AM	40	341	25	10	176	16	16	93	23	48	191	34	1013
8:30 AM	37	317	25	20	152	5	16	86	23	74	233	43	1031
8:45 AM	28	316	26	12	185	9	11	102	27	39	149	48	952
9:00 AM	24	224	15	18	167	6	18	90	28	41	124	22	777
9:15 AM	23	228	18	17	165	10	11	51	26	32	99	38	718
9:30 AM	24	198	21	20	165	6	11	47	22	32	102	34	682
9:45 AM	20	199	21	19	167	5	18	61	23	33	105	38	709
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	399	3343	366	201	2213	109	146	953	288	603	1958	502	11081
APPROACH %'s :	9.71%	81.38%	8.91%	7.97%	87.71%	4.32%	10.53%	68.71%	20.76%	19.69%	63.92%	16.39%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	188	1265	166	74	898	53	47	383	109	244	853	181	4461
PEAK HR FACTOR :		0.890			0.846			0.797			0.885		0.953

UTURNS

	NB	SB	EB	WB
7:00 AM	0	0		0
7:15 AM	0	0		0
7:30 AM	0	0		0
7:45 AM	0	0		0
8:00 AM	0	0		0
8:15 AM	0	1		0
8:30 AM	0	1		1
8:45 AM	0	1		0
9:00 AM	0	0		0
9:15 AM	1	0		0
9:30 AM	1	0		0
9:45 AM	0	1		0
TOTAL VOLUMES :	2	4	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5805-002 **Day:** Wednesday

City: Carson **Date:** 12/2/2015

PM

NS/EW Streets:	Western Ave			Western Ave			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
3:00 PM	21	222	33	56	273	11	10	166	35	24	115	20	986
3:15 PM	26	223	55	36	297	10	22	191	43	17	126	25	1071
3:30 PM	17	215	50	49	254	11	18	198	43	24	117	20	1016
3:45 PM	22	248	42	43	320	10	18	181	44	22	140	25	1115
4:00 PM	21	203	54	49	321	8	17	212	55	28	116	25	1109
4:15 PM	34	228	53	50	312	7	11	179	44	24	129	20	1091
4:30 PM	30	210	53	44	305	11	17	243	51	23	125	30	1142
4:45 PM	39	255	49	44	340	6	14	177	44	17	131	22	1138
5:00 PM	31	209	40	52	290	6	17	249	57	18	144	24	1137
5:15 PM	21	233	35	58	390	12	14	203	44	15	149	17	1191
5:30 PM	23	198	47	44	323	15	11	257	38	22	171	19	1168
5:45 PM	23	223	42	49	354	9	12	214	50	19	122	27	1144
TOTAL VOLUMES :	308	2667	553	574	3779	116	181	2470	548	253	1585	274	13308
APPROACH %'s :	8.73%	75.60%	15.67%	12.84%	84.56%	2.60%	5.66%	77.21%	17.13%	11.98%	75.05%	12.97%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	98	863	164	203	1357	42	54	923	189	74	586	87	4640
PEAK HR FACTOR :		0.973			0.871			0.902			0.881		0.974

UTURNS	NB	SB	EB	WB
	0	1		
	0	1		
	0	0		
	0	0		
	0	0		
	1	0		
	0	0		
	0	0		
	0	0		
	0	0		
	0	0		
	0	2		
	NB	SB	EB	WB
	1	4	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-011 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 2.5	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	18	96	17	3	59	9	12	100	6	22	140	13	495
7:15 AM	36	142	15	9	72	8	20	110	10	28	240	10	700
7:30 AM	32	198	30	15	92	16	23	156	12	15	264	16	869
7:45 AM	31	229	39	15	93	22	18	181	13	30	238	23	932
8:00 AM	35	220	19	9	98	12	21	132	31	42	246	20	885
8:15 AM	25	152	17	10	76	14	20	131	8	27	270	16	766
8:30 AM	30	126	15	8	90	13	15	95	14	27	252	18	703
8:45 AM	17	95	6	13	58	14	9	110	13	29	247	16	627
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	224	1258	158	82	638	108	138	1015	107	220	1897	132	5977
APPROACH %'s :	13.66%	76.71%	9.63%	9.90%	77.05%	13.04%	10.95%	80.56%	8.49%	9.78%	84.35%	5.87%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	123	799	105	49	359	64	82	600	64	114	1018	75	3452
PEAK HR FACTOR :		0.859			0.908			0.880			0.964		0.926

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-011 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 2.5	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	10	116	27	33	123	13	19	211	23	31	147	10	763
4:15 PM	16	105	35	19	147	15	20	234	16	24	157	14	802
4:30 PM	12	100	30	29	132	20	12	277	23	10	158	10	813
4:45 PM	10	97	30	21	172	20	19	260	10	19	154	17	829
5:00 PM	23	93	32	26	153	21	12	260	29	21	153	16	839
5:15 PM	16	109	41	26	168	20	17	324	37	24	172	18	972
5:30 PM	12	98	19	14	154	16	25	290	22	23	193	19	885
5:45 PM	12	114	31	19	209	18	17	263	17	25	178	31	934
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	111	832	245	187	1258	143	141	2119	177	177	1312	135	6837
APPROACH %'s :	9.34%	70.03%	20.62%	11.78%	79.22%	9.01%	5.79%	86.95%	7.26%	10.90%	80.79%	8.31%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	63	414	123	85	684	75	71	1137	105	93	696	84	3630
PEAK HR FACTOR :		0.904			0.858			0.868			0.929		0.934

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	1	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-002 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

AM

NS/EW Streets:	Meyler St			Meyler St			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	10	5	11	6	1	7	5	119	1	14	228	5	412
7:15 AM	7	4	22	8	2	7	6	167	2	16	272	14	527
7:30 AM	28	13	19	9	8	12	12	155	5	14	300	10	585
7:45 AM	21	17	14	20	19	13	22	187	6	8	267	29	623
8:00 AM	18	5	14	18	15	22	12	157	11	8	273	12	565
8:15 AM	7	2	13	5	3	6	2	105	6	16	257	7	429
8:30 AM	15	0	10	2	3	7	5	128	3	4	277	13	467
8:45 AM	6	1	6	4	0	7	4	146	6	11	247	3	441
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	112	47	109	72	51	81	68	1164	40	91	2121	93	4049
APPROACH %'s :	41.79%	17.54%	40.67%	35.29%	25.00%	39.71%	5.35%	91.51%	3.14%	3.95%	92.02%	4.03%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	74	39	69	55	44	54	52	666	24	46	1112	65	2300
PEAK HR FACTOR :	0.758			0.695			0.863			0.944			0.923

UTURNS	NB	SB	EB	WB
	0	0	1	0
	0	0	0	0
	0	0	0	0
	0	0	1	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	NB	SB	EB	WB
	0	0	2	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5726-002 **Day:** Wednesday

City: Torrance **Date:** 11/4/2015

PM

NS/EW Streets:	Meyler St			Meyler St			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
4:00 PM	3	8	10	4	3	6	9	274	19	21	168	5	530
4:15 PM	7	8	5	1	6	5	21	267	32	24	177	9	562
4:30 PM	6	1	13	14	5	10	8	272	11	17	179	4	540
4:45 PM	3	1	7	7	1	11	10	267	23	19	182	13	544
5:00 PM	4	6	14	8	1	10	11	304	14	14	189	10	585
5:15 PM	6	2	8	3	4	9	15	274	22	6	214	6	569
5:30 PM	10	3	6	6	4	8	14	262	26	21	228	9	597
5:45 PM	7	4	7	2	6	7	18	290	27	18	182	19	587
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	46	33	70	45	30	66	106	2210	174	140	1519	75	4514
APPROACH %'s :	30.87%	22.15%	46.98%	31.91%	21.28%	46.81%	4.26%	88.76%	6.99%	8.07%	87.60%	4.33%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	27	15	35	19	15	34	58	1130	89	59	813	44	2338
PEAK HR FACTOR :	0.802			0.895			0.953			0.888			0.979

UTURNS	NB	SB	EB	WB
	0	0	0	0
	0	0	1	0
	0	0	0	0
	0	0	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	1
	NB	SB	EB	WB
	0	0	1	2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-012 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Vermont Ave			Vermont Ave			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 1	WL 2	WT 2	WR 0	TOTAL
7:00 AM	21	132	31	22	69	10	10	103	9	65	183	79	734
7:15 AM	17	177	33	21	63	16	22	133	6	64	258	58	868
7:30 AM	45	224	42	40	119	21	32	147	10	56	221	60	1017
7:45 AM	33	261	43	41	83	32	33	184	24	46	224	86	1090
8:00 AM	39	185	20	43	104	26	20	130	25	73	261	82	1008
8:15 AM	21	159	25	19	79	10	26	132	13	72	273	72	901
8:30 AM	29	128	23	18	76	19	16	95	11	56	258	63	792
8:45 AM	19	124	28	20	70	13	19	123	18	66	245	38	783
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	224	1390	245	224	663	147	178	1047	116	498	1923	538	7193
APPROACH %'s :	12.05%	74.77%	13.18%	21.66%	64.12%	14.22%	13.27%	78.08%	8.65%	16.83%	64.99%	18.18%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	138	829	130	143	385	89	111	593	72	247	979	300	4016
PEAK HR FACTOR :		0.814			0.857			0.805			0.915		0.921

UTURNS

NB	SB	EB	WB
5	0	0	3
1	0	0	4
2	0	0	0
3	0	1	3
0	1	0	3
1	0	0	2
1	1	2	0
1	0	0	0
NB	SB	EB	WB
14	2	3	15

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-012 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Vermont Ave			Vermont Ave			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 1	WL 2	WT 2	WR 0	TOTAL
4:00 PM	15	94	46	71	138	20	23	225	24	54	154	31	895
4:15 PM	14	87	44	43	135	20	17	268	24	65	185	28	930
4:30 PM	13	89	49	47	161	16	16	260	23	49	131	23	877
4:45 PM	19	94	42	55	163	29	24	281	37	64	187	43	1038
5:00 PM	15	102	57	67	196	24	8	247	35	56	166	30	1003
5:15 PM	20	93	46	78	170	28	13	266	16	76	197	26	1029
5:30 PM	21	109	45	71	212	29	15	268	29	57	182	26	1064
5:45 PM	27	67	44	70	161	29	11	250	24	64	193	36	976
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	144	735	373	502	1336	195	127	2065	212	485	1395	243	7812
APPROACH %'s :	11.50%	58.71%	29.79%	24.69%	65.72%	9.59%	5.28%	85.90%	8.82%	22.85%	65.71%	11.45%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	75	398	190	271	741	110	60	1062	117	253	732	125	4134
PEAK HR FACTOR :		0.947			0.899			0.906			0.928		0.971

UTURNS

NB	SB	EB	WB
2	3	1	0
0	0	0	3
0	0	0	2
1	1	0	3
1	0	0	0
0	2	0	2
1	0	0	7
2	2	2	0
NB	SB	EB	WB
7	8	3	17

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-013 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	I-110			I-110			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 0.5	ST 1	SR 0.5	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	0	0	0	49	0	157	0	148	14	39	187	0	594
7:15 AM	0	0	0	60	0	130	0	177	25	41	238	0	671
7:30 AM	0	0	0	92	0	112	0	202	36	57	251	0	750
7:45 AM	0	0	0	92	0	91	0	248	31	33	272	0	767
8:00 AM	0	0	0	60	1	144	0	169	28	41	284	0	727
8:15 AM	0	0	0	50	0	200	0	148	10	34	192	0	634
8:30 AM	0	0	0	46	0	178	0	144	15	33	228	0	644
8:45 AM	0	0	0	50	1	136	0	132	25	28	187	0	559
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	499	2	1148	0	1368	184	306	1839	0	5346
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	30.26%	0.12%	69.62%	0.00%	88.14%	11.86%	14.27%	85.73%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	304	1	477	0	796	120	172	1045	0	2915
PEAK HR FACTOR :	0.000			0.954			0.821			0.936			0.950

UTURNS

NB	SB	EB	WB
0	0	0	2
0	0	0	0
0	0	0	1
0	0	0	2
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	0
NB	SB	EB	WB
0	0	0	7

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-013 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	I-110			I-110			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 0.5	ST 1	SR 0.5	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	0	0	0	96	1	109	0	314	44	29	147	0	740
4:15 PM	0	0	0	105	0	111	0	302	44	30	165	0	757
4:30 PM	0	0	0	115	0	84	0	304	51	24	140	0	718
4:45 PM	0	0	0	113	0	111	0	329	51	30	155	0	789
5:00 PM	0	0	0	96	1	89	0	338	38	20	183	0	765
5:15 PM	0	0	0	109	0	101	0	311	62	43	185	0	811
5:30 PM	0	0	0	114	1	100	0	322	52	26	169	0	784
5:45 PM	0	0	0	107	0	98	0	314	52	31	205	0	807
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	855	3	803	0	2534	394	233	1349	0	6171
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	51.48%	0.18%	48.34%	0.00%	86.54%	13.46%	14.73%	85.27%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	426	2	388	0	1285	204	120	742	0	3167
PEAK HR FACTOR :	0.000			0.949			0.990			0.913			0.976

UTURNS	NB	SB	EB	WB
	0	0	0	1
	0	0	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	0
TOTAL VOLUMES :	0	0	0	3

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-014 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

AM

NS/EW Streets:	Figueroa St			Figueroa St			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	17	133	18	17	31	27	75	99	26	11	183	31	668
7:15 AM	33	139	23	15	44	29	83	109	37	18	223	38	791
7:30 AM	22	212	42	9	69	48	72	145	56	13	258	81	1027
7:45 AM	24	186	56	19	91	65	84	209	52	28	203	92	1109
8:00 AM	23	148	28	23	56	35	54	121	33	13	241	45	820
8:15 AM	15	106	10	22	38	29	72	134	22	7	189	31	675
8:30 AM	20	95	9	17	47	45	52	103	19	11	187	29	634
8:45 AM	12	55	18	20	25	36	51	105	36	22	166	34	580
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	166	1074	204	142	401	314	543	1025	281	123	1650	381	6304
APPROACH %'s :	11.50%	74.38%	14.13%	16.57%	46.79%	36.64%	29.37%	55.44%	15.20%	5.71%	76.60%	17.69%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	102	685	149	66	260	177	293	584	178	72	925	256	3747
PEAK HR FACTOR :		0.848			0.719			0.764			0.890		0.845

UTURNS

NB	SB	EB	WB
0	8	7	0
2	7	3	0
1	1	6	0
1	4	5	1
0	10	7	1
0	10	9	0
0	5	3	0
0	7	6	0
NB	SB	EB	WB
4	52	46	2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5731-014 **Day:** Wednesday

City: West Carson **Date:** 10/29/2014

PM

NS/EW Streets:	Figueroa St			Figueroa St			223rd St			223rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	11	93	32	38	63	32	77	245	46	10	125	31	803
4:15 PM	8	70	15	35	62	41	90	297	49	15	139	24	845
4:30 PM	12	90	26	30	76	38	73	288	45	14	122	25	839
4:45 PM	7	64	21	30	70	28	83	311	60	16	164	25	879
5:00 PM	16	104	22	29	91	41	82	286	47	14	145	36	913
5:15 PM	18	74	22	32	111	39	67	308	48	28	172	34	953
5:30 PM	16	88	32	36	90	37	66	311	52	15	142	26	911
5:45 PM	21	77	34	50	113	41	70	290	61	17	157	34	965
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	109	660	204	280	676	297	608	2336	408	129	1166	235	7108
APPROACH %'s :	11.20%	67.83%	20.97%	22.35%	53.95%	23.70%	18.14%	69.69%	12.17%	8.43%	76.21%	15.36%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	71	343	110	147	405	158	285	1195	208	74	616	130	3742
PEAK HR FACTOR :		0.923			0.870			0.984			0.876		0.969

UTURNS	NB	SB	EB	WB
	0	7	5	0
	0	9	8	1
	0	8	2	1
	0	8	8	1
	0	4	4	0
	2	3	6	0
	2	9	4	0
	2	9	8	1
	NB	SB	EB	WB
	6	57	45	4

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5805-003 **Day:** Wednesday

City: Carson **Date:** 12/2/2015

AM

NS/EW Streets:	Western Ave			Western Ave			Sepulveda Blvd			Sepulveda Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
7:00 AM	44	234	57	13	132	35	27	239	12	57	372	36	1258
7:15 AM	44	238	56	11	196	43	20	253	17	58	457	22	1415
7:30 AM	42	270	81	13	280	60	48	247	14	85	380	21	1541
7:45 AM	30	236	86	11	268	75	65	345	15	89	407	15	1642
8:00 AM	32	245	77	30	180	64	66	323	17	67	376	24	1501
8:15 AM	35	222	53	22	146	68	50	346	26	63	439	36	1506
8:30 AM	47	267	53	27	151	84	53	240	15	64	363	45	1409
8:45 AM	44	191	48	15	129	57	62	315	18	44	371	40	1334
9:00 AM	32	160	51	25	135	47	55	268	17	49	270	27	1136
9:15 AM	38	150	36	27	110	41	39	269	21	39	336	41	1147
9:30 AM	39	151	50	25	137	41	23	207	12	35	300	26	1046
9:45 AM	44	146	50	25	136	48	42	199	27	42	307	33	1099
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	471	2510	698	244	2000	663	550	3251	211	692	4378	366	16034
APPROACH %'s :	12.80%	68.23%	18.97%	8.39%	68.80%	22.81%	13.71%	81.03%	5.26%	12.73%	80.54%	6.73%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	139	973	297	76	874	267	229	1261	72	304	1602	96	6190
PEAK HR FACTOR :		0.896			0.859			0.919			0.930		0.942

UTURNS

NB	SB	EB	WB
5	0	1	1
2	0	0	0
3	0	0	1
4	0	0	0
2	0	0	0
1	1	0	0
0	2	0	1
0	0	0	0
4	0	0	0
9	0	1	1
2	1	0	1
0	1	1	0
NB	SB	EB	WB
32	5	3	5

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5805-003 **Day:** Wednesday

City: Carson **Date:** 12/2/2015

PM

NS/EW Streets:	Western Ave			Western Ave			Sepulveda Blvd			Sepulveda Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
3:00 PM	43	182	73	39	242	40	39	332	30	73	286	40	1419
3:15 PM	21	205	58	39	199	36	53	390	39	70	304	39	1453
3:30 PM	35	205	93	49	221	34	51	338	24	66	302	29	1447
3:45 PM	33	183	81	39	207	42	54	387	39	73	342	41	1521
4:00 PM	38	213	88	41	256	29	59	322	31	70	279	37	1463
4:15 PM	29	189	92	37	234	27	66	353	43	74	296	29	1469
4:30 PM	33	201	85	42	267	40	59	294	37	76	338	38	1510
4:45 PM	43	193	72	40	227	27	60	355	36	83	362	39	1537
5:00 PM	47	220	69	50	254	34	57	297	33	73	298	36	1468
5:15 PM	51	183	82	43	223	27	44	350	25	75	375	38	1516
5:30 PM	41	200	98	41	257	45	49	336	26	78	345	26	1542
5:45 PM	44	178	70	40	237	31	36	367	29	74	322	34	1462
TOTAL VOLUMES :	458	2352	961	500	2824	412	627	4121	392	885	3849	426	17807
APPROACH %'s :	12.15%	62.37%	25.48%	13.38%	75.59%	11.03%	12.20%	80.18%	7.63%	17.15%	74.59%	8.26%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	182	796	321	174	961	133	210	1338	120	309	1380	139	6063
PEAK HR FACTOR :		0.958			0.924			0.925			0.936		0.983

UTURNS

	NB	SB	EB	WB
3:00 PM	3	0		0
3:15 PM	2	2		1
3:30 PM	5	0		0
3:45 PM	2	0		0
4:00 PM	5	0		0
4:15 PM	1	0		1
4:30 PM	5	0		0
4:45 PM	5	0		2
5:00 PM	2	1		1
5:15 PM	2	1		0
5:30 PM	3	0		1
5:45 PM	2	0		0
TOTAL VOLUMES :	37	4	0	6

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5815-002 **Day:** Wednesday

City: Carson **Date:** 12/9/2015

AM

NS/EW Streets:	I-405 NB Ramps			I-405 NB Ramps			E Carson St			E Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	0.5	0.5	1	1	2	0	1	2	1	
7:00 AM	0	0	0	5	2	147	22	101	2	1	166	64	510
7:15 AM	0	0	0	6	1	149	13	157	2	1	200	49	578
7:30 AM	1	0	0	2	0	189	20	170	0	0	252	65	699
7:45 AM	1	0	0	3	1	130	21	198	1	0	199	55	609
8:00 AM	1	0	0	5	0	91	23	194	0	1	128	62	505
8:15 AM	0	0	0	8	0	126	15	139	0	1	129	46	464
8:30 AM	2	0	1	8	0	105	12	121	1	1	112	58	421
8:45 AM	0	0	1	8	1	120	27	132	1	0	132	42	464
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	0	2	45	5	1057	153	1212	7	5	1318	441	4250
APPROACH %'s :	71.43%	0.00%	28.57%	4.07%	0.45%	95.48%	11.15%	88.34%	0.51%	0.28%	74.72%	25.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	2	0	0	16	4	615	76	626	5	2	817	233	2396
PEAK HR FACTOR :	0.500			0.831			0.803			0.830			0.857

UTURNS	NB	SB	EB	WB
	0	0	0	0
	0	1	0	1
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	NB	SB	EB	WB
	0	1	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5815-002 **Day:** Wednesday

City: Carson **Date:** 12/9/2015

PM

NS/EW Streets:	I-405 NB Ramps			I-405 NB Ramps			E Carson St			E Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	0.5	0.5	1	1	2	0	1	2	1	
4:00 PM	1	6	1	5	1	110	22	203	2	1	151	82	585
4:15 PM	2	1	1	6	0	106	27	206	1	0	145	84	579
4:30 PM	1	0	0	6	1	118	19	201	0	0	161	98	605
4:45 PM	0	1	0	10	2	121	25	225	2	1	187	78	652
5:00 PM	0	1	1	4	0	116	38	228	0	0	185	99	672
5:15 PM	2	1	1	5	0	119	26	235	4	0	184	77	654
5:30 PM	0	0	1	2	0	117	21	233	0	1	184	71	630
5:45 PM	0	0	0	6	0	132	17	203	1	0	166	52	577
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	6	10	5	44	4	939	195	1734	10	3	1363	641	4954
APPROACH %'s :	28.57%	47.62%	23.81%	4.46%	0.41%	95.14%	10.06%	89.43%	0.52%	0.15%	67.91%	31.94%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	2	3	3	21	2	473	110	921	6	2	740	325	2608
PEAK HR FACTOR :	0.500			0.932			0.975			0.939			0.970

UTURNS

NB	SB	EB	WB
0	0	0	1
0	0	0	0
0	1	0	0
0	0	1	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	1	0
NB	SB	EB	WB
0	2	2	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5815-001 **Day:** Wednesday

City: Carson **Date:** 12/9/2015

AM

NS/EW Streets:	I-405 SB Ramps			I-405 SB Ramps			E Carson St			E Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	1	1	2	1	1	3	0	
7:00 AM	3	0	25	0	0	0	2	97	152	18	295	1	593
7:15 AM	13	0	37	0	0	0	0	140	136	25	331	1	683
7:30 AM	7	0	41	0	0	0	0	146	150	29	398	4	775
7:45 AM	9	2	35	0	0	1	4	193	141	21	308	3	717
8:00 AM	5	3	48	0	0	0	0	159	130	16	206	2	569
8:15 AM	21	1	52	0	0	1	1	102	131	18	226	4	557
8:30 AM	10	3	41	0	0	0	2	95	94	17	208	2	472
8:45 AM	7	1	45	0	0	0	3	121	86	15	231	3	512
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	75	10	324	0	0	2	12	1053	1020	159	2203	20	4878
APPROACH %'s :	18.34%	2.44%	79.22%	0.00%	0.00%	100.00%	0.58%	50.50%	48.92%	6.68%	92.49%	0.84%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	32	2	138	0	0	1	6	576	579	93	1332	9	2768
PEAK HR FACTOR :	0.860			0.250			0.859			0.832			0.893

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	1	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-5815-001 **Day:** Wednesday

City: Carson **Date:** 12/9/2015

PM

NS/EW Streets:	I-405 SB Ramps			I-405 SB Ramps			E Carson St			E Carson St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	1	1	2	1	1	3	0	
4:00 PM	10	1	25	0	0	0	2	203	148	23	241	2	655
4:15 PM	11	1	22	0	0	2	2	214	160	11	246	4	673
4:30 PM	5	2	18	0	0	0	0	194	216	9	261	0	705
4:45 PM	6	3	21	0	0	1	2	238	207	14	301	1	794
5:00 PM	5	1	18	0	0	0	0	243	214	28	266	3	778
5:15 PM	6	4	23	0	0	1	2	245	197	18	279	2	777
5:30 PM	6	2	24	0	0	1	1	229	204	21	284	2	774
5:45 PM	5	1	21	0	0	0	0	205	196	9	291	3	731
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	54	15	172	0	0	5	9	1771	1542	133	2169	17	5887
APPROACH %'s :	22.41%	6.22%	71.37%	0.00%	0.00%	100.00%	0.27%	53.31%	46.42%	5.74%	93.53%	0.73%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	23	10	86	0	0	3	5	955	822	81	1130	8	3123
PEAK HR FACTOR :	0.902			0.750			0.975			0.964			0.983

UTURNS	NB	SB	EB	WB
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	NB	SB	EB	WB
	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5177 Cars-010

City: Carson

Day: Thursday

Date: 4/3/2014

TOTALS

AM

NS/EW Streets:	Wilmington Ave			Wilmington Ave			I-405 NB Ramps			I-405 NB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 1	SL 1	ST 3	SR 0	EL 0	ET 0	ER 0	WL 2	WT 0	WR 1	TOTAL
7:00 AM	0	84	23	9	122	0	0	0	0	291	0	141	586
7:15 AM	0	97	25	11	149	0	0	0	0	293	0	137	615
7:30 AM	0	108	13	6	158	0	0	0	0	288	0	117	582
7:45 AM	0	147	18	7	155	0	0	0	0	277	0	160	617
8:00 AM	0	132	19	14	122	0	0	0	0	246	0	139	540
8:15 AM	0	98	24	11	157	0	0	0	0	254	0	127	573
8:30 AM	0	86	28	13	141	0	0	0	0	204	0	121	507
8:45 AM	0	88	20	16	125	0	0	0	0	268	0	101	530
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	840	170	87	1129	0	0	0	0	2121	0	1043	5390
APPROACH %'s :	0.00%	83.17%	16.83%	7.15%	92.85%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	67.04%	0.00%	32.96%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	484	75	38	584	0	0	0	0	1104	0	553	2838
PEAK HR FACTOR :		0.847			0.948			0.000			0.948		0.929

UTURNS	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5177 Cars-010

City: Carson

Day: Thursday

Date: 4/3/2014

TOTALS

PM

NS/EW Streets:	Wilmington Ave			Wilmington Ave			I-405 NB Ramps			I-405 NB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 2	NR 1	SL 1	ST 3	SR 0	EL 0	ET 0	ER 0	WL 2	WT 0	WR 1	TOTAL
4:00 PM	0	101	56	32	232	0	0	0	0	210	0	77	607
4:15 PM	0	75	52	17	225	0	0	0	0	237	0	71	602
4:30 PM	0	87	67	17	244	0	0	0	0	174	0	98	600
4:45 PM	0	89	68	15	238	0	0	0	0	264	0	79	664
5:00 PM	0	74	48	27	222	0	0	0	0	245	0	69	611
5:15 PM	0	109	47	18	267	0	0	0	0	259	0	95	686
5:30 PM	0	90	55	17	228	0	0	0	0	264	0	78	642
5:45 PM	0	89	58	10	187	0	0	0	0	210	0	103	568
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	714	451	153	1843	0	0	0	0	1863	0	670	5694
APPROACH %'s :	0.00%	61.29%	38.71%	7.67%	92.33%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	73.55%	0.00%	26.45%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	362	218	77	955	0	0	0	0	1032	0	321	2965
PEAK HR FACTOR :		0.924			0.905			0.000			0.956		0.932

UTURNS	NB	SB	EB	WB

	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

APPENDIX C: LOS ANALYSIS

APPENDIX C

EXISTING

Project Title: **Harbor-UCLA Medical Center**
Intersection: **1 - Normandie Avenue & Torrance Bloulevard**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	101	0	0.000	N-S(1):	0.296 *
	TH	2.00	382	3,200	0.151	N-S(2):	0.247
	LT	1.00	32	1,600	0.020 *	E-W(1):	0.374
Westbound	RT	0.00	74	0	0.000	E-W(2):	0.539 *
	TH	2.00	1,461	3,200	0.480 *		
	LT	1.00	103	1,600	0.064	V/C:	0.835
Northbound	RT	0.00	147	0	0.000	Lost Time:	0.100
	TH	2.00	736	3,200	0.276 *	ITS:	0.000
	LT	1.00	154	1,600	0.096		
Eastbound	RT	0.00	77	0	0.000	ICU:	0.935
	TH	2.00	915	3,200	0.310		
	LT	1.00	95	1,600	0.059 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	152	0	0.000	N-S(1):	0.293
	TH	2.00	729	3,200	0.275 *	N-S(2):	0.336 *
	LT	1.00	130	1,600	0.081	E-W(1):	0.500 *
Westbound	RT	0.00	43	0	0.000	E-W(2):	0.380
	TH	2.00	963	3,200	0.314		
	LT	1.00	58	1,600	0.036 *	V/C:	0.836
Northbound	RT	0.00	149	0	0.000	Lost Time:	0.100
	TH	2.00	530	3,200	0.212	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	0.00	111	0	0.000	ICU:	0.936
	TH	2.00	1,373	3,200	0.464 *		
	LT	1.00	106	1,600	0.066	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **2 - Vermont Avenue & Torrance Bloulevard**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	185	1,600	0.008	N-S(1):	0.277 *
	TH	2.00	566	3,200	0.177	N-S(2):	0.253
	LT	1.00	37	1,600	0.023 *	E-W(1):	0.373
Westbound	RT	0.00	111	0	0.000	E-W(2):	0.550 *
	TH	2.00	1,303	3,200	0.442 *		
	LT	1.00	89	1,600	0.056	V/C:	0.827
Northbound	RT	1.00	182	1,600	0.058	Lost Time:	0.100
	TH	2.00	813	3,200	0.254 *	ITS:	0.000
	LT	1.00	122	1,600	0.076		
Eastbound	RT	0.00	147	0	0.000	ICU:	0.927
	TH	2.00	866	3,200	0.317		
	LT	1.00	172	1,600	0.108 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	229	1,600	0.039	N-S(1):	0.221
	TH	2.00	863	3,200	0.270 *	N-S(2):	0.319 *
	LT	1.00	112	1,600	0.070	E-W(1):	0.461 *
Westbound	RT	0.00	89	0	0.000	E-W(2):	0.347
	TH	2.00	689	3,200	0.243		
	LT	1.00	60	1,600	0.038 *	V/C:	0.780
Northbound	RT	1.00	120	1,600	0.038	Lost Time:	0.100
	TH	2.00	484	3,200	0.151	ITS:	0.000
	LT	1.00	78	1,600	0.049 *		
Eastbound	RT	0.00	96	0	0.000	ICU:	0.880
	TH	2.00	1,259	3,200	0.423 *		
	LT	1.00	166	1,600	0.104	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	133	1,600	0.065	N-S(1):	0.409 *
	TH	2.00	710	3,200	0.222	N-S(2):	0.316
	LT	1.00	93	1,600	0.058 *	E-W(1):	0.306
Westbound	RT	0.00	153	0	0.000	E-W(2):	0.434 *
	TH	2.00	1,121	3,200	0.398 *		
	LT	1.00	66	1,600	0.041	V/C:	0.843
Northbound	RT	1.00	83	1,600	0.031	Lost Time:	0.100
	TH	2.00	1,123	3,200	0.351 *	ITS:	0.000
	LT	1.00	150	1,600	0.094		
Eastbound	RT	0.00	103	0	0.000	ICU:	0.943
	TH	2.00	745	3,200	0.265		
	LT	1.00	58	1,600	0.036 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	220	1,600	0.111	N-S(1):	0.344
	TH	2.00	1,295	3,200	0.405 *	N-S(2):	0.499 *
	LT	1.00	154	1,600	0.096	E-W(1):	0.407 *
Westbound	RT	0.00	122	0	0.000	E-W(2):	0.376
	TH	2.00	910	3,200	0.323		
	LT	1.00	70	1,600	0.044 *	V/C:	0.906
Northbound	RT	1.00	116	1,600	0.051	Lost Time:	0.100
	TH	2.00	793	3,200	0.248	ITS:	0.000
	LT	1.00	151	1,600	0.094 *		
Eastbound	RT	0.00	183	0	0.000	ICU:	1.006
	TH	2.00	980	3,200	0.363 *		
	LT	1.00	84	1,600	0.053	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **4 - Normandie Avenue & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	147	0	0.000	N-S(1):	0.249
	TH	2.00	358	3,200	0.158 *	N-S(2):	0.289 *
	LT	1.00	33	1,600	0.021	E-W(1):	0.437
Westbound	RT	0.00	75	0	0.000	E-W(2):	0.515 *
	TH	2.00	1,186	3,200	0.394 *		
	LT	1.00	161	1,600	0.101	V/C:	0.804
Northbound	RT	0.00	71	0	0.000	Lost Time:	0.100
	TH	2.00	660	3,200	0.228	ITS:	0.000
	LT	1.00	209	1,600	0.131 *		
Eastbound	RT	0.00	187	0	0.000	ICU:	0.904
	TH	2.00	887	3,200	0.336		
	LT	1.00	194	1,600	0.121 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	162	0	0.000	N-S(1):	0.243
	TH	2.00	517	3,200	0.212 *	N-S(2):	0.318 *
	LT	1.00	92	1,600	0.058	E-W(1):	0.512 *
Westbound	RT	0.00	76	0	0.000	E-W(2):	0.466
	TH	2.00	1,019	3,200	0.342		
	LT	1.00	153	1,600	0.096 *	V/C:	0.830
Northbound	RT	0.00	104	0	0.000	Lost Time:	0.100
	TH	2.00	489	3,200	0.185	ITS:	0.000
	LT	1.00	170	1,600	0.106 *		
Eastbound	RT	0.00	163	0	0.000	ICU:	0.930
	TH	2.00	1,168	3,200	0.416 *		
	LT	1.00	199	1,600	0.124	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **5 - Budlong Avenue & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.011
	TH	1.00	0	1,600	0.032 *	N-S(2):	0.032 *
	LT	0.00	17	1,600	0.011	E-W(1):	0.299
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.438 *
	TH	2.00	1,356	3,200	0.429 *		
	LT	0.00	0	0	0.000	V/C:	0.470
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.570
	TH	2.00	957	3,200	0.299		
	LT	1.00	15	1,600	0.009 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	35	0	0.000	N-S(1):	0.013
	TH	1.00	0	1,600	0.034 *	N-S(2):	0.034 *
	LT	0.00	20	1,600	0.013	E-W(1):	0.402
Westbound	RT	0.00	27	0	0.000	E-W(2):	0.405 *
	TH	2.00	1,219	3,200	0.389 *		
	LT	0.00	0	0	0.000	V/C:	0.439
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.539
	TH	2.00	1,287	3,200	0.402		
	LT	1.00	25	1,600	0.016 *	LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **6 - Berendo Avenue & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	36	0	0.000	N-S(1):	0.009
	TH	1.00	1	1,600	0.023 *	N-S(2):	0.035 *
	LT	1.00	13	1,600	0.008	E-W(1):	0.360
Westbound	RT	0.00	33	0	0.000	E-W(2):	0.440 *
	TH	2.00	1,341	3,200	0.429 *		
	LT	1.00	107	1,600	0.067	V/C:	0.475
Northbound	RT	1.00	44	1,600	0.000	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	19	1,600	0.012 *		
Eastbound	RT	0.00	43	0	0.000	ICU:	0.575
	TH	2.00	893	3,200	0.293		
	LT	1.00	17	1,600	0.011 *	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.046 *
	TH	1.00	4	1,600	0.024	N-S(2):	0.032
	LT	1.00	24	1,600	0.015 *	E-W(1):	0.415 *
Westbound	RT	0.00	45	0	0.000	E-W(2):	0.406
	TH	2.00	1,200	3,200	0.389		
	LT	1.00	28	1,600	0.018 *	V/C:	0.461
Northbound	RT	1.00	77	1,600	0.031 *	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	12	1,600	0.008		
Eastbound	RT	0.00	23	0	0.000	ICU:	0.561
	TH	2.00	1,248	3,200	0.397 *		
	LT	1.00	27	1,600	0.017	LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 7 - Medical Center Drive & Carson Street
Description: Existing

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	34	34	0	0.000		N-S(1):	0.051
	TH	1.00	1	1	1,600	0.053	*	N-S(2):	0.072 *
	LT	0.00	45	50	1,600	0.031		E-W(1):	0.409
Westbound	RT	0.00	10	10	0	0.000		E-W(2):	0.460 *
	TH	2.00	1,436	1,436	3,200	0.452	*		
	LT	1.00	182	182	1,600	0.114		V/C:	0.532
Northbound	RT	1.00	114	114	1,600	0.000		Lost Time:	0.100
	TH	1.00	1	1	1,600	0.020		ITS:	0.000
	LT	0.00	28	31	1,600	0.019	*		
Eastbound	RT	0.00	16	16	0	0.000		ICU:	0.632
	TH	2.00	928	928	3,200	0.295			
	LT	1.00	13	13	1,600	0.008	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	17	17	0	0.000		N-S(1):	0.027
	TH	1.00	0	0	1,600	0.019	*	N-S(2):	0.037 *
	LT	0.00	12	14	1,600	0.009		E-W(1):	0.465 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.411
	TH	2.00	1,242	1,242	3,200	0.396			
	LT	1.00	86	86	1,600	0.054	*	V/C:	0.502
Northbound	RT	1.00	104	104	1,600	0.011		Lost Time:	0.100
	TH	1.00	0	0	1,600	0.018		ITS:	0.000
	LT	0.00	25	28	1,600	0.018	*		
Eastbound	RT	0.00	14	14	0	0.000		ICU:	0.602
	TH	2.00	1,302	1,302	3,200	0.411	*		
	LT	1.00	24	24	1,600	0.015		LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **8 - Vermont Avenue & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	210	1,600	0.054	N-S(1):	0.336 *
	TH	2.00	487	3,200	0.152	N-S(2):	0.249
	LT	1.00	124	1,600	0.078 *	E-W(1):	0.435
Westbound	RT	1.00	132	1,600	0.005	E-W(2):	0.469 *
	TH	2.00	1,250	3,200	0.391 *		
	LT	1.00	256	1,600	0.160	V/C:	0.805
Northbound	RT	1.00	222	1,600	0.000	Lost Time:	0.100
	TH	2.00	824	3,200	0.258 *	ITS:	0.000
	LT	1.00	155	1,600	0.097		
Eastbound	RT	1.00	81	1,600	0.000	ICU:	0.905
	TH	2.00	881	3,200	0.275		
	LT	1.00	124	1,600	0.078 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	179	1,600	0.041	N-S(1):	0.300
	TH	2.00	740	3,200	0.231 *	N-S(2):	0.314 *
	LT	1.00	272	1,600	0.170	E-W(1):	0.479 *
Westbound	RT	1.00	163	1,600	0.000	E-W(2):	0.390
	TH	2.00	1,022	3,200	0.319		
	LT	1.00	152	1,600	0.095 *	V/C:	0.793
Northbound	RT	1.00	345	1,600	0.121	Lost Time:	0.100
	TH	2.00	415	3,200	0.130	ITS:	0.000
	LT	1.00	133	1,600	0.083 *		
Eastbound	RT	1.00	109	1,600	0.000	ICU:	0.893
	TH	2.00	1,230	3,200	0.384 *		
	LT	1.00	113	1,600	0.071	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	538	1,600	0.336 *	N-S(1):	0.083
	TH	0.00	0	0	0.000	N-S(2):	0.336 *
	LT	1.00	132	1,600	0.083	E-W(1):	0.360
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.378 *
	TH	2.00	1,211	3,200	0.378 *		
	LT	1.00	174	1,600	0.109	V/C:	0.714
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	131	0	0.000	ICU:	0.814
	TH	3.00	1,074	4,800	0.251		
	LT	0.00	0	0	0.000 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	400	1,600	0.250 *	N-S(1):	0.164
	TH	0.00	0	0	0.000	N-S(2):	0.250 *
	LT	1.00	263	1,600	0.164	E-W(1):	0.499 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.308
	TH	2.00	984	3,200	0.308		
	LT	1.00	178	1,600	0.111 *	V/C:	0.749
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	261	0	0.000	ICU:	0.849
	TH	3.00	1,600	4,800	0.388 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	148	1,600	0.058	N-S(1):	0.168
	TH	2.00	258	3,200	0.081 *	N-S(2):	0.191 *
	LT	2.00	38	2,560	0.015	E-W(1):	0.261
Westbound	RT	1.00	98	1,600	0.054	E-W(2):	0.370 *
	TH	2.00	961	3,200	0.300 *		
	LT	1.00	95	1,600	0.059	V/C:	0.561
Northbound	RT	1.00	171	1,600	0.077	Lost Time:	0.100
	TH	2.00	488	3,200	0.153	ITS:	0.000
	LT	2.00	282	2,560	0.110 *		
Eastbound	RT	1.00	449	1,600	0.170	ICU:	0.661
	TH	2.00	645	3,200	0.202		
	LT	1.00	112	1,600	0.070 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	161	1,600	0.069	N-S(1):	0.123
	TH	2.00	468	3,200	0.146 *	N-S(2):	0.227 *
	LT	2.00	131	2,560	0.051	E-W(1):	0.435 *
Westbound	RT	1.00	70	1,600	0.018	E-W(2):	0.312
	TH	2.00	797	3,200	0.249		
	LT	1.00	103	1,600	0.064 *	V/C:	0.662
Northbound	RT	1.00	138	1,600	0.054	Lost Time:	0.100
	TH	2.00	231	3,200	0.072	ITS:	0.000
	LT	2.00	207	2,560	0.081 *		
Eastbound	RT	1.00	565	1,600	0.272	ICU:	0.762
	TH	2.00	1,188	3,200	0.371 *		
	LT	1.00	100	1,600	0.063	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	68	0	0.000	N-S(1):	0.438 *
	TH	2.00	876	3,200	0.295	N-S(2):	0.368
	LT	1.00	11	1,600	0.007 *	E-W(1):	0.125
Westbound	RT	0.00	36	0	0.000	E-W(2):	0.147 *
	TH	1.00	77	1,600	0.136 *		
	LT	0.00	104	1,600	0.065	V/C:	0.585
Northbound	RT	0.00	31	0	0.000	Lost Time:	0.100
	TH	2.00	1,348	3,200	0.431 *	ITS:	0.000
	LT	1.00	116	1,600	0.073		
Eastbound	RT	0.00	55	0	0.000	ICU:	0.685
	TH	1.00	23	1,600	0.060		
	LT	0.00	18	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	17	0	0.000	N-S(1):	0.314
	TH	2.00	1,446	3,200	0.457 *	N-S(2):	0.493 *
	LT	1.00	30	1,600	0.019	E-W(1):	0.226 *
Westbound	RT	0.00	19	0	0.000	E-W(2):	0.101
	TH	1.00	39	1,600	0.066		
	LT	0.00	47	1,600	0.029 *	V/C:	0.719
Northbound	RT	0.00	23	0	0.000	Lost Time:	0.100
	TH	2.00	921	3,200	0.295	ITS:	0.000
	LT	1.00	58	1,600	0.036 *		
Eastbound	RT	0.00	162	0	0.000	ICU:	0.819
	TH	1.00	97	1,600	0.197 *		
	LT	0.00	56	1,600	0.035	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 12 - Normandie Avenue & 220th Street
Description: Existing

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	26	26	0	0.000	N-S(1):	0.340 *
	TH	2.00	384	384	3,200	0.128	N-S(2):	0.144
	LT	1.00	69	69	1,600	0.043 *	E-W(1):	0.140
Westbound	RT	0.00	100	100	0	0.000	E-W(2):	0.162 *
	TH	1.00	76	76	1,600	0.142 *		
	LT	0.00	46	51	1,600	0.032	V/C:	0.502
Northbound	RT	0.00	117	117	0	0.000	Lost Time:	0.100
	TH	2.00	834	834	3,200	0.297 *	ITS:	0.000
	LT	1.00	25	25	1,600	0.016		
Eastbound	RT	0.00	42	42	0	0.000	ICU:	0.602
	TH	1.00	99	99	1,600	0.108		
	LT	0.00	29	32	1,600	0.020 *	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	36	36	0	0.000	N-S(1):	0.214
	TH	2.00	758	758	3,200	0.248 *	N-S(2):	0.262 *
	LT	1.00	74	74	1,600	0.046	E-W(1):	0.114
Westbound	RT	0.00	84	84	0	0.000	E-W(2):	0.119 *
	TH	1.00	35	35	1,600	0.105 *		
	LT	0.00	44	49	1,600	0.031	V/C:	0.381
Northbound	RT	0.00	41	41	0	0.000	Lost Time:	0.100
	TH	2.00	498	498	3,200	0.168	ITS:	0.000
	LT	1.00	23	23	1,600	0.014 *		
Eastbound	RT	0.00	50	50	0	0.000	ICU:	0.481
	TH	1.00	61	61	1,600	0.083		
	LT	0.00	20	22	1,600	0.014 *	LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 13 - Meyler Street & 220th Street
Description: Existing

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	1	1	0	0.000		N-S(1):	0.116 *
	TH	1.00	0	0	1,600	0.007		N-S(2):	0.073
	LT	0.00	9	10	1,600	0.006	*	E-W(1):	0.166 *
Westbound	RT	0.00	21	21	0	0.000		E-W(2):	0.148
	TH	1.00	143	143	1,600	0.145			
	LT	0.00	61	68	1,600	0.043	*	V/C:	0.282
Northbound	RT	0.00	66	66	0	0.000		Lost Time:	0.100
	TH	1.00	4	4	1,600	0.110	*	ITS:	0.000
	LT	0.00	96	106	1,600	0.066			
Eastbound	RT	0.00	51	51	0	0.000		ICU:	0.382
	TH	1.00	141	141	1,600	0.123	*		
	LT	0.00	3	4	1,600	0.003		LOS:	A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	5	5	0	0.000		N-S(1):	0.072 *
	TH	1.00	4	4	1,600	0.028		N-S(2):	0.037
	LT	0.00	31	35	1,600	0.022	*	E-W(1):	0.193 *
Westbound	RT	0.00	3	3	0	0.000		E-W(2):	0.081
	TH	1.00	96	96	1,600	0.077			
	LT	0.00	21	24	1,600	0.015	*	V/C:	0.265
Northbound	RT	0.00	65	65	0	0.000		Lost Time:	0.100
	TH	1.00	0	0	1,600	0.050	*	ITS:	0.000
	LT	0.00	13	15	1,600	0.009			
Eastbound	RT	0.00	33	33	0	0.000		ICU:	0.365
	TH	1.00	246	246	1,600	0.178	*		
	LT	0.00	5	6	1,600	0.004		LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 14 - Vermont Avenue & 220th Street
Description: Existing

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	252	252	0	0.000		N-S(1):	0.366 *
	TH	2.00	498	498	3,200	0.234		N-S(2):	0.355
	LT	1.00	56	56	1,600	0.035	*	E-W(1):	0.190 *
Westbound	RT	0.00	37	37	0	0.000		E-W(2):	0.155
	TH	1.00	27	27	1,600	0.052			
	LT	0.00	17	19	1,600	0.012	*	V/C:	0.556
Northbound	RT	0.00	40	40	0	0.000		Lost Time:	0.100
	TH	2.00	1,019	1,019	3,200	0.331	*	ITS:	0.000
	LT	1.00	194	194	1,600	0.121			
Eastbound	RT	0.00	88	88	0	0.000		ICU:	0.656
	TH	1.00	32	32	1,600	0.178	*		
	LT	0.00	149	164	1,600	0.103		LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	64	64	0	0.000		N-S(1):	0.188
	TH	2.00	906	906	3,200	0.303	*	N-S(2):	0.324 *
	LT	1.00	22	22	1,600	0.014		E-W(1):	0.290 *
Westbound	RT	0.00	43	43	0	0.000		E-W(2):	0.218
	TH	1.00	12	12	1,600	0.056			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.614
Northbound	RT	0.00	14	14	0	0.000		Lost Time:	0.100
	TH	2.00	544	544	3,200	0.174		ITS:	0.000
	LT	1.00	34	34	1,600	0.021	*		
Eastbound	RT	0.00	156	156	0	0.000		ICU:	0.714
	TH	1.00	13	13	1,600	0.268	*		
	LT	0.00	235	259	1,600	0.162		LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	379	1,600	0.164 *	N-S(1):	0.272
	TH	2.00	366	3,200	0.114	N-S(2):	0.460 *
	LT	1.00	128	1,600	0.080	E-W(1):	0.353 *
Westbound	RT	1.00	89	1,600	0.016	E-W(2):	0.000
	TH	1.00	207	1,600	0.184 *		
	LT	0.00	87	1,600	0.054	V/C:	0.813
Northbound	RT	1.00	145	1,600	0.063	Lost Time:	0.100
	TH	2.00	615	3,200	0.192	ITS:	0.000
	LT	1.00	473	1,600	0.296 *		
Eastbound	RT	1.00	47	1,600	0.000	ICU:	0.913
	TH	1.00	37	1,600	0.169 *		
	LT	0.00	233	1,600	0.146	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	475	1,600	0.221 *	N-S(1):	0.137
	TH	2.00	545	3,200	0.170	N-S(2):	0.475 *
	LT	1.00	75	1,600	0.047	E-W(1):	0.311 *
Westbound	RT	1.00	52	1,600	0.009	E-W(2):	0.000
	TH	1.00	104	1,600	0.100 *		
	LT	0.00	56	1,600	0.035	V/C:	0.786
Northbound	RT	1.00	50	1,600	0.014	Lost Time:	0.100
	TH	2.00	287	3,200	0.090	ITS:	0.000
	LT	1.00	406	1,600	0.254 *		
Eastbound	RT	1.00	103	1,600	0.000	ICU:	0.886
	TH	1.00	95	1,600	0.211 *		
	LT	0.00	242	1,600	0.151	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	53	1,600	0.018	N-S(1):	0.441 *
	TH	2.00	898	3,200	0.281	N-S(2):	0.399
	LT	1.00	74	1,600	0.046 *	E-W(1):	0.273
Westbound	RT	0.00	181	0	0.000	E-W(2):	0.352 *
	TH	2.00	853	3,200	0.323 *		
	LT	1.00	244	1,600	0.153	V/C:	0.793
Northbound	RT	1.00	166	1,600	0.028	Lost Time:	0.100
	TH	2.00	1,265	3,200	0.395 *	ITS:	0.000
	LT	1.00	188	1,600	0.118		
Eastbound	RT	1.00	109	1,600	0.009	ICU:	0.893
	TH	2.00	383	3,200	0.120		
	LT	1.00	47	1,600	0.029 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	42	1,600	0.009	N-S(1):	0.397
	TH	2.00	1,357	3,200	0.424 *	N-S(2):	0.485 *
	LT	1.00	203	1,600	0.127	E-W(1):	0.334 *
Westbound	RT	0.00	87	0	0.000	E-W(2):	0.244
	TH	2.00	586	3,200	0.210		
	LT	1.00	74	1,600	0.046 *	V/C:	0.819
Northbound	RT	1.00	164	1,600	0.079	Lost Time:	0.100
	TH	2.00	863	3,200	0.270	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	1.00	189	1,600	0.088	ICU:	0.919
	TH	2.00	923	3,200	0.288 *		
	LT	1.00	54	1,600	0.034	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **17 - Normandie Avenue & 223rd Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	64	0	0.000	N-S(1):	0.314 *
	TH	2.00	359	3,200	0.132	N-S(2):	0.209
	LT	1.00	49	1,600	0.031 *	E-W(1):	0.279
Westbound	RT	0.00	75	0	0.000	E-W(2):	0.393 *
	TH	2.00	1,018	3,200	0.342 *		
	LT	1.00	114	1,600	0.071	V/C:	0.707
Northbound	RT	0.00	105	0	0.000	Lost Time:	0.100
	TH	2.00	799	3,200	0.283 *	ITS:	0.000
	LT	1.00	123	1,600	0.077		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.807
	TH	2.00	600	3,200	0.208		
	LT	1.00	82	1,600	0.051 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	75	0	0.000	N-S(1):	0.221
	TH	2.00	684	3,200	0.237 *	N-S(2):	0.276 *
	LT	1.00	85	1,600	0.053	E-W(1):	0.446 *
Westbound	RT	0.00	84	0	0.000	E-W(2):	0.288
	TH	2.00	696	3,200	0.244		
	LT	1.00	93	1,600	0.058 *	V/C:	0.722
Northbound	RT	0.00	123	0	0.000	Lost Time:	0.100
	TH	2.00	414	3,200	0.168	ITS:	0.000
	LT	1.00	63	1,600	0.039 *		
Eastbound	RT	0.00	105	0	0.000	ICU:	0.822
	TH	2.00	1,137	3,200	0.388 *		
	LT	1.00	71	1,600	0.044	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 18 - Meyler Street & 223rd Street
Description: Existing

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	54	54	0	0.000		N-S(1):	0.157 *
	TH	1.00	44	44	1,600	0.099		N-S(2):	0.150
	LT	0.00	55	61	1,600	0.038	*	E-W(1):	0.245
Westbound	RT	0.00	65	65	0	0.000		E-W(2):	0.401 *
	TH	2.00	1,112	1,112	3,200	0.368	*		
	LT	1.00	46	46	1,600	0.029		V/C:	0.558
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	39	39	1,600	0.119	*	ITS:	0.000
	LT	0.00	74	82	1,600	0.051			
Eastbound	RT	0.00	24	24	0	0.000		ICU:	0.658
	TH	2.00	666	666	3,200	0.216			
	LT	1.00	52	52	1,600	0.033	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	34	34	0	0.000		N-S(1):	0.063 *
	TH	1.00	15	15	1,600	0.044	*	N-S(2):	0.063 *
	LT	0.00	19	21	1,600	0.013	*	E-W(1):	0.418 *
Westbound	RT	0.00	44	44	0	0.000		E-W(2):	0.304
	TH	2.00	813	813	3,200	0.268			
	LT	1.00	59	59	1,600	0.037	*	V/C:	0.481
Northbound	RT	0.00	35	35	0	0.000		Lost Time:	0.100
	TH	1.00	15	15	1,600	0.050	*	ITS:	0.000
	LT	0.00	27	30	1,600	0.019	*		
Eastbound	RT	0.00	89	89	0	0.000		ICU:	0.581
	TH	2.00	1,130	1,130	3,200	0.381	*		
	LT	1.00	58	58	1,600	0.036		LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **19 - Vermont Avenue & 223rd Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	89	0	0.000	N-S(1):	0.348 *
	TH	2.00	385	3,200	0.148	N-S(2):	0.234
	LT	1.00	143	1,600	0.089 *	E-W(1):	0.271
Westbound	RT	0.00	300	0	0.000	E-W(2):	0.469 *
	TH	2.00	979	3,200	0.400 *		
	LT	2.00	247	2,880	0.086	V/C:	0.817
Northbound	RT	1.00	130	1,600	0.000	Lost Time:	0.100
	TH	2.00	829	3,200	0.259 *	ITS:	0.000
	LT	1.00	138	1,600	0.086		
Eastbound	RT	1.00	72	1,600	0.000	ICU:	0.917
	TH	2.00	593	3,200	0.185		
	LT	1.00	111	1,600	0.069 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	110	0	0.000	N-S(1):	0.293
	TH	2.00	741	3,200	0.266 *	N-S(2):	0.313 *
	LT	1.00	271	1,600	0.169	E-W(1):	0.420 *
Westbound	RT	0.00	125	0	0.000	E-W(2):	0.306
	TH	2.00	732	3,200	0.268		
	LT	2.00	253	2,880	0.088 *	V/C:	0.733
Northbound	RT	1.00	190	1,600	0.031	Lost Time:	0.100
	TH	2.00	398	3,200	0.124	ITS:	0.000
	LT	1.00	75	1,600	0.047 *		
Eastbound	RT	1.00	117	1,600	0.026	ICU:	0.833
	TH	2.00	1,062	3,200	0.332 *		
	LT	1.00	60	1,600	0.038	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	477	1,600	0.298 *	N-S(1):	0.190
	TH	2.00	1	1,600	0.191	N-S(2):	0.298 *
	LT	0.00	304	1,600	0.190	E-W(1):	0.357 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.327
	TH	2.00	1,045	3,200	0.327		
	LT	1.00	172	1,600	0.108 *	V/C:	0.655
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	1.00	120	1,600	0.075	ICU:	0.755
	TH	2.00	796	3,200	0.249 *		
	LT	0.00	0	0	0.000	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	388	0	0.000	N-S(1):	0.266 *
	TH	2.00	2	1,600	0.244	N-S(2):	0.244
	LT	0.00	426	1,600	0.266 *	E-W(1):	0.477 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.232
	TH	2.00	742	3,200	0.232		
	LT	1.00	120	1,600	0.075 *	V/C:	0.743
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	1.00	204	1,600	0.128	ICU:	0.843
	TH	2.00	1,285	3,200	0.402 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	177	1,600	0.019	N-S(1):	0.255 *
	TH	2.00	260	3,200	0.081	N-S(2):	0.145
	LT	1.00	66	1,600	0.041 *	E-W(1):	0.228
Westbound	RT	1.00	256	1,600	0.139	E-W(2):	0.472 *
	TH	2.00	925	3,200	0.289 *		
	LT	1.00	72	1,600	0.045	V/C:	0.727
Northbound	RT	1.00	149	1,600	0.071	Lost Time:	0.100
	TH	2.00	685	3,200	0.214 *	ITS:	0.000
	LT	1.00	102	1,600	0.064		
Eastbound	RT	1.00	178	1,600	0.079	ICU:	0.827
	TH	2.00	584	3,200	0.183		
	LT	1.00	293	1,600	0.183 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	158	1,600	0.010	N-S(1):	0.199 *
	TH	2.00	405	3,200	0.127	N-S(2):	0.171
	LT	1.00	147	1,600	0.092 *	E-W(1):	0.419 *
Westbound	RT	1.00	130	1,600	0.035	E-W(2):	0.371
	TH	2.00	616	3,200	0.193		
	LT	1.00	74	1,600	0.046 *	V/C:	0.618
Northbound	RT	1.00	110	1,600	0.046	Lost Time:	0.100
	TH	2.00	343	3,200	0.107 *	ITS:	0.000
	LT	1.00	71	1,600	0.044		
Eastbound	RT	1.00	208	1,600	0.108	ICU:	0.718
	TH	2.00	1,195	3,200	0.373 *		
	LT	1.00	285	1,600	0.178	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Existing**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	267	1,600	0.095	N-S(1):	0.352
	TH	2.00	874	3,200	0.273 *	N-S(2):	0.360 *
	LT	1.00	76	1,600	0.048	E-W(1):	0.468
Westbound	RT	0.00	96	0	0.000	E-W(2):	0.497 *
	TH	3.00	1,602	4,800	0.354 *		
	LT	1.00	304	1,600	0.190	V/C:	0.857
Northbound	RT	1.00	297	1,600	0.091	Lost Time:	0.100
	TH	2.00	973	3,200	0.304	ITS:	0.000
	LT	1.00	139	1,600	0.087 *		
Eastbound	RT	0.00	72	0	0.000	ICU:	0.957
	TH	3.00	1,261	4,800	0.278		
	LT	1.00	229	1,600	0.143 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	133	1,600	0.018	N-S(1):	0.358
	TH	2.00	961	3,200	0.300 *	N-S(2):	0.414 *
	LT	1.00	174	1,600	0.109	E-W(1):	0.497 *
Westbound	RT	0.00	139	0	0.000	E-W(2):	0.447
	TH	3.00	1,380	4,800	0.316		
	LT	1.00	309	1,600	0.193 *	V/C:	0.911
Northbound	RT	1.00	321	1,600	0.104	Lost Time:	0.100
	TH	2.00	796	3,200	0.249	ITS:	0.000
	LT	1.00	182	1,600	0.114 *		
Eastbound	RT	0.00	120	0	0.000	ICU:	1.011
	TH	3.00	1,338	4,800	0.304 *		
	LT	1.00	210	1,600	0.131	LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	154	1	154	98	1	**98**
	Left-Through		0			0	
	Through	736	1	**442**	530	1	340
	Through-Right		1			1	
	Right	147	0	147	149	0	149
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	32	1	**32**	130	1	130
	Left-Through		0			0	
	Through	382	1	242	729	1	**441**
	Through-Right		1			1	
	Right	101	0	101	152	0	152
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	95	1	**95**	106	1	106
	Left-Through		0			0	
	Through	915	1	496	1373	1	**742**
	Through-Right		1			1	
	Right	77	0	77	111	0	111
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	103	1	103	58	1	**58**
	Left-Through		0			0	
	Through	1461	1	**768**	963	1	503
	Through-Right		1			1	
	Right	74	0	74	43	0	43
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	474		North-South:	539
			East-West:	863		East-West:	800
			SUM:	1337		SUM:	1339
VOLUME/CAPACITY (V/C) RATIO:				0.972			0.974
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.902**			**0.904**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
3	North-South Street:	Western Avenue	East-West Street:	Carson Street
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	150	1	150	151	1	**151**
	Left-Through		0			0	
	Through	1123	2	**562**	793	2	397
	Through-Right		0			0	
	Right	83	1	50	116	1	81
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	93	1	**93**	154	1	154
	Left-Through		0			0	
	Through	710	2	355	1295	2	**648**
	Through-Right		0			0	
	Right	133	1	104	220	1	178
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	58	1	**58**	84	1	84
	Left-Through		0			0	
	Through	745	1	424	980	1	**582**
	Through-Right		1			1	
	Right	103	0	103	183	0	183
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	66	1	66	70	1	**70**
	Left-Through		0			0	
	Through	1121	1	**637**	910	1	516
	Through-Right		1			1	
	Right	153	0	153	122	0	122
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	655		North-South:	799
			East-West:	695		East-West:	652
			SUM:	1350		SUM:	1451
VOLUME/CAPACITY (V/C) RATIO:				0.947			1.018
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.877**			**0.948**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	209	1	**209**	170	1	**170**
	Left-Through		0			0	
	Through	660	2	330	489	2	245
	Through-Right		0			0	
	Right	71	1	0	104	1	28
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	33	1	33	92	1	92
	Left-Through		0			0	
	Through	358	1	**253**	517	1	**340**
	Through-Right		1			1	
	Right	147	0	147	162	0	162
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	194	1	**194**	199	1	199
	Left-Through		0			0	
	Through	887	2	444	1168	2	**584**
	Through-Right		0			0	
	Right	187	1	83	163	1	78
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	161	1	161	153	1	**153**
	Left-Through		0			0	
	Through	1186	2	**593**	1019	2	510
	Through-Right		0			0	
	Right	75	1	59	76	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	462		North-South:	510
			East-West:	787		East-West:	737
			SUM:	1249		SUM:	1247
VOLUME/CAPACITY (V/C) RATIO:				0.833			0.907
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.763**			**0.837**
LEVEL OF SERVICE (LOS):				**C**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	116	58	1	**58**
	Left-Through		0			0	
	Through	1348	1	**690**	921	1	472
	Through-Right		1			1	
	Right	31	0	31	23	0	23
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	11	1	**11**	30	1	30
	Left-Through		0			0	
	Through	876	1	472	1446	1	**732**
	Through-Right		1			1	
	Right	68	0	68	17	0	17
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	18	0	**18**	56	0	56
	Left-Through		0			0	
	Through	23	0	96	97	0	**315**
	Through-Right		0			0	
	Right	55	0	0	162	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	104	0	104	47	0	**47**
	Left-Through		0			0	
	Through	77	0	**217**	39	0	105
	Through-Right		0			0	
	Right	36	0	0	19	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	701		*North-South:*	790
			East-West:	235		*East-West:*	362
			SUM:	936		*SUM:*	1152
VOLUME/CAPACITY *(V/C)* RATIO:				0.624			0.768
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.554**			**0.698**
LEVEL OF SERVICE (LOS):				**A**			**B**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	25	1	25	23	1	**23**
	Left-Through		0			0	
	Through	834	1	**476**	498	1	270
	Through-Right		1			1	
	Right	117	0	117	41	0	41
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	69	1	**69**	74	1	74
	Left-Through		0			0	
	Through	384	1	205	758	1	**397**
	Through-Right		1			1	
	Right	26	0	26	36	0	36
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	29	0	29	20	0	20
	Left-Through		1			1	
	Through	99	0	**128**	61	0	**81**
	Through-Right		0			0	
	Right	42	1	30	50	1	39
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	46	0	**46**	44	0	**44**
	Left-Through		1			1	
	Through	76	0	122	35	0	79
	Through-Right		0			0	
	Right	100	1	66	84	1	47
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	545		North-South:	420
			East-West:	174		East-West:	125
			SUM:	719		SUM:	545
VOLUME/CAPACITY (V/C) RATIO:				0.479			0.363
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.409**			**0.293**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

			AM				PM		
No. of Phases					3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--		0	NB--	0	SB--	0
	EB--	0	WB--		0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?					1				1
Override Capacity					0				0

	MOVEMENT	AM Volume	AM No. of Lanes	AM Lane Volume	PM Volume	PM No. of Lanes	PM Lane Volume
NORTHBOUND	Left	188	1	188	98	1	**98**
	Left-Through		0			0	
	Through	1265	2	**633**	863	2	432
	Through-Right		0			0	
	Right	166	1	44	164	1	127
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	74	1	**74**	203	1	203
	Left-Through		0			0	
	Through	898	2	449	1357	2	**679**
	Through-Right		0			0	
	Right	53	1	30	42	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	47	1	**47**	54	1	54
	Left-Through		0			0	
	Through	383	2	192	923	2	**462**
	Through-Right		0			0	
	Right	109	1	15	189	1	140
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	244	1	244	74	1	**74**
	Left-Through		0			0	
	Through	853	1	**517**	586	1	337
	Through-Right		1			1	
	Right	181	0	181	87	0	87
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	707		North-South:	777
			East-West:	564		East-West:	536
			SUM:	1271		SUM:	1313
VOLUME/CAPACITY (V/C) RATIO:				0.892			0.921
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.822**			**0.851**
LEVEL OF SERVICE (LOS):				**D**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	123	1	123	63	1	**63**
	Left-Through		0			0	
	Through	799	2	**400**	414	2	207
	Through-Right		0			0	
	Right	105	1	48	123	1	77
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	49	1	**49**	85	1	85
	Left-Through		0			0	
	Through	359	1	212	684	1	**380**
	Through-Right		1			1	
	Right	64	0	64	75	0	75
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	82	1	**82**	71	1	71
	Left-Through		0			0	
	Through	600	1	332	1137	1	**621**
	Through-Right		1			1	
	Right	64	0	64	105	0	105
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	114	1	114	93	1	**93**
	Left-Through		0			0	
	Through	1018	2	**509**	696	2	348
	Through-Right		0			0	
	Right	75	1	51	84	1	42
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	449		North-South:	443
			East-West:	591		East-West:	714
			SUM:	1040		SUM:	1157
VOLUME/CAPACITY (V/C) RATIO:				0.693			0.771
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.623**			**0.701**
LEVEL OF SERVICE (LOS):				**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Existing		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	139	1	**139**	182	1	**182**
	Left-Through		0			0	
	Through	973	2	487	796	2	398
	Through-Right		0			0	
	Right	297	1	145	321	1	167
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	76	1	76	174	1	174
	Left-Through		0			0	
	Through	874	2	**437**	961	2	**481**
	Through-Right		0			0	
	Right	267	1	153	133	1	28
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	229	1	**229**	210	1	210
	Left-Through		0			0	
	Through	1261	2	444	1338	2	**486**
	Through-Right		1			1	
	Right	72	0	72	120	0	120
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	304	1	304	309	1	**309**
	Left-Through		0			0	
	Through	1602	2	**566**	1380	2	506
	Through-Right		1			1	
	Right	96	0	96	139	0	139
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	576		*North-South:*	663
			East-West:	795		*East-West:*	795
			SUM:	1371		*SUM:*	1458
VOLUME/CAPACITY *(V/C)* RATIO:				0.997			1.060
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.927**			**0.990**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

EXISTING PLUS 2023 PROJECT

Project Title: **Harbor-UCLA Medical Center**
Intersection: **1 - Normandie Avenue & Torrance Bloulevard**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	101	0	0.000	N-S(1):	0.297 *
	TH	2.00	400	3,200	0.157	N-S(2):	0.253
	LT	1.00	32	1,600	0.020 *	E-W(1):	0.376
Westbound	RT	0.00	74	0	0.000	E-W(2):	0.539 *
	TH	2.00	1,461	3,200	0.480 *		
	LT	1.00	104	1,600	0.065	V/C:	0.836
Northbound	RT	0.00	147	0	0.000	Lost Time:	0.100
	TH	2.00	740	3,200	0.277 *	ITS:	0.000
	LT	1.00	154	1,600	0.096		
Eastbound	RT	0.00	80	0	0.000	ICU:	0.936
	TH	2.00	915	3,200	0.311		
	LT	1.00	95	1,600	0.059 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	152	0	0.000	N-S(1):	0.299
	TH	2.00	733	3,200	0.277 *	N-S(2):	0.338 *
	LT	1.00	130	1,600	0.081	E-W(1):	0.500 *
Westbound	RT	0.00	43	0	0.000	E-W(2):	0.380
	TH	2.00	963	3,200	0.314		
	LT	1.00	58	1,600	0.036 *	V/C:	0.838
Northbound	RT	0.00	150	0	0.000	Lost Time:	0.100
	TH	2.00	547	3,200	0.218	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	0.00	112	0	0.000	ICU:	0.938
	TH	2.00	1,373	3,200	0.464 *		
	LT	1.00	106	1,600	0.066	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **2 - Vermont Avenue & Torrance Bloulevard**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	186	1,600	0.009	N-S(1):	0.278 *
	TH	2.00	579	3,200	0.181	N-S(2):	0.257
	LT	1.00	37	1,600	0.023 *	E-W(1):	0.374
Westbound	RT	0.00	111	0	0.000	E-W(2):	0.550 *
	TH	2.00	1,303	3,200	0.442 *		
	LT	1.00	91	1,600	0.057	V/C:	0.828
Northbound	RT	1.00	182	1,600	0.057	Lost Time:	0.100
	TH	2.00	816	3,200	0.255 *	ITS:	0.000
	LT	1.00	122	1,600	0.076		
Eastbound	RT	0.00	147	0	0.000	ICU:	0.928
	TH	2.00	866	3,200	0.317		
	LT	1.00	172	1,600	0.108 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	229	1,600	0.039	N-S(1):	0.225
	TH	2.00	866	3,200	0.271 *	N-S(2):	0.320 *
	LT	1.00	112	1,600	0.070	E-W(1):	0.461 *
Westbound	RT	0.00	89	0	0.000	E-W(2):	0.347
	TH	2.00	689	3,200	0.243		
	LT	1.00	60	1,600	0.038 *	V/C:	0.781
Northbound	RT	1.00	120	1,600	0.038	Lost Time:	0.100
	TH	2.00	497	3,200	0.155	ITS:	0.000
	LT	1.00	78	1,600	0.049 *		
Eastbound	RT	0.00	96	0	0.000	ICU:	0.881
	TH	2.00	1,259	3,200	0.423 *		
	LT	1.00	167	1,600	0.104	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	133	1,600	0.065	N-S(1):	0.409 *
	TH	2.00	715	3,200	0.223	N-S(2):	0.317
	LT	1.00	93	1,600	0.058 *	E-W(1):	0.309
Westbound	RT	0.00	154	0	0.000	E-W(2):	0.435 *
	TH	2.00	1,122	3,200	0.399 *		
	LT	1.00	66	1,600	0.041	V/C:	0.844
Northbound	RT	1.00	83	1,600	0.031	Lost Time:	0.100
	TH	2.00	1,124	3,200	0.351 *	ITS:	0.000
	LT	1.00	150	1,600	0.094		
Eastbound	RT	0.00	105	0	0.000	ICU:	0.944
	TH	2.00	752	3,200	0.268		
	LT	1.00	58	1,600	0.036 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	220	1,600	0.111	N-S(1):	0.345
	TH	2.00	1,296	3,200	0.405 *	N-S(2):	0.500 *
	LT	1.00	154	1,600	0.096	E-W(1):	0.408 *
Westbound	RT	0.00	126	0	0.000	E-W(2):	0.379
	TH	2.00	918	3,200	0.326		
	LT	1.00	70	1,600	0.044 *	V/C:	0.908
Northbound	RT	1.00	116	1,600	0.051	Lost Time:	0.100
	TH	2.00	798	3,200	0.249	ITS:	0.000
	LT	1.00	152	1,600	0.095 *		
Eastbound	RT	0.00	183	0	0.000	ICU:	1.008
	TH	2.00	981	3,200	0.364 *		
	LT	1.00	84	1,600	0.053	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **4 - Normandie Avenue & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	147	0	0.000	N-S(1):	0.255
	TH	2.00	375	3,200	0.163 *	N-S(2):	0.294 *
	LT	1.00	39	1,600	0.024	E-W(1):	0.442
Westbound	RT	0.00	76	0	0.000	E-W(2):	0.516 *
	TH	2.00	1,187	3,200	0.395 *		
	LT	1.00	167	1,600	0.104	V/C:	0.810
Northbound	RT	0.00	76	0	0.000	Lost Time:	0.100
	TH	2.00	663	3,200	0.231	ITS:	0.000
	LT	1.00	210	1,600	0.131 *		
Eastbound	RT	0.00	192	0	0.000	ICU:	0.910
	TH	2.00	890	3,200	0.338		
	LT	1.00	194	1,600	0.121 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	162	0	0.000	N-S(1):	0.252
	TH	2.00	520	3,200	0.213 *	N-S(2):	0.324 *
	LT	1.00	93	1,600	0.058	E-W(1):	0.514 *
Westbound	RT	0.00	79	0	0.000	E-W(2):	0.468
	TH	2.00	1,023	3,200	0.344		
	LT	1.00	156	1,600	0.098 *	V/C:	0.838
Northbound	RT	0.00	117	0	0.000	Lost Time:	0.100
	TH	2.00	504	3,200	0.194	ITS:	0.000
	LT	1.00	178	1,600	0.111 *		
Eastbound	RT	0.00	164	0	0.000	ICU:	0.938
	TH	2.00	1,168	3,200	0.416 *		
	LT	1.00	199	1,600	0.124	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **5 - Budlong Avenue & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.011
	TH	1.00	0	1,600	0.032 *	N-S(2):	0.032 *
	LT	0.00	17	1,600	0.011	E-W(1):	0.332
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.492 *
	TH	2.00	1,528	3,200	0.483 *		
	LT	0.00	0	0	0.000	V/C:	0.524
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.624
	TH	2.00	1,063	3,200	0.332		
	LT	1.00	15	1,600	0.009 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	35	0	0.000	N-S(1):	0.013
	TH	1.00	0	1,600	0.034 *	N-S(2):	0.034 *
	LT	0.00	20	1,600	0.013	E-W(1):	0.438 *
Westbound	RT	0.00	27	0	0.000	E-W(2):	0.426
	TH	2.00	1,286	3,200	0.410		
	LT	0.00	0	0	0.000 *	V/C:	0.472
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.572
	TH	2.00	1,402	3,200	0.438 *		
	LT	1.00	25	1,600	0.016	LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **6 - Berendo Avenue & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	36	0	0.000	N-S(1):	0.009
	TH	1.00	1	1,600	0.023 *	N-S(2):	0.035 *
	LT	1.00	13	1,600	0.008	E-W(1):	0.415
Westbound	RT	0.00	33	0	0.000	E-W(2):	0.494 *
	TH	2.00	1,513	3,200	0.483 *		
	LT	1.00	142	1,600	0.089	V/C:	0.529
Northbound	RT	1.00	52	1,600	0.000	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	19	1,600	0.012 *		
Eastbound	RT	0.00	45	0	0.000	ICU:	0.629
	TH	2.00	997	3,200	0.326		
	LT	1.00	17	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.063 *
	TH	1.00	4	1,600	0.024	N-S(2):	0.033
	LT	1.00	24	1,600	0.015 *	E-W(1):	0.455 *
Westbound	RT	0.00	45	0	0.000	E-W(2):	0.426
	TH	2.00	1,265	3,200	0.409		
	LT	1.00	35	1,600	0.022 *	V/C:	0.518
Northbound	RT	1.00	112	1,600	0.048 *	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	14	1,600	0.009		
Eastbound	RT	0.00	23	0	0.000	ICU:	0.618
	TH	2.00	1,362	3,200	0.433 *		
	LT	1.00	27	1,600	0.017	LOS:	B

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 7 - Medical Center Drive & Carson Street
Description: Existing plus 2023 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.40	34	34	648	0.044		N-S(1):	0.053 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.044
	LT	0.60	45	50	952	0.053	*	E-W(1):	0.330
Westbound	RT	0.00	10	10	0	0.000		E-W(2):	0.533 *
	TH	2.00	1,670	1,670	3,200	0.525	*		
	LT	0.00	0	0	0	0.000		V/C:	0.586
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000	*	ITS:	0.000
	LT	0.00	0	0	0	0.000			
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.686
	TH	2.00	1,056	1,056	3,200	0.330			
	LT	1.00	13	13	1,600	0.008	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.55	17	17	877	0.004		N-S(1):	0.019 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.004
	LT	0.45	12	14	723	0.019	*	E-W(1):	0.458 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.441
	TH	2.00	1,339	1,339	3,200	0.426			
	LT	0.00	0	0	0	0.000	*	V/C:	0.477
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000	*	ITS:	0.000
	LT	0.00	0	0	0	0.000			
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.577
	TH	2.00	1,465	1,465	3,200	0.458	*		
	LT	1.00	24	24	1,600	0.015		LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **8 - Vermont Avenue & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	216	1,600	0.057	N-S(1):	0.336 *
	TH	2.00	495	3,200	0.155	N-S(2):	0.256
	LT	1.00	124	1,600	0.078 *	E-W(1):	0.450
Westbound	RT	1.00	132	1,600	0.005	E-W(2):	0.481 *
	TH	2.00	1,290	3,200	0.403 *		
	LT	1.00	273	1,600	0.171	V/C:	0.817
Northbound	RT	1.00	226	1,600	0.000	Lost Time:	0.100
	TH	2.00	826	3,200	0.258 *	ITS:	0.000
	LT	1.00	161	1,600	0.101		
Eastbound	RT	1.00	83	1,600	0.000	ICU:	0.917
	TH	2.00	892	3,200	0.279		
	LT	1.00	125	1,600	0.078 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	180	1,600	0.038	N-S(1):	0.302
	TH	2.00	742	3,200	0.232 *	N-S(2):	0.316 *
	LT	1.00	272	1,600	0.170	E-W(1):	0.497 *
Westbound	RT	1.00	163	1,600	0.000	E-W(2):	0.396
	TH	2.00	1,031	3,200	0.322		
	LT	1.00	156	1,600	0.098 *	V/C:	0.813
Northbound	RT	1.00	362	1,600	0.129	Lost Time:	0.100
	TH	2.00	423	3,200	0.132	ITS:	0.000
	LT	1.00	134	1,600	0.084 *		
Eastbound	RT	1.00	115	1,600	0.000	ICU:	0.913
	TH	2.00	1,278	3,200	0.399 *		
	LT	1.00	119	1,600	0.074	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	573	1,600	0.358 *	N-S(1):	0.083
	TH	0.00	0	0	0.000	N-S(2):	0.358 *
	LT	1.00	132	1,600	0.083	E-W(1):	0.363
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.386 *
	TH	2.00	1,234	3,200	0.386 *		
	LT	1.00	174	1,600	0.109	V/C:	0.744
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	133	0	0.000	ICU:	0.844
	TH	3.00	1,087	4,800	0.254		
	LT	0.00	0	0	0.000 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	408	1,600	0.255 *	N-S(1):	0.164
	TH	0.00	0	0	0.000	N-S(2):	0.255 *
	LT	1.00	263	1,600	0.164	E-W(1):	0.512 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.309
	TH	2.00	988	3,200	0.309		
	LT	1.00	178	1,600	0.111 *	V/C:	0.767
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	270	0	0.000	ICU:	0.867
	TH	3.00	1,656	4,800	0.401 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	153	1,600	0.060	N-S(1):	0.168
	TH	2.00	261	3,200	0.082 *	N-S(2):	0.195 *
	LT	2.00	38	2,560	0.015	E-W(1):	0.262
Westbound	RT	1.00	98	1,600	0.054	E-W(2):	0.375 *
	TH	2.00	973	3,200	0.304 *		
	LT	1.00	95	1,600	0.059	V/C:	0.570
Northbound	RT	1.00	171	1,600	0.077	Lost Time:	0.100
	TH	2.00	489	3,200	0.153	ITS:	0.000
	LT	2.00	288	2,560	0.113 *		
Eastbound	RT	1.00	457	1,600	0.173	ICU:	0.670
	TH	2.00	649	3,200	0.203		
	LT	1.00	113	1,600	0.071 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	162	1,600	0.068	N-S(1):	0.124
	TH	2.00	469	3,200	0.147 *	N-S(2):	0.228 *
	LT	2.00	131	2,560	0.051	E-W(1):	0.439 *
Westbound	RT	1.00	70	1,600	0.018	E-W(2):	0.316
	TH	2.00	799	3,200	0.250		
	LT	1.00	103	1,600	0.064 *	V/C:	0.667
Northbound	RT	1.00	138	1,600	0.054	Lost Time:	0.100
	TH	2.00	234	3,200	0.073	ITS:	0.000
	LT	2.00	208	2,560	0.081 *		
Eastbound	RT	1.00	604	1,600	0.296	ICU:	0.767
	TH	2.00	1,200	3,200	0.375 *		
	LT	1.00	105	1,600	0.066	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	68	0	0.000	N-S(1):	0.442 *
	TH	2.00	876	3,200	0.295	N-S(2):	0.368
	LT	1.00	18	1,600	0.011 *	E-W(1):	0.125
Westbound	RT	0.00	37	0	0.000	E-W(2):	0.147 *
	TH	1.00	77	1,600	0.136 *		
	LT	0.00	104	1,600	0.065	V/C:	0.589
Northbound	RT	0.00	31	0	0.000	Lost Time:	0.100
	TH	2.00	1,348	3,200	0.431 *	ITS:	0.000
	LT	1.00	116	1,600	0.073		
Eastbound	RT	0.00	55	0	0.000	ICU:	0.689
	TH	1.00	23	1,600	0.060		
	LT	0.00	18	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	17	0	0.000	N-S(1):	0.314
	TH	2.00	1,446	3,200	0.457 *	N-S(2):	0.493 *
	LT	1.00	31	1,600	0.019	E-W(1):	0.226 *
Westbound	RT	0.00	24	0	0.000	E-W(2):	0.104
	TH	1.00	39	1,600	0.069		
	LT	0.00	47	1,600	0.029 *	V/C:	0.719
Northbound	RT	0.00	23	0	0.000	Lost Time:	0.100
	TH	2.00	921	3,200	0.295	ITS:	0.000
	LT	1.00	58	1,600	0.036 *		
Eastbound	RT	0.00	162	0	0.000	ICU:	0.819
	TH	1.00	97	1,600	0.197 *		
	LT	0.00	56	1,600	0.035	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 12 - Normandie Avenue & 220th Street
Description: Existing plus 2023 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	26	26	0	0.000		N-S(1):	0.351 *
	TH	2.00	385	385	3,200	0.128		N-S(2):	0.144
	LT	1.00	78	78	1,600	0.049	*	E-W(1):	0.145
Westbound	RT	0.00	102	102	0	0.000		E-W(2):	0.165 *
	TH	1.00	77	77	1,600	0.144	*		
	LT	0.00	46	51	1,600	0.032		V/C:	0.516
Northbound	RT	0.00	118	118	0	0.000		Lost Time:	0.100
	TH	2.00	849	849	3,200	0.302	*	ITS:	0.000
	LT	1.00	25	25	1,600	0.016			
Eastbound	RT	0.00	42	42	0	0.000		ICU:	0.616
	TH	1.00	105	105	1,600	0.113			
	LT	0.00	30	33	1,600	0.021	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	36	36	0	0.000		N-S(1):	0.217
	TH	2.00	767	767	3,200	0.251	*	N-S(2):	0.265 *
	LT	1.00	76	76	1,600	0.048		E-W(1):	0.115
Westbound	RT	0.00	93	93	0	0.000		E-W(2):	0.128 *
	TH	1.00	40	40	1,600	0.114	*		
	LT	0.00	44	49	1,600	0.031		V/C:	0.393
Northbound	RT	0.00	41	41	0	0.000		Lost Time:	0.100
	TH	2.00	501	501	3,200	0.169		ITS:	0.000
	LT	1.00	23	23	1,600	0.014	*		
Eastbound	RT	0.00	50	50	0	0.000		ICU:	0.493
	TH	1.00	62	62	1,600	0.084			
	LT	0.00	20	22	1,600	0.014	*	LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 13 - Meyler Street & 220th Street
Description: Existing plus 2023 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	2	2	0	0.000		N-S(1):	0.124 *
	TH	1.00	2	2	1,600	0.009		N-S(2):	0.075
	LT	0.00	10	11	1,600	0.007	*	E-W(1):	0.209 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.189
	TH	1.00	145	145	1,600	0.183			
	LT	0.00	61	122	1,600	0.076	*	V/C:	0.333
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	12	12	1,600	0.117	*	ITS:	0.000
	LT	0.00	96	106	1,600	0.066			
Eastbound	RT	0.00	51	51	0	0.000		ICU:	0.433
	TH	1.00	152	152	1,600	0.133	*		
	LT	0.00	8	9	1,600	0.006		LOS:	A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	10	10	0	0.000		N-S(1):	0.075 *
	TH	1.00	12	12	1,600	0.038		N-S(2):	0.047
	LT	0.00	35	39	1,600	0.024	*	E-W(1):	0.197 *
Westbound	RT	0.00	4	4	0	0.000		E-W(2):	0.090
	TH	1.00	106	106	1,600	0.086			
	LT	0.00	24	27	1,600	0.017	*	V/C:	0.272
Northbound	RT	0.00	65	65	0	0.000		Lost Time:	0.100
	TH	1.00	2	2	1,600	0.051	*	ITS:	0.000
	LT	0.00	13	15	1,600	0.009			
Eastbound	RT	0.00	33	33	0	0.000		ICU:	0.372
	TH	1.00	248	248	1,600	0.180	*		
	LT	0.00	6	7	1,600	0.004		LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 14 - Vermont Avenue & 220th Street
Description: Existing plus 2023 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	269	269	0	0.000		N-S(1):	0.370
	TH	2.00	501	501	3,200	0.241	*	N-S(2):	0.375 *
	LT	1.00	56	56	1,600	0.035		E-W(1):	0.196 *
Westbound	RT	0.00	37	37	0	0.000		E-W(2):	0.158
	TH	1.00	27	27	1,600	0.052			
	LT	0.00	17	19	1,600	0.012	*	V/C:	0.571
Northbound	RT	0.00	40	40	0	0.000		Lost Time:	0.100
	TH	2.00	1,031	1,031	3,200	0.335		ITS:	0.000
	LT	1.00	214	214	1,600	0.134	*		
Eastbound	RT	0.00	93	93	0	0.000		ICU:	0.671
	TH	1.00	32	32	1,600	0.184	*		
	LT	0.00	153	169	1,600	0.106		LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	68	68	0	0.000		N-S(1):	0.189
	TH	2.00	918	918	3,200	0.308	*	N-S(2):	0.332 *
	LT	1.00	22	22	1,600	0.014		E-W(1):	0.313 *
Westbound	RT	0.00	43	43	0	0.000		E-W(2):	0.229
	TH	1.00	12	12	1,600	0.056			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.645
Northbound	RT	0.00	14	14	0	0.000		Lost Time:	0.100
	TH	2.00	547	547	3,200	0.175		ITS:	0.000
	LT	1.00	38	38	1,600	0.024	*		
Eastbound	RT	0.00	176	176	0	0.000		ICU:	0.745
	TH	1.00	13	13	1,600	0.291	*		
	LT	0.00	251	277	1,600	0.173		LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	387	1,600	0.167 *	N-S(1):	0.273
	TH	2.00	369	3,200	0.115	N-S(2):	0.465 *
	LT	1.00	128	1,600	0.080	E-W(1):	0.357 *
Westbound	RT	1.00	89	1,600	0.016	E-W(2):	0.000
	TH	1.00	207	1,600	0.184 *		
	LT	0.00	87	1,600	0.054	V/C:	0.822
Northbound	RT	1.00	145	1,600	0.063	Lost Time:	0.100
	TH	2.00	616	3,200	0.193	ITS:	0.000
	LT	1.00	476	1,600	0.298 *		
Eastbound	RT	1.00	57	1,600	0.000	ICU:	0.922
	TH	1.00	37	1,600	0.173 *		
	LT	0.00	239	1,600	0.149	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	513	1,600	0.245 *	N-S(1):	0.138
	TH	2.00	546	3,200	0.171	N-S(2):	0.508 *
	LT	1.00	75	1,600	0.047	E-W(1):	0.311 *
Westbound	RT	1.00	52	1,600	0.009	E-W(2):	0.000
	TH	1.00	104	1,600	0.100 *		
	LT	0.00	56	1,600	0.035	V/C:	0.819
Northbound	RT	1.00	50	1,600	0.014	Lost Time:	0.100
	TH	2.00	290	3,200	0.091	ITS:	0.000
	LT	1.00	421	1,600	0.263 *		
Eastbound	RT	1.00	105	1,600	0.000	ICU:	0.919
	TH	1.00	95	1,600	0.211 *		
	LT	0.00	243	1,600	0.152	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	53	1,600	0.018	N-S(1):	0.441 *
	TH	2.00	898	3,200	0.281	N-S(2):	0.399
	LT	1.00	74	1,600	0.046 *	E-W(1):	0.273
Westbound	RT	0.00	181	0	0.000	E-W(2):	0.352 *
	TH	2.00	853	3,200	0.323 *		
	LT	1.00	244	1,600	0.153	V/C:	0.793
Northbound	RT	1.00	168	1,600	0.029	Lost Time:	0.100
	TH	2.00	1,265	3,200	0.395 *	ITS:	0.000
	LT	1.00	188	1,600	0.118		
Eastbound	RT	1.00	109	1,600	0.009	ICU:	0.893
	TH	2.00	385	3,200	0.120		
	LT	1.00	47	1,600	0.029 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	42	1,600	0.009	N-S(1):	0.397
	TH	2.00	1,357	3,200	0.424 *	N-S(2):	0.485 *
	LT	1.00	203	1,600	0.127	E-W(1):	0.336 *
Westbound	RT	0.00	87	0	0.000	E-W(2):	0.245
	TH	2.00	588	3,200	0.211		
	LT	1.00	76	1,600	0.048 *	V/C:	0.821
Northbound	RT	1.00	164	1,600	0.079	Lost Time:	0.100
	TH	2.00	863	3,200	0.270	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	1.00	189	1,600	0.088	ICU:	0.921
	TH	2.00	923	3,200	0.288 *		
	LT	1.00	54	1,600	0.034	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **17 - Normandie Avenue & 223rd Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	64	0	0.000	N-S(1):	0.316 *
	TH	2.00	360	3,200	0.133	N-S(2):	0.210
	LT	1.00	50	1,600	0.031 *	E-W(1):	0.279
Westbound	RT	0.00	84	0	0.000	E-W(2):	0.397 *
	TH	2.00	1,018	3,200	0.344 *		
	LT	1.00	114	1,600	0.071	V/C:	0.713
Northbound	RT	0.00	108	0	0.000	Lost Time:	0.100
	TH	2.00	803	3,200	0.285 *	ITS:	0.000
	LT	1.00	123	1,600	0.077		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.813
	TH	2.00	601	3,200	0.208		
	LT	1.00	85	1,600	0.053 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	77	0	0.000	N-S(1):	0.223
	TH	2.00	688	3,200	0.239 *	N-S(2):	0.278 *
	LT	1.00	88	1,600	0.055	E-W(1):	0.448 *
Westbound	RT	0.00	86	0	0.000	E-W(2):	0.289
	TH	2.00	698	3,200	0.245		
	LT	1.00	96	1,600	0.060 *	V/C:	0.726
Northbound	RT	0.00	123	0	0.000	Lost Time:	0.100
	TH	2.00	415	3,200	0.168	ITS:	0.000
	LT	1.00	63	1,600	0.039 *		
Eastbound	RT	0.00	105	0	0.000	ICU:	0.826
	TH	2.00	1,137	3,200	0.388 *		
	LT	1.00	71	1,600	0.044	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 18 - Meyler Street & 223rd Street
Description: Existing plus 2023 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	54	54	0	0.000		N-S(1):	0.158 *
	TH	1.00	44	44	1,600	0.101		N-S(2):	0.152
	LT	0.00	57	63	1,600	0.039	*	E-W(1):	0.245
Westbound	RT	0.00	72	72	0	0.000		E-W(2):	0.408 *
	TH	2.00	1,121	1,121	3,200	0.373	*		
	LT	1.00	46	46	1,600	0.029		V/C:	0.566
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	39	39	1,600	0.119	*	ITS:	0.000
	LT	0.00	74	82	1,600	0.051			
Eastbound	RT	0.00	24	24	0	0.000		ICU:	0.666
	TH	2.00	667	667	3,200	0.216			
	LT	1.00	56	56	1,600	0.035	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	38	38	0	0.000		N-S(1):	0.068
	TH	1.00	15	15	1,600	0.051	*	N-S(2):	0.070 *
	LT	0.00	26	29	1,600	0.018		E-W(1):	0.419 *
Westbound	RT	0.00	46	46	0	0.000		E-W(2):	0.305
	TH	2.00	816	816	3,200	0.269			
	LT	1.00	59	59	1,600	0.037	*	V/C:	0.489
Northbound	RT	0.00	35	35	0	0.000		Lost Time:	0.100
	TH	1.00	15	15	1,600	0.050		ITS:	0.000
	LT	0.00	27	30	1,600	0.019	*		
Eastbound	RT	0.00	89	89	0	0.000		ICU:	0.589
	TH	2.00	1,133	1,133	3,200	0.382	*		
	LT	1.00	58	58	1,600	0.036		LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **19 - Vermont Avenue & 223rd Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	89	0	0.000	N-S(1):	0.354 *
	TH	2.00	386	3,200	0.148	N-S(2):	0.235
	LT	1.00	150	1,600	0.094 *	E-W(1):	0.272
Westbound	RT	0.00	328	0	0.000	E-W(2):	0.482 *
	TH	2.00	994	3,200	0.413 *		
	LT	2.00	247	2,880	0.086	V/C:	0.836
Northbound	RT	1.00	130	1,600	0.000	Lost Time:	0.100
	TH	2.00	833	3,200	0.260 *	ITS:	0.000
	LT	1.00	139	1,600	0.087		
Eastbound	RT	1.00	72	1,600	0.000	ICU:	0.936
	TH	2.00	595	3,200	0.186		
	LT	1.00	111	1,600	0.069 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	111	0	0.000	N-S(1):	0.312
	TH	2.00	745	3,200	0.268 *	N-S(2):	0.315 *
	LT	1.00	299	1,600	0.187	E-W(1):	0.423 *
Westbound	RT	0.00	131	0	0.000	E-W(2):	0.309
	TH	2.00	735	3,200	0.271		
	LT	2.00	253	2,880	0.088 *	V/C:	0.738
Northbound	RT	1.00	190	1,600	0.031	Lost Time:	0.100
	TH	2.00	399	3,200	0.125	ITS:	0.000
	LT	1.00	75	1,600	0.047 *		
Eastbound	RT	1.00	118	1,600	0.027	ICU:	0.838
	TH	2.00	1,071	3,200	0.335 *		
	LT	1.00	60	1,600	0.038	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	495	1,600	0.309 *	N-S(1):	0.190
	TH	2.00	1	1,600	0.191	N-S(2):	0.309 *
	LT	0.00	304	1,600	0.190	E-W(1):	0.359 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.334
	TH	2.00	1,070	3,200	0.334		
	LT	1.00	172	1,600	0.108 *	V/C:	0.668
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	1.00	122	1,600	0.076	ICU:	0.768
	TH	2.00	803	3,200	0.251 *		
	LT	0.00	0	0	0.000	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	392	0	0.000	N-S(1):	0.266 *
	TH	2.00	2	1,600	0.246	N-S(2):	0.246
	LT	0.00	426	1,600	0.266 *	E-W(1):	0.486 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.234
	TH	2.00	748	3,200	0.234		
	LT	1.00	120	1,600	0.075 *	V/C:	0.752
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	1.00	212	1,600	0.133	ICU:	0.852
	TH	2.00	1,314	3,200	0.411 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	190	1,600	0.026	N-S(1):	0.255 *
	TH	2.00	260	3,200	0.081	N-S(2):	0.146
	LT	1.00	66	1,600	0.041 *	E-W(1):	0.228
Westbound	RT	1.00	257	1,600	0.140	E-W(2):	0.478 *
	TH	2.00	934	3,200	0.292 *		
	LT	1.00	72	1,600	0.045	V/C:	0.733
Northbound	RT	1.00	149	1,600	0.071	Lost Time:	0.100
	TH	2.00	685	3,200	0.214 *	ITS:	0.000
	LT	1.00	104	1,600	0.065		
Eastbound	RT	1.00	178	1,600	0.079	ICU:	0.833
	TH	2.00	587	3,200	0.183		
	LT	1.00	297	1,600	0.186 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	161	1,600	0.006	N-S(1):	0.200 *
	TH	2.00	405	3,200	0.127	N-S(2):	0.172
	LT	1.00	148	1,600	0.093 *	E-W(1):	0.422 *
Westbound	RT	1.00	130	1,600	0.035	E-W(2):	0.382
	TH	2.00	618	3,200	0.193		
	LT	1.00	74	1,600	0.046 *	V/C:	0.622
Northbound	RT	1.00	110	1,600	0.046	Lost Time:	0.100
	TH	2.00	343	3,200	0.107 *	ITS:	0.000
	LT	1.00	72	1,600	0.045		
Eastbound	RT	1.00	210	1,600	0.109	ICU:	0.722
	TH	2.00	1,204	3,200	0.376 *		
	LT	1.00	302	1,600	0.189	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Existing plus 2023 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	267	1,600	0.095	N-S(1):	0.353
	TH	2.00	874	3,200	0.273 *	N-S(2):	0.360 *
	LT	1.00	76	1,600	0.048	E-W(1):	0.468
Westbound	RT	0.00	96	0	0.000	E-W(2):	0.497 *
	TH	3.00	1,602	4,800	0.354 *		
	LT	1.00	304	1,600	0.190	V/C:	0.857
Northbound	RT	1.00	297	1,600	0.091	Lost Time:	0.100
	TH	2.00	975	3,200	0.305	ITS:	0.000
	LT	1.00	139	1,600	0.087 *		
Eastbound	RT	0.00	72	0	0.000	ICU:	0.957
	TH	3.00	1,261	4,800	0.278		
	LT	1.00	229	1,600	0.143 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	133	1,600	0.018	N-S(1):	0.358
	TH	2.00	963	3,200	0.301 *	N-S(2):	0.415 *
	LT	1.00	174	1,600	0.109	E-W(1):	0.497 *
Westbound	RT	0.00	139	0	0.000	E-W(2):	0.447
	TH	3.00	1,380	4,800	0.316		
	LT	1.00	309	1,600	0.193 *	V/C:	0.912
Northbound	RT	1.00	321	1,600	0.104	Lost Time:	0.100
	TH	2.00	796	3,200	0.249	ITS:	0.000
	LT	1.00	182	1,600	0.114 *		
Eastbound	RT	0.00	120	0	0.000	ICU:	1.012
	TH	3.00	1,338	4,800	0.304 *		
	LT	1.00	210	1,600	0.131	LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	154	1	154	98	1	**98**
	Left-Through		0			0	
	Through	740	1	**444**	547	1	349
	Through-Right		1			1	
	Right	147	0	147	150	0	150
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	32	1	**32**	130	1	130
	Left-Through		0			0	
	Through	400	1	251	733	1	**443**
	Through-Right		1			1	
	Right	101	0	101	152	0	152
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	95	1	**95**	106	1	106
	Left-Through		0			0	
	Through	915	1	498	1373	1	**743**
	Through-Right		1			1	
	Right	80	0	80	112	0	112
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	104	1	104	58	1	**58**
	Left-Through		0			0	
	Through	1461	1	**768**	963	1	503
	Through-Right		1			1	
	Right	74	0	74	43	0	43
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	476		North-South:	541
			East-West:	863		East-West:	801
			SUM:	1339		SUM:	1342
VOLUME/CAPACITY (V/C) RATIO:				0.974			0.976
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.904**			**0.906**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
3	North-South Street:	Western Avenue	East-West Street:	Carson Street
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	150	1	150	152	1	**152**
	Left-Through		0			0	
	Through	1124	2	**562**	798	2	399
	Through-Right		0			0	
	Right	83	1	50	116	1	81
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	93	1	**93**	154	1	154
	Left-Through		0			0	
	Through	715	2	358	1296	2	**648**
	Through-Right		0			0	
	Right	133	1	104	220	1	178
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	58	1	**58**	84	1	84
	Left-Through		0			0	
	Through	752	1	429	981	1	**582**
	Through-Right		1			1	
	Right	105	0	105	183	0	183
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	66	1	66	70	1	**70**
	Left-Through		0			0	
	Through	1122	1	**638**	918	1	522
	Through-Right		1			1	
	Right	154	0	154	126	0	126
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	655		*North-South:*	800
			East-West:	696		*East-West:*	652
			SUM:	1351		*SUM:*	1452
VOLUME/CAPACITY *(V/C)* RATIO:				0.948			1.019
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.878**			**0.949**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

	AM			PM		
No. of Phases			2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1			1
Override Capacity			0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	210	1	**210**	178	1	**178**
	Left-Through		0			0	
	Through	663	2	332	504	2	252
	Through-Right		0			0	
	Right	76	1	0	117	1	39
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	39	1	39	93	1	93
	Left-Through		0			0	
	Through	375	1	**261**	520	1	**341**
	Through-Right		1			1	
	Right	147	0	147	162	0	162
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	194	1	**194**	199	1	199
	Left-Through		0			0	
	Through	890	2	445	1168	2	**584**
	Through-Right		0			0	
	Right	192	1	87	164	1	75
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	167	1	167	156	1	**156**
	Left-Through		0			0	
	Through	1187	2	**594**	1023	2	512
	Through-Right		0			0	
	Right	76	1	57	79	1	33
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	471		North-South:	519
			East-West:	788		East-West:	740
			SUM:	1259		SUM:	1259
VOLUME/CAPACITY (V/C) RATIO:				0.839			0.916
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.769**			**0.846**
LEVEL OF SERVICE (LOS):				**C**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	116	58	1	**58**
	Left-Through		0			0	
	Through	1348	1	**690**	921	1	472
	Through-Right		1			1	
	Right	31	0	31	23	0	23
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	18	1	**18**	31	1	31
	Left-Through		0			0	
	Through	876	1	472	1446	1	**732**
	Through-Right		1			1	
	Right	68	0	68	17	0	17
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	18	0	**18**	56	0	56
	Left-Through		0			0	
	Through	23	0	96	97	0	**315**
	Through-Right		0			0	
	Right	55	0	0	162	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	104	0	104	47	0	**47**
	Left-Through		0			0	
	Through	77	0	**218**	39	0	110
	Through-Right		0			0	
	Right	37	0	0	24	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	708		North-South:	790
			East-West:	236		East-West:	362
			SUM:	944		SUM:	1152
VOLUME/CAPACITY (V/C) RATIO:				0.629			0.768
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.559**			**0.698**
LEVEL OF SERVICE (LOS):				**A**			**B**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>				
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street		
	Scenario:	Existing plus 2023 Project				
	Count Date:	1/0/1900	Analyst:	<Fehr & Peers>	Date:	<date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	25	1	25	23	1	**23**
	Left-Through		0			0	
	Through	849	1	**484**	501	1	271
	Through-Right		1			1	
	Right	118	0	118	41	0	41
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	78	1	**78**	76	1	76
	Left-Through		0			0	
	Through	385	1	206	767	1	**402**
	Through-Right		1			1	
	Right	26	0	26	36	0	36
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	30	0	30	20	0	20
	Left-Through		1			1	
	Through	105	0	**135**	62	0	**82**
	Through-Right		0			0	
	Right	42	1	30	50	1	39
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	46	0	**46**	44	0	**44**
	Left-Through		1			1	
	Through	77	0	123	40	0	84
	Through-Right		0			0	
	Right	102	1	63	93	1	55
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	562		North-South:	425
			East-West:	181		East-West:	126
			SUM:	743		SUM:	551
VOLUME/CAPACITY (V/C) RATIO:				0.495			0.367
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.425**			**0.297**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	188	1	188	98	1	**98**
	Left-Through		0			0	
	Through	1265	2	**633**	863	2	432
	Through-Right		0			0	
	Right	168	1	46	164	1	126
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	74	1	**74**	203	1	203
	Left-Through		0			0	
	Through	898	2	449	1357	2	**679**
	Through-Right		0			0	
	Right	53	1	30	42	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	47	1	**47**	54	1	54
	Left-Through		0			0	
	Through	385	2	193	923	2	**462**
	Through-Right		0			0	
	Right	109	1	15	189	1	140
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	244	1	244	76	1	**76**
	Left-Through		0			0	
	Through	853	1	**517**	588	1	338
	Through-Right		1			1	
	Right	181	0	181	87	0	87
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	707		North-South:	777
			East-West:	564		East-West:	538
			SUM:	1271		SUM:	1315
VOLUME/CAPACITY (V/C) RATIO:				0.892			0.923
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.822**			**0.853**
LEVEL OF SERVICE (LOS):				**D**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM				PM			
No. of Phases					2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB--		0	NB-- 0	SB--		0
		EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?					1				1
Override Capacity					0				0
	MOVEMENT	Volume	No. of Lanes	Lane Volume		Volume	No. of Lanes	Lane Volume	
NORTHBOUND	Left	123	1	123		63	1	**63**	
	Left-Through		0				0		
	Through	803	2	**402**		415	2	208	
	Through-Right		0				0		
	Right	108	1	51		123	1	75	
	Left-Through-Right		0				0		
	Left-Right		0				0		
SOUTHBOUND	Left	50	1	**50**		88	1	88	
	Left-Through		0				0		
	Through	360	1	212		688	1	**383**	
	Through-Right		1				1		
	Right	64	0	64		77	0	77	
	Left-Through-Right		0				0		
	Left-Right		0				0		
EASTBOUND	Left	85	1	**85**		71	1	71	
	Left-Through		0				0		
	Through	601	1	333		1137	1	**621**	
	Through-Right		1				1		
	Right	64	0	64		105	0	105	
	Left-Through-Right		0				0		
	Left-Right		0				0		
WESTBOUND	Left	114	1	114		96	1	**96**	
	Left-Through		0				0		
	Through	1018	2	**509**		698	2	349	
	Through-Right		0				0		
	Right	84	1	59		86	1	42	
	Left-Through-Right		0				0		
	Left-Right		0				0		
CRITICAL VOLUMES			North-South:	452			North-South:	446	
			East-West:	594			East-West:	717	
			SUM:	1046			SUM:	1163	
VOLUME/CAPACITY (V/C) RATIO:				0.697				0.775	
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.627**				**0.705**	
LEVEL OF SERVICE (LOS):				**B**				**C**	

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Existing plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM				PM			
No. of Phases					4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB--		0	NB-- 0	SB--		0
		EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?					1				1
Override Capacity					0				0
MOVEMENT		Volume	No. of Lanes	Lane Volume		Volume	No. of Lanes	Lane Volume	
NORTHBOUND	Left	139	1	**139**		182	1	**182**	
	Left-Through		0				0		
	Through	975	2	488		796	2	398	
	Through-Right		0				0		
	Right	297	1	145		321	1	167	
	Left-Through-Right		0				0		
	Left-Right		0				0		
SOUTHBOUND	Left	76	1	76		174	1	174	
	Left-Through		0				0		
	Through	874	2	**437**		963	2	**482**	
	Through-Right		0				0		
	Right	267	1	153		133	1	28	
	Left-Through-Right		0				0		
	Left-Right		0				0		
EASTBOUND	Left	229	1	**229**		210	1	210	
	Left-Through		0				0		
	Through	1261	2	444		1338	2	**486**	
	Through-Right		1				1		
	Right	72	0	72		120	0	120	
	Left-Through-Right		0				0		
	Left-Right		0				0		
WESTBOUND	Left	304	1	304		309	1	**309**	
	Left-Through		0				0		
	Through	1602	2	**566**		1380	2	506	
	Through-Right		1				1		
	Right	96	0	96		139	0	139	
	Left-Through-Right		0				0		
	Left-Right		0				0		
CRITICAL VOLUMES			*North-South:*	576			*North-South:*	664	
			East-West:	795			*East-West:*	795	
			SUM:	1371			*SUM:*	1459	
VOLUME/CAPACITY *(V/C)* RATIO:				0.997				1.061	
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.927**				**0.991**	
LEVEL OF SERVICE (LOS):				**E**				**E**	

Version: 1i Beta; 8/4/2011

EXISTING PLUS 2030 PROJECT

Project Title: **Harbor-UCLA Medical Center**
Intersection: **1 - Normandie Avenue & Torrance Bloulevard**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	101	0	0.000	N-S(1):	0.300 *
	TH	2.00	441	3,200	0.169	N-S(2):	0.265
	LT	1.00	32	1,600	0.020 *	E-W(1):	0.379
Westbound	RT	0.00	74	0	0.000	E-W(2):	0.539 *
	TH	2.00	1,461	3,200	0.480 *		
	LT	1.00	106	1,600	0.066	V/C:	0.839
Northbound	RT	0.00	148	0	0.000	Lost Time:	0.100
	TH	2.00	747	3,200	0.280 *	ITS:	0.000
	LT	1.00	154	1,600	0.096		
Eastbound	RT	0.00	86	0	0.000	ICU:	0.939
	TH	2.00	915	3,200	0.313		
	LT	1.00	95	1,600	0.059 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	152	0	0.000	N-S(1):	0.312
	TH	2.00	747	3,200	0.281 *	N-S(2):	0.342 *
	LT	1.00	130	1,600	0.081	E-W(1):	0.502 *
Westbound	RT	0.00	43	0	0.000	E-W(2):	0.380
	TH	2.00	963	3,200	0.314		
	LT	1.00	59	1,600	0.037 *	V/C:	0.844
Northbound	RT	0.00	152	0	0.000	Lost Time:	0.100
	TH	2.00	588	3,200	0.231	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	0.00	114	0	0.000	ICU:	0.944
	TH	2.00	1,373	3,200	0.465 *		
	LT	1.00	106	1,600	0.066	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **2 - Vermont Avenue & Torrance Bloulevard**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	187	1,600	0.009	N-S(1):	0.280 *
	TH	2.00	608	3,200	0.190	N-S(2):	0.266
	LT	1.00	37	1,600	0.023 *	E-W(1):	0.375
Westbound	RT	0.00	111	0	0.000	E-W(2):	0.550 *
	TH	2.00	1,304	3,200	0.442 *		
	LT	1.00	93	1,600	0.058	V/C:	0.830
Northbound	RT	1.00	182	1,600	0.056	Lost Time:	0.100
	TH	2.00	821	3,200	0.257 *	ITS:	0.000
	LT	1.00	122	1,600	0.076		
Eastbound	RT	0.00	147	0	0.000	ICU:	0.930
	TH	2.00	866	3,200	0.317		
	LT	1.00	172	1,600	0.108 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	230	1,600	0.039	N-S(1):	0.235
	TH	2.00	876	3,200	0.274 *	N-S(2):	0.323 *
	LT	1.00	112	1,600	0.070	E-W(1):	0.463 *
Westbound	RT	0.00	89	0	0.000	E-W(2):	0.348
	TH	2.00	689	3,200	0.243		
	LT	1.00	62	1,600	0.039 *	V/C:	0.786
Northbound	RT	1.00	123	1,600	0.038	Lost Time:	0.100
	TH	2.00	528	3,200	0.165	ITS:	0.000
	LT	1.00	78	1,600	0.049 *		
Eastbound	RT	0.00	96	0	0.000	ICU:	0.886
	TH	2.00	1,260	3,200	0.424 *		
	LT	1.00	168	1,600	0.105	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	133	1,600	0.065	N-S(1):	0.411 *
	TH	2.00	725	3,200	0.227	N-S(2):	0.321
	LT	1.00	94	1,600	0.059 *	E-W(1):	0.314
Westbound	RT	0.00	156	0	0.000	E-W(2):	0.437 *
	TH	2.00	1,127	3,200	0.401 *		
	LT	1.00	66	1,600	0.041	V/C:	0.848
Northbound	RT	1.00	83	1,600	0.031	Lost Time:	0.100
	TH	2.00	1,126	3,200	0.352 *	ITS:	0.000
	LT	1.00	151	1,600	0.094		
Eastbound	RT	0.00	108	0	0.000	ICU:	0.948
	TH	2.00	766	3,200	0.273		
	LT	1.00	58	1,600	0.036 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	220	1,600	0.111	N-S(1):	0.349
	TH	2.00	1,300	3,200	0.406 *	N-S(2):	0.502 *
	LT	1.00	154	1,600	0.096	E-W(1):	0.410 *
Westbound	RT	0.00	136	0	0.000	E-W(2):	0.388
	TH	2.00	936	3,200	0.335		
	LT	1.00	70	1,600	0.044 *	V/C:	0.912
Northbound	RT	1.00	116	1,600	0.051	Lost Time:	0.100
	TH	2.00	809	3,200	0.253	ITS:	0.000
	LT	1.00	154	1,600	0.096 *		
Eastbound	RT	0.00	185	0	0.000	ICU:	1.012
	TH	2.00	987	3,200	0.366 *		
	LT	1.00	84	1,600	0.053	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **4 - Normandie Avenue & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	147	0	0.000	N-S(1):	0.268
	TH	2.00	411	3,200	0.174 *	N-S(2):	0.308 *
	LT	1.00	51	1,600	0.032	E-W(1):	0.457
Westbound	RT	0.00	77	0	0.000	E-W(2):	0.517 *
	TH	2.00	1,189	3,200	0.396 *		
	LT	1.00	182	1,600	0.114	V/C:	0.825
Northbound	RT	0.00	85	0	0.000	Lost Time:	0.100
	TH	2.00	669	3,200	0.236	ITS:	0.000
	LT	1.00	215	1,600	0.134 *		
Eastbound	RT	0.00	201	0	0.000	ICU:	0.925
	TH	2.00	895	3,200	0.343		
	LT	1.00	194	1,600	0.121 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	162	0	0.000	N-S(1):	0.277
	TH	2.00	534	3,200	0.218 *	N-S(2):	0.341 *
	LT	1.00	98	1,600	0.061	E-W(1):	0.521 *
Westbound	RT	0.00	87	0	0.000	E-W(2):	0.474
	TH	2.00	1,034	3,200	0.350		
	LT	1.00	165	1,600	0.103 *	V/C:	0.862
Northbound	RT	0.00	150	0	0.000	Lost Time:	0.100
	TH	2.00	540	3,200	0.216	ITS:	0.000
	LT	1.00	196	1,600	0.123 *		
Eastbound	RT	0.00	168	0	0.000	ICU:	0.962
	TH	2.00	1,171	3,200	0.418 *		
	LT	1.00	199	1,600	0.124	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **5 - Budlong Avenue & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.011
	TH	1.00	0	1,600	0.032 *	N-S(2):	0.032 *
	LT	0.00	17	1,600	0.011	E-W(1):	0.337
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.504 *
	TH	2.00	1,567	3,200	0.495 *		
	LT	0.00	0	0	0.000	V/C:	0.536
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.636
	TH	2.00	1,079	3,200	0.337		
	LT	1.00	15	1,600	0.009 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	35	0	0.000	N-S(1):	0.013
	TH	1.00	0	1,600	0.034 *	N-S(2):	0.034 *
	LT	0.00	20	1,600	0.013	E-W(1):	0.457 *
Westbound	RT	0.00	27	0	0.000	E-W(2):	0.432
	TH	2.00	1,304	3,200	0.416		
	LT	0.00	0	0	0.000 *	V/C:	0.491
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.591
	TH	2.00	1,462	3,200	0.457 *		
	LT	1.00	25	1,600	0.016	LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **6 - Berendo Avenue & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	36	0	0.000	N-S(1):	0.009
	TH	1.00	1	1,600	0.023 *	N-S(2):	0.036 *
	LT	1.00	13	1,600	0.008	E-W(1):	0.466
Westbound	RT	0.00	33	0	0.000	E-W(2):	0.506 *
	TH	2.00	1,551	3,200	0.495 *		
	LT	1.00	216	1,600	0.135	V/C:	0.542
Northbound	RT	1.00	68	1,600	0.000	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	20	1,600	0.013 *		
Eastbound	RT	0.00	49	0	0.000	ICU:	0.642
	TH	2.00	1,009	3,200	0.331		
	LT	1.00	17	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.097 *
	TH	1.00	4	1,600	0.024	N-S(2):	0.036
	LT	1.00	24	1,600	0.015 *	E-W(1):	0.491 *
Westbound	RT	0.00	45	0	0.000	E-W(2):	0.431
	TH	2.00	1,279	3,200	0.414		
	LT	1.00	63	1,600	0.039 *	V/C:	0.588
Northbound	RT	1.00	194	1,600	0.082 *	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	19	1,600	0.012		
Eastbound	RT	0.00	25	0	0.000	ICU:	0.688
	TH	2.00	1,421	3,200	0.452 *		
	LT	1.00	27	1,600	0.017	LOS:	B

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 7 - Medical Center Drive & Carson Street
Description: Existing plus 2030 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.40	34	34	648	0.044		N-S(1):	0.053 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.044
	LT	0.60	45	50	952	0.053	*	E-W(1):	0.339
Westbound	RT	0.00	10	10	0	0.000		E-W(2):	0.568 *
	TH	2.00	1,783	1,783	3,200	0.560	*		
	LT	0.00	0	0	0	0.000		V/C:	0.621
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000	*	ITS:	0.000
	LT	0.00	0	0	0	0.000			
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.721
	TH	2.00	1,084	1,084	3,200	0.339			
	LT	1.00	13	13	1,600	0.008	*	LOS:	C

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.55	17	17	877	0.004		N-S(1):	0.019 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.004
	LT	0.45	12	14	723	0.019	*	E-W(1):	0.502 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.454
	TH	2.00	1,381	1,381	3,200	0.439			
	LT	0.00	0	0	0	0.000	*	V/C:	0.521
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000	*	ITS:	0.000
	LT	0.00	0	0	0	0.000			
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.621
	TH	2.00	1,606	1,606	3,200	0.502	*		
	LT	1.00	24	24	1,600	0.015		LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **8 - Vermont Avenue & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	230	1,600	0.064	N-S(1):	0.337 *
	TH	2.00	513	3,200	0.160	N-S(2):	0.268
	LT	1.00	124	1,600	0.078 *	E-W(1):	0.481
Westbound	RT	1.00	132	1,600	0.005	E-W(2):	0.509 *
	TH	2.00	1,377	3,200	0.430 *		
	LT	1.00	312	1,600	0.195	V/C:	0.846
Northbound	RT	1.00	234	1,600	0.000	Lost Time:	0.100
	TH	2.00	829	3,200	0.259 *	ITS:	0.000
	LT	1.00	172	1,600	0.108		
Eastbound	RT	1.00	87	1,600	0.000	ICU:	0.946
	TH	2.00	914	3,200	0.286		
	LT	1.00	127	1,600	0.079 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	185	1,600	0.033	N-S(1):	0.316
	TH	2.00	748	3,200	0.234 *	N-S(2):	0.321 *
	LT	1.00	272	1,600	0.170	E-W(1):	0.541 *
Westbound	RT	1.00	163	1,600	0.000	E-W(2):	0.415
	TH	2.00	1,063	3,200	0.332		
	LT	1.00	170	1,600	0.106 *	V/C:	0.862
Northbound	RT	1.00	403	1,600	0.146	Lost Time:	0.100
	TH	2.00	443	3,200	0.138	ITS:	0.000
	LT	1.00	139	1,600	0.087 *		
Eastbound	RT	1.00	128	1,600	0.000	ICU:	0.962
	TH	2.00	1,392	3,200	0.435 *		
	LT	1.00	132	1,600	0.083	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	650	1,600	0.406 *	N-S(1):	0.083
	TH	0.00	0	0	0.000	N-S(2):	0.406 *
	LT	1.00	132	1,600	0.083	E-W(1):	0.369
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.401 *
	TH	2.00	1,282	3,200	0.401 *		
	LT	1.00	174	1,600	0.109	V/C:	0.807
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	137	0	0.000	ICU:	0.907
	TH	3.00	1,113	4,800	0.260		
	LT	0.00	0	0	0.000 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	435	1,600	0.272 *	N-S(1):	0.164
	TH	0.00	0	0	0.000	N-S(2):	0.272 *
	LT	1.00	263	1,600	0.164	E-W(1):	0.544 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.315
	TH	2.00	1,007	3,200	0.315		
	LT	1.00	178	1,600	0.111 *	V/C:	0.816
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	290	0	0.000	ICU:	0.916
	TH	3.00	1,790	4,800	0.433 *		
	LT	0.00	0	0	0.000	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	163	1,600	0.066	N-S(1):	0.168
	TH	2.00	267	3,200	0.083 *	N-S(2):	0.201 *
	LT	2.00	38	2,560	0.015	E-W(1):	0.263
Westbound	RT	1.00	98	1,600	0.054	E-W(2):	0.384 *
	TH	2.00	997	3,200	0.312 *		
	LT	1.00	95	1,600	0.059	V/C:	0.585
Northbound	RT	1.00	171	1,600	0.077	Lost Time:	0.100
	TH	2.00	490	3,200	0.153	ITS:	0.000
	LT	2.00	302	2,560	0.118 *		
Eastbound	RT	1.00	476	1,600	0.180	ICU:	0.685
	TH	2.00	654	3,200	0.204		
	LT	1.00	115	1,600	0.072 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	166	1,600	0.067	N-S(1):	0.126
	TH	2.00	471	3,200	0.147 *	N-S(2):	0.231 *
	LT	2.00	131	2,560	0.051	E-W(1):	0.448 *
Westbound	RT	1.00	70	1,600	0.018	E-W(2):	0.327
	TH	2.00	809	3,200	0.253		
	LT	1.00	103	1,600	0.064 *	V/C:	0.679
Northbound	RT	1.00	138	1,600	0.054	Lost Time:	0.100
	TH	2.00	241	3,200	0.075	ITS:	0.000
	LT	2.00	214	2,560	0.084 *		
Eastbound	RT	1.00	698	1,600	0.353	ICU:	0.779
	TH	2.00	1,228	3,200	0.384 *		
	LT	1.00	118	1,600	0.074	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	68	0	0.000	N-S(1):	0.450 *
	TH	2.00	876	3,200	0.295	N-S(2):	0.368
	LT	1.00	31	1,600	0.019 *	E-W(1):	0.125
Westbound	RT	0.00	40	0	0.000	E-W(2):	0.149 *
	TH	1.00	77	1,600	0.138 *		
	LT	0.00	104	1,600	0.065	V/C:	0.599
Northbound	RT	0.00	32	0	0.000	Lost Time:	0.100
	TH	2.00	1,348	3,200	0.431 *	ITS:	0.000
	LT	1.00	116	1,600	0.073		
Eastbound	RT	0.00	55	0	0.000	ICU:	0.699
	TH	1.00	23	1,600	0.060		
	LT	0.00	18	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	17	0	0.000	N-S(1):	0.318
	TH	2.00	1,446	3,200	0.457 *	N-S(2):	0.493 *
	LT	1.00	37	1,600	0.023	E-W(1):	0.227 *
Westbound	RT	0.00	38	0	0.000	E-W(2):	0.113
	TH	1.00	39	1,600	0.078		
	LT	0.00	48	1,600	0.030 *	V/C:	0.720
Northbound	RT	0.00	23	0	0.000	Lost Time:	0.100
	TH	2.00	921	3,200	0.295	ITS:	0.000
	LT	1.00	58	1,600	0.036 *		
Eastbound	RT	0.00	162	0	0.000	ICU:	0.820
	TH	1.00	97	1,600	0.197 *		
	LT	0.00	56	1,600	0.035	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 12 - Normandie Avenue & 220th Street
Description: Existing plus 2030 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	26	26	0	0.000		N-S(1):	0.374 *
	TH	2.00	390	390	3,200	0.130		N-S(2):	0.146
	LT	1.00	97	97	1,600	0.061	*	E-W(1):	0.154
Westbound	RT	0.00	106	106	0	0.000		E-W(2):	0.171 *
	TH	1.00	80	80	1,600	0.148	*		
	LT	0.00	46	51	1,600	0.032		V/C:	0.545
Northbound	RT	0.00	120	120	0	0.000		Lost Time:	0.100
	TH	2.00	880	880	3,200	0.313	*	ITS:	0.000
	LT	1.00	25	25	1,600	0.016			
Eastbound	RT	0.00	42	42	0	0.000		ICU:	0.645
	TH	1.00	116	116	1,600	0.122			
	LT	0.00	33	37	1,600	0.023	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	37	37	0	0.000		N-S(1):	0.225
	TH	2.00	785	785	3,200	0.257	*	N-S(2):	0.271 *
	LT	1.00	83	83	1,600	0.052		E-W(1):	0.119
Westbound	RT	0.00	115	115	0	0.000		E-W(2):	0.152 *
	TH	1.00	54	54	1,600	0.137	*		
	LT	0.00	45	50	1,600	0.031		V/C:	0.423
Northbound	RT	0.00	42	42	0	0.000		Lost Time:	0.100
	TH	2.00	513	513	3,200	0.173		ITS:	0.000
	LT	1.00	23	23	1,600	0.014	*		
Eastbound	RT	0.00	50	50	0	0.000		ICU:	0.523
	TH	1.00	67	67	1,600	0.088			
	LT	0.00	21	24	1,600	0.015	*	LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 13 - Meyler Street & 220th Street
Description: Existing plus 2030 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	4	4	0	0.000		N-S(1):	0.140 *
	TH	1.00	6	6	1,600	0.015		N-S(2):	0.081
	LT	0.00	12	14	1,600	0.009	*	E-W(1):	0.198 *
Westbound	RT	0.00	32	32	0	0.000		E-W(2):	0.171
	TH	1.00	150	150	1,600	0.158			
	LT	0.00	63	70	1,600	0.044	*	V/C:	0.338
Northbound	RT	0.00	74	74	0	0.000		Lost Time:	0.100
	TH	1.00	30	30	1,600	0.131	*	ITS:	0.000
	LT	0.00	96	106	1,600	0.066			
Eastbound	RT	0.00	51	51	0	0.000		ICU:	0.438
	TH	1.00	174	174	1,600	0.154	*		
	LT	0.00	19	21	1,600	0.013		LOS:	A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	22	22	0	0.000		N-S(1):	0.087 *
	TH	1.00	32	32	1,600	0.064		N-S(2):	0.073
	LT	0.00	43	48	1,600	0.030	*	E-W(1):	0.210 *
Westbound	RT	0.00	7	7	0	0.000		E-W(2):	0.115
	TH	1.00	130	130	1,600	0.108			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.297
Northbound	RT	0.00	68	68	0	0.000		Lost Time:	0.100
	TH	1.00	8	8	1,600	0.057	*	ITS:	0.000
	LT	0.00	13	15	1,600	0.009			
Eastbound	RT	0.00	33	33	0	0.000		ICU:	0.397
	TH	1.00	257	257	1,600	0.188	*		
	LT	0.00	10	11	1,600	0.007		LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 14 - Vermont Avenue & 220th Street
Description: Existing plus 2030 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	307	307	0	0.000		N-S(1):	0.377
	TH	2.00	507	507	3,200	0.254	*	N-S(2):	0.413 *
	LT	1.00	56	56	1,600	0.035		E-W(1):	0.207 *
Westbound	RT	0.00	37	37	0	0.000		E-W(2):	0.163
	TH	1.00	27	27	1,600	0.052			
	LT	0.00	17	19	1,600	0.012	*	V/C:	0.620
Northbound	RT	0.00	40	40	0	0.000		Lost Time:	0.100
	TH	2.00	1,055	1,055	3,200	0.342		ITS:	0.000
	LT	1.00	255	255	1,600	0.159	*		
Eastbound	RT	0.00	102	102	0	0.000		ICU:	0.720
	TH	1.00	32	32	1,600	0.195	*		
	LT	0.00	161	178	1,600	0.111		LOS:	C

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	83	83	0	0.000		N-S(1):	0.192
	TH	2.00	947	947	3,200	0.322	*	N-S(2):	0.356 *
	LT	1.00	22	22	1,600	0.014		E-W(1):	0.371 *
Westbound	RT	0.00	43	43	0	0.000		E-W(2):	0.257
	TH	1.00	12	12	1,600	0.056			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.727
Northbound	RT	0.00	14	14	0	0.000		Lost Time:	0.100
	TH	2.00	556	556	3,200	0.178		ITS:	0.000
	LT	1.00	54	54	1,600	0.034	*		
Eastbound	RT	0.00	225	225	0	0.000		ICU:	0.827
	TH	1.00	13	13	1,600	0.349	*		
	LT	0.00	291	321	1,600	0.201		LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	406	1,600	0.175 *	N-S(1):	0.273
	TH	2.00	375	3,200	0.117	N-S(2):	0.477 *
	LT	1.00	128	1,600	0.080	E-W(1):	0.365 *
Westbound	RT	1.00	89	1,600	0.016	E-W(2):	0.000
	TH	1.00	207	1,600	0.184 *		
	LT	0.00	87	1,600	0.054	V/C:	0.842
Northbound	RT	1.00	145	1,600	0.063	Lost Time:	0.100
	TH	2.00	618	3,200	0.193	ITS:	0.000
	LT	1.00	483	1,600	0.302 *		
Eastbound	RT	1.00	80	1,600	0.000	ICU:	0.942
	TH	1.00	37	1,600	0.181 *		
	LT	0.00	252	1,600	0.158	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	606	1,600	0.301 *	N-S(1):	0.140
	TH	2.00	549	3,200	0.172	N-S(2):	0.586 *
	LT	1.00	75	1,600	0.047	E-W(1):	0.314 *
Westbound	RT	1.00	52	1,600	0.009	E-W(2):	0.000
	TH	1.00	104	1,600	0.100 *		
	LT	0.00	56	1,600	0.035	V/C:	0.900
Northbound	RT	1.00	50	1,600	0.014	Lost Time:	0.100
	TH	2.00	298	3,200	0.093	ITS:	0.000
	LT	1.00	456	1,600	0.285 *		
Eastbound	RT	1.00	114	1,600	0.000	ICU:	1.000
	TH	1.00	95	1,600	0.214 *		
	LT	0.00	248	1,600	0.155	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	53	1,600	0.018	N-S(1):	0.442 *
	TH	2.00	898	3,200	0.281	N-S(2):	0.399
	LT	1.00	74	1,600	0.046 *	E-W(1):	0.274
Westbound	RT	0.00	181	0	0.000	E-W(2):	0.352 *
	TH	2.00	854	3,200	0.323 *		
	LT	1.00	245	1,600	0.153	V/C:	0.794
Northbound	RT	1.00	170	1,600	0.030	Lost Time:	0.100
	TH	2.00	1,266	3,200	0.396 *	ITS:	0.000
	LT	1.00	188	1,600	0.118		
Eastbound	RT	1.00	109	1,600	0.009	ICU:	0.894
	TH	2.00	388	3,200	0.121		
	LT	1.00	47	1,600	0.029 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	42	1,600	0.009	N-S(1):	0.397
	TH	2.00	1,358	3,200	0.424 *	N-S(2):	0.485 *
	LT	1.00	203	1,600	0.127	E-W(1):	0.338 *
Westbound	RT	0.00	87	0	0.000	E-W(2):	0.246
	TH	2.00	592	3,200	0.212		
	LT	1.00	79	1,600	0.049 *	V/C:	0.823
Northbound	RT	1.00	166	1,600	0.079	Lost Time:	0.100
	TH	2.00	863	3,200	0.270	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	1.00	189	1,600	0.088	ICU:	0.923
	TH	2.00	925	3,200	0.289 *		
	LT	1.00	54	1,600	0.034	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **17 - Normandie Avenue & 223rd Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	65	0	0.000	N-S(1):	0.321 *
	TH	2.00	362	3,200	0.133	N-S(2):	0.210
	LT	1.00	51	1,600	0.032 *	E-W(1):	0.281
Westbound	RT	0.00	104	0	0.000	E-W(2):	0.407 *
	TH	2.00	1,019	3,200	0.351 *		
	LT	1.00	116	1,600	0.073	V/C:	0.728
Northbound	RT	0.00	113	0	0.000	Lost Time:	0.100
	TH	2.00	812	3,200	0.289 *	ITS:	0.000
	LT	1.00	123	1,600	0.077		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.828
	TH	2.00	603	3,200	0.208		
	LT	1.00	89	1,600	0.056 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	81	0	0.000	N-S(1):	0.229
	TH	2.00	697	3,200	0.243 *	N-S(2):	0.282 *
	LT	1.00	94	1,600	0.059	E-W(1):	0.452 *
Westbound	RT	0.00	94	0	0.000	E-W(2):	0.294
	TH	2.00	701	3,200	0.248		
	LT	1.00	103	1,600	0.064 *	V/C:	0.734
Northbound	RT	0.00	126	0	0.000	Lost Time:	0.100
	TH	2.00	418	3,200	0.170	ITS:	0.000
	LT	1.00	63	1,600	0.039 *		
Eastbound	RT	0.00	105	0	0.000	ICU:	0.834
	TH	2.00	1,138	3,200	0.388 *		
	LT	1.00	74	1,600	0.046	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 18 - Meyler Street & 223rd Street
Description: Existing plus 2030 Project

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	57	57	0	0.000		N-S(1):	0.160 *
	TH	1.00	44	44	1,600	0.104		N-S(2):	0.155
	LT	0.00	60	66	1,600	0.041	*	E-W(1):	0.245
Westbound	RT	0.00	88	88	0	0.000		E-W(2):	0.423 *
	TH	2.00	1,142	1,142	3,200	0.384	*		
	LT	1.00	46	46	1,600	0.029		V/C:	0.583
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	39	39	1,600	0.119	*	ITS:	0.000
	LT	0.00	74	82	1,600	0.051			
Eastbound	RT	0.00	24	24	0	0.000		ICU:	0.683
	TH	2.00	668	668	3,200	0.216			
	LT	1.00	62	62	1,600	0.039	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	47	47	0	0.000		N-S(1):	0.081
	TH	1.00	15	15	1,600	0.069	*	N-S(2):	0.088 *
	LT	0.00	44	49	1,600	0.031		E-W(1):	0.421 *
Westbound	RT	0.00	51	51	0	0.000		E-W(2):	0.313
	TH	2.00	825	825	3,200	0.274			
	LT	1.00	59	59	1,600	0.037	*	V/C:	0.509
Northbound	RT	0.00	35	35	0	0.000		Lost Time:	0.100
	TH	1.00	15	15	1,600	0.050		ITS:	0.000
	LT	0.00	27	30	1,600	0.019	*		
Eastbound	RT	0.00	89	89	0	0.000		ICU:	0.609
	TH	2.00	1,139	1,139	3,200	0.384	*		
	LT	1.00	62	62	1,600	0.039		LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **19 - Vermont Avenue & 223rd Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	12.5 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	89	0	0.000	N-S(1):	0.365 *
	TH	2.00	387	3,200	0.149	N-S(2):	0.238
	LT	1.00	163	1,600	0.102 *	E-W(1):	0.275
Westbound	RT	0.00	385	0	0.000	E-W(2):	0.510 *
	TH	2.00	1,027	3,200	0.441 *		
	LT	2.00	247	2,800	0.088	V/C:	0.875
Northbound	RT	1.00	130	1,600	0.000	Lost Time:	0.100
	TH	2.00	841	3,200	0.263 *	ITS:	0.000
	LT	1.00	142	1,600	0.089		
Eastbound	RT	1.00	73	1,600	0.000	ICU:	0.975
	TH	2.00	599	3,200	0.187		
	LT	1.00	111	1,600	0.069 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	112	0	0.000	N-S(1):	0.355 *
	TH	2.00	753	3,200	0.270	N-S(2):	0.318
	LT	1.00	367	1,600	0.229 *	E-W(1):	0.431 *
Westbound	RT	0.00	153	0	0.000	E-W(2):	0.320
	TH	2.00	748	3,200	0.282		
	LT	2.00	253	2,800	0.090 *	V/C:	0.786
Northbound	RT	1.00	190	1,600	0.028	Lost Time:	0.100
	TH	2.00	402	3,200	0.126 *	ITS:	0.000
	LT	1.00	76	1,600	0.048		
Eastbound	RT	1.00	121	1,600	0.028	ICU:	0.886
	TH	2.00	1,091	3,200	0.341 *		
	LT	1.00	60	1,600	0.038	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	533	1,600	0.333 *	N-S(1):	0.190
	TH	2.00	1	1,600	0.191	N-S(2):	0.333 *
	LT	0.00	304	1,600	0.190	E-W(1):	0.363 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.351
	TH	2.00	1,122	3,200	0.351		
	LT	1.00	172	1,600	0.108 *	V/C:	0.696
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	1.00	125	1,600	0.078	ICU:	0.796
	TH	2.00	817	3,200	0.255 *		
	LT	0.00	0	0	0.000	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	406	0	0.000	N-S(1):	0.266 *
	TH	2.00	2	1,600	0.255	N-S(2):	0.255
	LT	0.00	426	1,600	0.266 *	E-W(1):	0.507 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.240
	TH	2.00	767	3,200	0.240		
	LT	1.00	120	1,600	0.075 *	V/C:	0.773
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	1.00	231	1,600	0.144	ICU:	0.873
	TH	2.00	1,383	3,200	0.432 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	219	1,600	0.042	N-S(1):	0.255 *
	TH	2.00	260	3,200	0.081	N-S(2):	0.148
	LT	1.00	66	1,600	0.041 *	E-W(1):	0.230
Westbound	RT	1.00	257	1,600	0.140	E-W(2):	0.489 *
	TH	2.00	955	3,200	0.298 *		
	LT	1.00	72	1,600	0.045	V/C:	0.744
Northbound	RT	1.00	149	1,600	0.071	Lost Time:	0.100
	TH	2.00	685	3,200	0.214 *	ITS:	0.000
	LT	1.00	107	1,600	0.067		
Eastbound	RT	1.00	180	1,600	0.079	ICU:	0.844
	TH	2.00	591	3,200	0.185		
	LT	1.00	305	1,600	0.191 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	172	1,600	0.000	N-S(1):	0.200 *
	TH	2.00	405	3,200	0.127	N-S(2):	0.173
	LT	1.00	149	1,600	0.093 *	E-W(1):	0.429 *
Westbound	RT	1.00	131	1,600	0.035	E-W(2):	0.411
	TH	2.00	625	3,200	0.195		
	LT	1.00	74	1,600	0.046 *	V/C:	0.629
Northbound	RT	1.00	110	1,600	0.046	Lost Time:	0.100
	TH	2.00	343	3,200	0.107 *	ITS:	0.000
	LT	1.00	73	1,600	0.046		
Eastbound	RT	1.00	214	1,600	0.111	ICU:	0.729
	TH	2.00	1,227	3,200	0.383 *		
	LT	1.00	345	1,600	0.216	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Existing plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	267	1,600	0.095	N-S(1):	0.354
	TH	2.00	875	3,200	0.273 *	N-S(2):	0.360 *
	LT	1.00	76	1,600	0.048	E-W(1):	0.468
Westbound	RT	0.00	96	0	0.000	E-W(2):	0.497 *
	TH	3.00	1,602	4,800	0.354 *		
	LT	1.00	304	1,600	0.190	V/C:	0.857
Northbound	RT	1.00	297	1,600	0.091	Lost Time:	0.100
	TH	2.00	978	3,200	0.306	ITS:	0.000
	LT	1.00	139	1,600	0.087 *		
Eastbound	RT	0.00	72	0	0.000	ICU:	0.957
	TH	3.00	1,261	4,800	0.278		
	LT	1.00	229	1,600	0.143 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	133	1,600	0.018	N-S(1):	0.358
	TH	2.00	967	3,200	0.302 *	N-S(2):	0.416 *
	LT	1.00	174	1,600	0.109	E-W(1):	0.497 *
Westbound	RT	0.00	139	0	0.000	E-W(2):	0.447
	TH	3.00	1,380	4,800	0.316		
	LT	1.00	309	1,600	0.193 *	V/C:	0.913
Northbound	RT	1.00	321	1,600	0.104	Lost Time:	0.100
	TH	2.00	798	3,200	0.249	ITS:	0.000
	LT	1.00	182	1,600	0.114 *		
Eastbound	RT	0.00	120	0	0.000	ICU:	1.013
	TH	3.00	1,338	4,800	0.304 *		
	LT	1.00	210	1,600	0.131	LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB--	0	NB-- 0	SB--	0
		EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	154	1	154	98	1	**98**
	Left-Through		0			0	
	Through	747	1	**448**	588	1	370
	Through-Right		1			1	
	Right	148	0	148	152	0	152
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	32	1	**32**	130	1	130
	Left-Through		0			0	
	Through	441	1	271	747	1	**450**
	Through-Right		1			1	
	Right	101	0	101	152	0	152
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	95	1	**95**	106	1	106
	Left-Through		0			0	
	Through	915	1	501	1373	1	**744**
	Through-Right		1			1	
	Right	86	0	86	114	0	114
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	106	1	106	59	1	**59**
	Left-Through		0			0	
	Through	1461	1	**768**	963	1	503
	Through-Right		1			1	
	Right	74	0	74	43	0	43
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	480		North-South:	548
			East-West:	863		East-West:	803
			SUM:	1343		SUM:	1351
VOLUME/CAPACITY (V/C) RATIO:				0.977			0.983
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.907**			**0.913**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
3	North-South Street:	Western Avenue	East-West Street:	Carson Street
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	0	NB-- 0	SB--	0	0
	EB-- 0	WB--	0	0	EB-- 0	WB--	0	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	151	154	1	**154**
	Left-Through		0			0	
	Through	1126	2	**563**	809	2	405
	Through-Right		0			0	
	Right	83	1	50	116	1	81
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	94	1	**94**	154	1	154
	Left-Through		0			0	
	Through	725	2	363	1300	2	**650**
	Through-Right		0			0	
	Right	133	1	104	220	1	178
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	58	1	**58**	84	1	84
	Left-Through		0			0	
	Through	766	1	437	987	1	**586**
	Through-Right		1			1	
	Right	108	0	108	185	0	185
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	66	1	66	70	1	**70**
	Left-Through		0			0	
	Through	1127	1	**642**	936	1	536
	Through-Right		1			1	
	Right	156	0	156	136	0	136
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	657		North-South:	804
			East-West:	700		East-West:	656
			SUM:	1357		SUM:	1460
VOLUME/CAPACITY (V/C) RATIO:				0.952			1.025
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.882**			**0.955**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	215	1	**215**	196	1	**196**
	Left-Through		0			0	
	Through	669	2	335	540	2	270
	Through-Right		0			0	
	Right	85	1	0	150	1	68
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	51	1	51	98	1	98
	Left-Through		0			0	
	Through	411	1	**279**	534	1	**348**
	Through-Right		1			1	
	Right	147	0	147	162	0	162
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	194	1	**194**	199	1	199
	Left-Through		0			0	
	Through	895	2	448	1171	2	**586**
	Through-Right		0			0	
	Right	201	1	94	168	1	70
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	182	1	182	165	1	**165**
	Left-Through		0			0	
	Through	1189	2	**595**	1034	2	517
	Through-Right		0			0	
	Right	77	1	52	87	1	38
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	494		North-South:	544
			East-West:	789		East-West:	751
			SUM:	1283		SUM:	1295
VOLUME/CAPACITY (V/C) RATIO:				0.855			0.942
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.785**			**0.872**
LEVEL OF SERVICE (LOS):				**C**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	116	1	116	58	1	**58**
	Left-Through		0			0	
	Through	1348	1	**690**	921	1	472
	Through-Right		1			1	
	Right	32	0	32	23	0	23
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	31	1	**31**	37	1	37
	Left-Through		0			0	
	Through	876	1	472	1446	1	**732**
	Through-Right		1			1	
	Right	68	0	68	17	0	17
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	18	0	**18**	56	0	56
	Left-Through		0			0	
	Through	23	0	96	97	0	**315**
	Through-Right		0			0	
	Right	55	0	0	162	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	104	0	104	48	0	**48**
	Left-Through		0			0	
	Through	77	0	**221**	39	0	125
	Through-Right		0			0	
	Right	40	0	0	38	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	721		*North-South:*	790
			East-West:	239		*East-West:*	363
			SUM:	960		*SUM:*	1153
VOLUME/CAPACITY *(V/C)* RATIO:				0.640			0.769
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.570**			**0.699**
LEVEL OF SERVICE (LOS):				**A**			**B**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	25	1	25	23	1	**23**
	Left-Through		0			0	
	Through	880	1	**500**	513	1	278
	Through-Right		1			1	
	Right	120	0	120	42	0	42
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	97	1	**97**	83	1	83
	Left-Through		0			0	
	Through	390	1	208	785	1	**411**
	Through-Right		1			1	
	Right	26	0	26	37	0	37
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	33	0	33	21	0	21
	Left-Through		1			1	
	Through	116	0	**149**	67	0	**88**
	Through-Right		0			0	
	Right	42	1	30	50	1	39
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	46	0	**46**	45	0	**45**
	Left-Through		1			1	
	Through	80	0	126	54	0	99
	Through-Right		0			0	
	Right	106	1	58	115	1	74
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	597		North-South:	434
			East-West:	195		East-West:	133
			SUM:	792		SUM:	567
VOLUME/CAPACITY (V/C) RATIO:				0.528			0.378
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.458**			**0.308**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	188	1	188	98	1	**98**
	Left-Through		0			0	
	Through	1266	2	**633**	863	2	432
	Through-Right		0			0	
	Right	170	1	48	166	1	127
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	74	1	**74**	203	1	203
	Left-Through		0			0	
	Through	898	2	449	1358	2	**679**
	Through-Right		0			0	
	Right	53	1	30	42	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	47	1	**47**	54	1	54
	Left-Through		0			0	
	Through	388	2	194	925	2	**463**
	Through-Right		0			0	
	Right	109	1	15	189	1	140
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	245	1	245	79	1	**79**
	Left-Through		0			0	
	Through	854	1	**518**	592	1	340
	Through-Right		1			1	
	Right	181	0	181	87	0	87
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	707		North-South:	777
			East-West:	565		East-West:	542
			SUM:	1272		SUM:	1319
VOLUME/CAPACITY (V/C) RATIO:				0.893			0.926
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.823**			**0.856**
LEVEL OF SERVICE (LOS):				**D**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>				
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street		
	Scenario:	Existing plus 2030 Project				
	Count Date:	1/0/1900	Analyst:	<Fehr & Peers>	Date:	<date>

		AM			PM		
	No. of Phases			2			2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0
		EB-- 0	WB--	0	EB-- 0	WB--	0
	ATSAC-1 or ATSAC+ATCS-2?			1			1
	Override Capacity			0			0
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	123	1	123	63	1	**63**
	Left-Through		0			0	
	Through	812	2	**406**	418	2	209
	Through-Right		0			0	
	Right	113	1	55	126	1	75
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	51	1	**51**	94	1	94
	Left-Through		0			0	
	Through	362	1	214	697	1	**389**
	Through-Right		1			1	
	Right	65	0	65	81	0	81
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	89	1	**89**	74	1	74
	Left-Through		0			0	
	Through	603	1	334	1138	1	**622**
	Through-Right		1			1	
	Right	64	0	64	105	0	105
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	116	1	116	103	1	**103**
	Left-Through		0			0	
	Through	1019	2	**510**	701	2	351
	Through-Right		0			0	
	Right	104	1	79	94	1	47
	Left-Through-Right		0			0	
	Left-Right		0			0	
	CRITICAL VOLUMES		North-South:	457		North-South:	452
			East-West:	599		East-West:	725
			SUM:	1056		SUM:	1177
	VOLUME/CAPACITY (V/C) RATIO:			0.704			0.785
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.634**			**0.715**
	LEVEL OF SERVICE (LOS):			**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Existing plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	139	1	**139**	182	1	**182**
	Left-Through		0			0	
	Through	978	2	489	798	2	399
	Through-Right		0			0	
	Right	297	1	145	321	1	167
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	76	1	76	174	1	174
	Left-Through		0			0	
	Through	875	2	**438**	967	2	**484**
	Through-Right		0			0	
	Right	267	1	153	133	1	28
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	229	1	**229**	210	1	210
	Left-Through		0			0	
	Through	1261	2	444	1338	2	**486**
	Through-Right		1			1	
	Right	72	0	72	120	0	120
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	304	1	304	309	1	**309**
	Left-Through		0			0	
	Through	1602	2	**566**	1380	2	506
	Through-Right		1			1	
	Right	96	0	96	139	0	139
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	577		North-South:	666
			East-West:	795		East-West:	795
			SUM:	1372		SUM:	1461
VOLUME/CAPACITY (V/C) RATIO:				0.998			1.063
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.928**			**0.993**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

EXISTING PLUS 2023 PROJECT PLUS CUMULATIVE

Project Title: **Harbor-UCLA Medical Center**
Intersection: **1 - Normandie Avenue & Torrance Bloulevard**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	104	0	0.000	N-S(1):	0.299 *
	TH	2.00	406	3,200	0.159	N-S(2):	0.255
	LT	1.00	32	1,600	0.020 *	E-W(1):	0.402
Westbound	RT	0.00	74	0	0.000	E-W(2):	0.564 *
	TH	2.00	1,526	3,200	0.500 *		
	LT	1.00	104	1,600	0.065	V/C:	0.863
Northbound	RT	0.00	147	0	0.000	Lost Time:	0.100
	TH	2.00	747	3,200	0.279 *	ITS:	0.000
	LT	1.00	154	1,600	0.096		
Eastbound	RT	0.00	86	0	0.000	ICU:	0.963
	TH	2.00	991	3,200	0.337		
	LT	1.00	103	1,600	0.064 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	162	0	0.000	N-S(1):	0.300
	TH	2.00	747	3,200	0.284 *	N-S(2):	0.345 *
	LT	1.00	130	1,600	0.081	E-W(1):	0.549 *
Westbound	RT	0.00	43	0	0.000	E-W(2):	0.424
	TH	2.00	1,090	3,200	0.354		
	LT	1.00	58	1,600	0.036 *	V/C:	0.894
Northbound	RT	0.00	150	0	0.000	Lost Time:	0.100
	TH	2.00	551	3,200	0.219	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	0.00	119	0	0.000	ICU:	0.994
	TH	2.00	1,524	3,200	0.513 *		
	LT	1.00	112	1,600	0.070	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **2 - Vermont Avenue & Torrance Bloulevard**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	240	1,600	0.007	N-S(1):	0.281 *
	TH	2.00	608	3,200	0.190	N-S(2):	0.266
	LT	1.00	37	1,600	0.023 *	E-W(1):	0.380
Westbound	RT	0.00	111	0	0.000	E-W(2):	0.588 *
	TH	2.00	1,314	3,200	0.445 *		
	LT	1.00	91	1,600	0.057	V/C:	0.869
Northbound	RT	1.00	182	1,600	0.057	Lost Time:	0.100
	TH	2.00	826	3,200	0.258 *	ITS:	0.000
	LT	1.00	122	1,600	0.076		
Eastbound	RT	0.00	149	0	0.000	ICU:	0.969
	TH	2.00	883	3,200	0.323		
	LT	1.00	229	1,600	0.143 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	349	1,600	0.034	N-S(1):	0.237
	TH	2.00	890	3,200	0.278 *	N-S(2):	0.327 *
	LT	1.00	112	1,600	0.070	E-W(1):	0.469 *
Westbound	RT	0.00	89	0	0.000	E-W(2):	0.429
	TH	2.00	696	3,200	0.245		
	LT	1.00	60	1,600	0.038 *	V/C:	0.796
Northbound	RT	1.00	120	1,600	0.038	Lost Time:	0.100
	TH	2.00	535	3,200	0.167	ITS:	0.000
	LT	1.00	78	1,600	0.049 *		
Eastbound	RT	0.00	98	0	0.000	ICU:	0.896
	TH	2.00	1,281	3,200	0.431 *		
	LT	1.00	294	1,600	0.184	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **4 - Normandie Avenue & Carson Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	151	0	0.000	N-S(1):	0.256
	TH	2.00	384	3,200	0.167 *	N-S(2):	0.299 *
	LT	1.00	39	1,600	0.024	E-W(1):	0.475
Westbound	RT	0.00	76	0	0.000	E-W(2):	0.553 *
	TH	2.00	1,294	3,200	0.428 *		
	LT	1.00	167	1,600	0.104	V/C:	0.852
Northbound	RT	0.00	76	0	0.000	Lost Time:	0.100
	TH	2.00	665	3,200	0.232	ITS:	0.000
	LT	1.00	211	1,600	0.132 *		
Eastbound	RT	0.00	195	0	0.000	ICU:	0.952
	TH	2.00	992	3,200	0.371		
	LT	1.00	200	1,600	0.125 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	175	0	0.000	N-S(1):	0.252
	TH	2.00	528	3,200	0.220 *	N-S(2):	0.334 *
	LT	1.00	93	1,600	0.058	E-W(1):	0.582 *
Westbound	RT	0.00	79	0	0.000	E-W(2):	0.540
	TH	2.00	1,241	3,200	0.413		
	LT	1.00	156	1,600	0.098 *	V/C:	0.916
Northbound	RT	0.00	117	0	0.000	Lost Time:	0.100
	TH	2.00	505	3,200	0.194	ITS:	0.000
	LT	1.00	182	1,600	0.114 *		
Eastbound	RT	0.00	166	0	0.000	ICU:	1.016
	TH	2.00	1,382	3,200	0.484 *		
	LT	1.00	203	1,600	0.127	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **5 - Budlong Avenue & Carson Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.011
	TH	1.00	0	1,600	0.032 *	N-S(2):	0.032 *
	LT	0.00	17	1,600	0.011	E-W(1):	0.364
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.525 *
	TH	2.00	1,635	3,200	0.516 *		
	LT	0.00	0	0	0.000	V/C:	0.557
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.657
	TH	2.00	1,165	3,200	0.364		
	LT	1.00	15	1,600	0.009 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	35	0	0.000	N-S(1):	0.013
	TH	1.00	0	1,600	0.034 *	N-S(2):	0.034 *
	LT	0.00	20	1,600	0.013	E-W(1):	0.505 *
Westbound	RT	0.00	27	0	0.000	E-W(2):	0.494
	TH	2.00	1,504	3,200	0.478		
	LT	0.00	0	0	0.000 *	V/C:	0.539
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.639
	TH	2.00	1,616	3,200	0.505 *		
	LT	1.00	25	1,600	0.016	LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **6 - Berendo Avenue & Carson Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	36	0	0.000	N-S(1):	0.009
	TH	1.00	1	1,600	0.023 *	N-S(2):	0.035 *
	LT	1.00	13	1,600	0.008	E-W(1):	0.447
Westbound	RT	0.00	33	0	0.000	E-W(2):	0.528 *
	TH	2.00	1,620	3,200	0.517 *		
	LT	1.00	142	1,600	0.089	V/C:	0.563
Northbound	RT	1.00	52	1,600	0.000	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	19	1,600	0.012 *		
Eastbound	RT	0.00	45	0	0.000	ICU:	0.663
	TH	2.00	1,099	3,200	0.358		
	LT	1.00	17	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.063 *
	TH	1.00	4	1,600	0.024	N-S(2):	0.033
	LT	1.00	24	1,600	0.015 *	E-W(1):	0.522 *
Westbound	RT	0.00	45	0	0.000	E-W(2):	0.495
	TH	2.00	1,483	3,200	0.478		
	LT	1.00	35	1,600	0.022 *	V/C:	0.585
Northbound	RT	1.00	112	1,600	0.048 *	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	14	1,600	0.009		
Eastbound	RT	0.00	23	0	0.000	ICU:	0.685
	TH	2.00	1,576	3,200	0.500 *		
	LT	1.00	27	1,600	0.017	LOS:	B

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 7 - Medical Center Drive & Carson Street
Description: Existing plus 2023 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.40	34	34	648	0.044		N-S(1):	0.053 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.044
	LT	0.60	45	50	952	0.053	*	E-W(1):	0.362
Westbound	RT	0.00	10	10	0	0.000		E-W(2):	0.566 *
	TH	2.00	1,777	1,777	3,200	0.558	*		
	LT	0.00	0	0	0	0.000		V/C:	0.619
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000	*	ITS:	0.000
	LT	0.00	0	0	0	0.000			
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.719
	TH	2.00	1,158	1,158	3,200	0.362			
	LT	1.00	13	13	1,600	0.008	*	LOS:	C

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.55	17	17	877	0.004		N-S(1):	0.019 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.004
	LT	0.45	12	14	723	0.019	*	E-W(1):	0.525 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.509
	TH	2.00	1,557	1,557	3,200	0.494			
	LT	0.00	0	0	0	0.000	*	V/C:	0.544
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000	*	ITS:	0.000
	LT	0.00	0	0	0	0.000			
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.644
	TH	2.00	1,679	1,679	3,200	0.525	*		
	LT	1.00	24	24	1,600	0.015		LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **8 - Vermont Avenue & Carson Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	221	1,600	0.059	N-S(1):	0.339 *
	TH	2.00	522	3,200	0.163	N-S(2):	0.264
	LT	1.00	124	1,600	0.078 *	E-W(1):	0.481
Westbound	RT	1.00	132	1,600	0.005	E-W(2):	0.514 *
	TH	2.00	1,392	3,200	0.435 *		
	LT	1.00	273	1,600	0.171	V/C:	0.853
Northbound	RT	1.00	226	1,600	0.000	Lost Time:	0.100
	TH	2.00	834	3,200	0.261 *	ITS:	0.000
	LT	1.00	161	1,600	0.101		
Eastbound	RT	1.00	83	1,600	0.000	ICU:	0.953
	TH	2.00	992	3,200	0.310		
	LT	1.00	126	1,600	0.079 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	183	1,600	0.036	N-S(1):	0.312
	TH	2.00	765	3,200	0.239 *	N-S(2):	0.323 *
	LT	1.00	272	1,600	0.170	E-W(1):	0.562 *
Westbound	RT	1.00	163	1,600	0.000	E-W(2):	0.467
	TH	2.00	1,245	3,200	0.389		
	LT	1.00	156	1,600	0.098 *	V/C:	0.885
Northbound	RT	1.00	362	1,600	0.129	Lost Time:	0.100
	TH	2.00	455	3,200	0.142	ITS:	0.000
	LT	1.00	134	1,600	0.084 *		
Eastbound	RT	1.00	115	1,600	0.000	ICU:	0.985
	TH	2.00	1,486	3,200	0.464 *		
	LT	1.00	125	1,600	0.078	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	579	1,600	0.362 *	N-S(1):	0.088
	TH	0.00	0	0	0.000	N-S(2):	0.362 *
	LT	1.00	141	1,600	0.088	E-W(1):	0.384
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.416 *
	TH	2.00	1,330	3,200	0.416 *		
	LT	1.00	174	1,600	0.109	V/C:	0.778
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	133	0	0.000	ICU:	0.878
	TH	3.00	1,187	4,800	0.275		
	LT	0.00	0	0	0.000 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	430	1,600	0.269 *	N-S(1):	0.168
	TH	0.00	0	0	0.000	N-S(2):	0.269 *
	LT	1.00	268	1,600	0.168	E-W(1):	0.556 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.369
	TH	2.00	1,181	3,200	0.369		
	LT	1.00	178	1,600	0.111 *	V/C:	0.825
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	270	0	0.000	ICU:	0.925
	TH	3.00	1,864	4,800	0.445 *		
	LT	0.00	0	0	0.000	LOS:	E

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 12 - Normandie Avenue & 220th Street
Description: Existing plus 2023 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	26	26	0	0.000		N-S(1):	0.352 *
	TH	2.00	397	397	3,200	0.132		N-S(2):	0.149
	LT	1.00	78	78	1,600	0.049	*	E-W(1):	0.147
Westbound	RT	0.00	102	102	0	0.000		E-W(2):	0.165 *
	TH	1.00	77	77	1,600	0.144	*		
	LT	0.00	46	51	1,600	0.032		V/C:	0.517
Northbound	RT	0.00	118	118	0	0.000		Lost Time:	0.100
	TH	2.00	852	852	3,200	0.303	*	ITS:	0.000
	LT	1.00	27	27	1,600	0.017			
Eastbound	RT	0.00	46	46	0	0.000		ICU:	0.617
	TH	1.00	105	105	1,600	0.115			
	LT	0.00	30	33	1,600	0.021	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	36	36	0	0.000		N-S(1):	0.219
	TH	2.00	777	777	3,200	0.254	*	N-S(2):	0.272 *
	LT	1.00	76	76	1,600	0.048		E-W(1):	0.117
Westbound	RT	0.00	93	93	0	0.000		E-W(2):	0.128 *
	TH	1.00	40	40	1,600	0.114	*		
	LT	0.00	44	49	1,600	0.031		V/C:	0.400
Northbound	RT	0.00	41	41	0	0.000		Lost Time:	0.100
	TH	2.00	505	505	3,200	0.171		ITS:	0.000
	LT	1.00	28	28	1,600	0.018	*		
Eastbound	RT	0.00	53	53	0	0.000		ICU:	0.500
	TH	1.00	62	62	1,600	0.086			
	LT	0.00	20	22	1,600	0.014	*	LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 13 - Meyler Street & 220th Street
Description: Existing plus 2023 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	2	2	0	0.000		N-S(1):	0.124 *
	TH	1.00	2	2	1,600	0.009		N-S(2):	0.075
	LT	0.00	10	11	1,600	0.007	*	E-W(1):	0.209 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.189
	TH	1.00	145	145	1,600	0.183			
	LT	0.00	61	122	1,600	0.076	*	V/C:	0.333
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	12	12	1,600	0.117	*	ITS:	0.000
	LT	0.00	96	106	1,600	0.066			
Eastbound	RT	0.00	51	51	0	0.000		ICU:	0.433
	TH	1.00	152	152	1,600	0.133	*		
	LT	0.00	8	9	1,600	0.006		LOS:	A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	10	10	0	0.000		N-S(1):	0.075 *
	TH	1.00	12	12	1,600	0.038		N-S(2):	0.047
	LT	0.00	35	39	1,600	0.024	*	E-W(1):	0.197 *
Westbound	RT	0.00	4	4	0	0.000		E-W(2):	0.090
	TH	1.00	106	106	1,600	0.086			
	LT	0.00	24	27	1,600	0.017	*	V/C:	0.272
Northbound	RT	0.00	65	65	0	0.000		Lost Time:	0.100
	TH	1.00	2	2	1,600	0.051	*	ITS:	0.000
	LT	0.00	13	15	1,600	0.009			
Eastbound	RT	0.00	33	33	0	0.000		ICU:	0.372
	TH	1.00	248	248	1,600	0.180	*		
	LT	0.00	6	7	1,600	0.004		LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 14 - Vermont Avenue & 220th Street
Description: Existing plus 2023 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	269	269	0	0.000		N-S(1):	0.372
	TH	2.00	528	528	3,200	0.249	*	N-S(2):	0.383 *
	LT	1.00	56	56	1,600	0.035		E-W(1):	0.196 *
Westbound	RT	0.00	37	37	0	0.000		E-W(2):	0.158
	TH	1.00	27	27	1,600	0.052			
	LT	0.00	17	19	1,600	0.012	*	V/C:	0.579
Northbound	RT	0.00	40	40	0	0.000		Lost Time:	0.100
	TH	2.00	1,039	1,039	3,200	0.337		ITS:	0.000
	LT	1.00	214	214	1,600	0.134	*		
Eastbound	RT	0.00	93	93	0	0.000		ICU:	0.679
	TH	1.00	32	32	1,600	0.184	*		
	LT	0.00	153	169	1,600	0.106		LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	68	68	0	0.000		N-S(1):	0.199
	TH	2.00	941	941	3,200	0.315	*	N-S(2):	0.339 *
	LT	1.00	22	22	1,600	0.014		E-W(1):	0.313 *
Westbound	RT	0.00	43	43	0	0.000		E-W(2):	0.229
	TH	1.00	12	12	1,600	0.056			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.652
Northbound	RT	0.00	14	14	0	0.000		Lost Time:	0.100
	TH	2.00	579	579	3,200	0.185		ITS:	0.000
	LT	1.00	38	38	1,600	0.024	*		
Eastbound	RT	0.00	176	176	0	0.000		ICU:	0.752
	TH	1.00	13	13	1,600	0.291	*		
	LT	0.00	251	277	1,600	0.173		LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **17 - Normandie Avenue & 223rd Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	64	0	0.000	N-S(1):	0.320 *
	TH	2.00	374	3,200	0.137	N-S(2):	0.214
	LT	1.00	52	1,600	0.033 *	E-W(1):	0.284
Westbound	RT	0.00	85	0	0.000	E-W(2):	0.400 *
	TH	2.00	1,024	3,200	0.347 *		
	LT	1.00	119	1,600	0.074	V/C:	0.720
Northbound	RT	0.00	111	0	0.000	Lost Time:	0.100
	TH	2.00	806	3,200	0.287 *	ITS:	0.000
	LT	1.00	123	1,600	0.077		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.820
	TH	2.00	607	3,200	0.210		
	LT	1.00	85	1,600	0.053 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	77	0	0.000	N-S(1):	0.227
	TH	2.00	699	3,200	0.243 *	N-S(2):	0.282 *
	LT	1.00	89	1,600	0.056	E-W(1):	0.452 *
Westbound	RT	0.00	88	0	0.000	E-W(2):	0.294
	TH	2.00	712	3,200	0.250		
	LT	1.00	98	1,600	0.061 *	V/C:	0.734
Northbound	RT	0.00	125	0	0.000	Lost Time:	0.100
	TH	2.00	422	3,200	0.171	ITS:	0.000
	LT	1.00	63	1,600	0.039 *		
Eastbound	RT	0.00	105	0	0.000	ICU:	0.834
	TH	2.00	1,147	3,200	0.391 *		
	LT	1.00	71	1,600	0.044	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 18 - Meyler Street & 223rd Street
Description: Existing plus 2023 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	54	54	0	0.000		N-S(1):	0.158 *
	TH	1.00	44	44	1,600	0.101		N-S(2):	0.152
	LT	0.00	57	63	1,600	0.039	*	E-W(1):	0.248
Westbound	RT	0.00	72	72	0	0.000		E-W(2):	0.412 *
	TH	2.00	1,133	1,133	3,200	0.377	*		
	LT	1.00	46	46	1,600	0.029		V/C:	0.570
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	39	39	1,600	0.119	*	ITS:	0.000
	LT	0.00	74	82	1,600	0.051			
Eastbound	RT	0.00	24	24	0	0.000		ICU:	0.670
	TH	2.00	678	678	3,200	0.219			
	LT	1.00	56	56	1,600	0.035	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	38	38	0	0.000		N-S(1):	0.068
	TH	1.00	15	15	1,600	0.051	*	N-S(2):	0.070 *
	LT	0.00	26	29	1,600	0.018		E-W(1):	0.423 *
Westbound	RT	0.00	46	46	0	0.000		E-W(2):	0.311
	TH	2.00	834	834	3,200	0.275			
	LT	1.00	59	59	1,600	0.037	*	V/C:	0.493
Northbound	RT	0.00	35	35	0	0.000		Lost Time:	0.100
	TH	1.00	15	15	1,600	0.050		ITS:	0.000
	LT	0.00	27	30	1,600	0.019	*		
Eastbound	RT	0.00	89	89	0	0.000		ICU:	0.593
	TH	2.00	1,146	1,146	3,200	0.386	*		
	LT	1.00	58	58	1,600	0.036		LOS:	A

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **19 - Vermont Avenue & 223rd Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	89	0	0.000	N-S(1):	0.358 *
	TH	2.00	411	3,200	0.156	N-S(2):	0.243
	LT	1.00	152	1,600	0.095 *	E-W(1):	0.279
Westbound	RT	0.00	328	0	0.000	E-W(2):	0.487 *
	TH	2.00	1,007	3,200	0.417 *		
	LT	2.00	250	2,880	0.087	V/C:	0.845
Northbound	RT	1.00	136	1,600	0.000	Lost Time:	0.100
	TH	2.00	841	3,200	0.263 *	ITS:	0.000
	LT	1.00	139	1,600	0.087		
Eastbound	RT	1.00	72	1,600	0.000	ICU:	0.945
	TH	2.00	615	3,200	0.192		
	LT	1.00	112	1,600	0.070 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	112	0	0.000	N-S(1):	0.323 *
	TH	2.00	765	3,200	0.274	N-S(2):	0.321
	LT	1.00	301	1,600	0.188 *	E-W(1):	0.433 *
Westbound	RT	0.00	131	0	0.000	E-W(2):	0.316
	TH	2.00	760	3,200	0.278		
	LT	2.00	271	2,880	0.094 *	V/C:	0.756
Northbound	RT	1.00	207	1,600	0.035	Lost Time:	0.100
	TH	2.00	431	3,200	0.135 *	ITS:	0.000
	LT	1.00	75	1,600	0.047		
Eastbound	RT	1.00	118	1,600	0.027	ICU:	0.856
	TH	2.00	1,086	3,200	0.339 *		
	LT	1.00	60	1,600	0.038	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing plus 2023 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	497	1,600	0.311 *	N-S(1):	0.194
	TH	2.00	1	1,600	0.194	N-S(2):	0.311 *
	LT	0.00	310	1,600	0.194	E-W(1):	0.368 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.339
	TH	2.00	1,084	3,200	0.339		
	LT	1.00	174	1,600	0.109 *	V/C:	0.679
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	1.00	123	1,600	0.077	ICU:	0.779
	TH	2.00	829	3,200	0.259 *		
	LT	0.00	0	0	0.000	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	400	0	0.000	N-S(1):	0.274 *
	TH	2.00	2	1,600	0.251	N-S(2):	0.251
	LT	0.00	438	1,600	0.274 *	E-W(1):	0.499 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.245
	TH	2.00	784	3,200	0.245		
	LT	1.00	124	1,600	0.078 *	V/C:	0.773
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	1.00	213	1,600	0.133	ICU:	0.873
	TH	2.00	1,348	3,200	0.421 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE

Project Title: **Harbor-UCLA Medical Center**
Intersection: **1 - Normandie Avenue & Torrance Bloulevard**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	104	0	0.000	N-S(1):	0.302 *
	TH	2.00	447	3,200	0.172	N-S(2):	0.268
	LT	1.00	32	1,600	0.020 *	E-W(1):	0.404
Westbound	RT	0.00	74	0	0.000	E-W(2):	0.564 *
	TH	2.00	1,526	3,200	0.500 *		
	LT	1.00	106	1,600	0.066	V/C:	0.866
Northbound	RT	0.00	148	0	0.000	Lost Time:	0.100
	TH	2.00	754	3,200	0.282 *	ITS:	0.000
	LT	1.00	154	1,600	0.096		
Eastbound	RT	0.00	92	0	0.000	ICU:	0.966
	TH	2.00	991	3,200	0.338		
	LT	1.00	103	1,600	0.064 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	162	0	0.000	N-S(1):	0.314
	TH	2.00	761	3,200	0.288 *	N-S(2):	0.349 *
	LT	1.00	130	1,600	0.081	E-W(1):	0.551 *
Westbound	RT	0.00	43	0	0.000	E-W(2):	0.424
	TH	2.00	1,090	3,200	0.354		
	LT	1.00	59	1,600	0.037 *	V/C:	0.900
Northbound	RT	0.00	152	0	0.000	Lost Time:	0.100
	TH	2.00	592	3,200	0.233	ITS:	0.000
	LT	1.00	98	1,600	0.061 *		
Eastbound	RT	0.00	121	0	0.000	ICU:	1.000
	TH	2.00	1,524	3,200	0.514 *		
	LT	1.00	112	1,600	0.070	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **2 - Vermont Avenue & Torrance Bloulevard**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	241	1,600	0.008	N-S(1):	0.283 *
	TH	2.00	637	3,200	0.199	N-S(2):	0.275
	LT	1.00	37	1,600	0.023 *	E-W(1):	0.381
Westbound	RT	0.00	111	0	0.000	E-W(2):	0.589 *
	TH	2.00	1,315	3,200	0.446 *		
	LT	1.00	93	1,600	0.058	V/C:	0.872
Northbound	RT	1.00	182	1,600	0.056	Lost Time:	0.100
	TH	2.00	831	3,200	0.260 *	ITS:	0.000
	LT	1.00	122	1,600	0.076		
Eastbound	RT	0.00	149	0	0.000	ICU:	0.972
	TH	2.00	883	3,200	0.323		
	LT	1.00	229	1,600	0.143 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	350	1,600	0.034	N-S(1):	0.247
	TH	2.00	900	3,200	0.281 *	N-S(2):	0.330 *
	LT	1.00	112	1,600	0.070	E-W(1):	0.470 *
Westbound	RT	0.00	89	0	0.000	E-W(2):	0.429
	TH	2.00	696	3,200	0.245		
	LT	1.00	62	1,600	0.039 *	V/C:	0.800
Northbound	RT	1.00	123	1,600	0.038	Lost Time:	0.100
	TH	2.00	566	3,200	0.177	ITS:	0.000
	LT	1.00	78	1,600	0.049 *		
Eastbound	RT	0.00	98	0	0.000	ICU:	0.900
	TH	2.00	1,282	3,200	0.431 *		
	LT	1.00	295	1,600	0.184	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **4 - Normandie Avenue & Carson Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	151	0	0.000	N-S(1):	0.268
	TH	2.00	420	3,200	0.178 *	N-S(2):	0.313 *
	LT	1.00	51	1,600	0.032	E-W(1):	0.489
Westbound	RT	0.00	77	0	0.000	E-W(2):	0.554 *
	TH	2.00	1,296	3,200	0.429 *		
	LT	1.00	182	1,600	0.114	V/C:	0.867
Northbound	RT	0.00	85	0	0.000	Lost Time:	0.100
	TH	2.00	671	3,200	0.236	ITS:	0.000
	LT	1.00	216	1,600	0.135 *		
Eastbound	RT	0.00	204	0	0.000	ICU:	0.967
	TH	2.00	997	3,200	0.375		
	LT	1.00	200	1,600	0.125 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	175	0	0.000	N-S(1):	0.277
	TH	2.00	542	3,200	0.224 *	N-S(2):	0.349 *
	LT	1.00	98	1,600	0.061	E-W(1):	0.589 *
Westbound	RT	0.00	87	0	0.000	E-W(2):	0.545
	TH	2.00	1,252	3,200	0.418		
	LT	1.00	165	1,600	0.103 *	V/C:	0.938
Northbound	RT	0.00	150	0	0.000	Lost Time:	0.100
	TH	2.00	541	3,200	0.216	ITS:	0.000
	LT	1.00	200	1,600	0.125 *		
Eastbound	RT	0.00	170	0	0.000	ICU:	1.038
	TH	2.00	1,385	3,200	0.486 *		
	LT	1.00	203	1,600	0.127	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **5 - Budlong Avenue & Carson Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.011
	TH	1.00	0	1,600	0.032 *	N-S(2):	0.032 *
	LT	0.00	17	1,600	0.011	E-W(1):	0.369
Westbound	RT	0.00	16	0	0.000	E-W(2):	0.537 *
	TH	2.00	1,674	3,200	0.528 *		
	LT	0.00	0	0	0.000	V/C:	0.569
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.669
	TH	2.00	1,181	3,200	0.369		
	LT	1.00	15	1,600	0.009 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	35	0	0.000	N-S(1):	0.013
	TH	1.00	0	1,600	0.034 *	N-S(2):	0.034 *
	LT	0.00	20	1,600	0.013	E-W(1):	0.524 *
Westbound	RT	0.00	27	0	0.000	E-W(2):	0.500
	TH	2.00	1,522	3,200	0.484		
	LT	0.00	0	0	0.000 *	V/C:	0.558
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	0	0	0.000	ICU:	0.658
	TH	2.00	1,676	3,200	0.524 *		
	LT	1.00	25	1,600	0.016	LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **6 - Berendo Avenue & Carson Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	36	0	0.000	N-S(1):	0.009
	TH	1.00	1	1,600	0.023 *	N-S(2):	0.036 *
	LT	1.00	13	1,600	0.008	E-W(1):	0.498
Westbound	RT	0.00	33	0	0.000	E-W(2):	0.539 *
	TH	2.00	1,658	3,200	0.528 *		
	LT	1.00	216	1,600	0.135	V/C:	0.575
Northbound	RT	1.00	68	1,600	0.000	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	20	1,600	0.013 *		
Eastbound	RT	0.00	49	0	0.000	ICU:	0.675
	TH	2.00	1,111	3,200	0.363		
	LT	1.00	17	1,600	0.011 *	LOS:	B

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	34	0	0.000	N-S(1):	0.097 *
	TH	1.00	4	1,600	0.024	N-S(2):	0.036
	LT	1.00	24	1,600	0.015 *	E-W(1):	0.558 *
Westbound	RT	0.00	45	0	0.000	E-W(2):	0.499
	TH	2.00	1,497	3,200	0.482		
	LT	1.00	63	1,600	0.039 *	V/C:	0.655
Northbound	RT	1.00	194	1,600	0.082 *	Lost Time:	0.100
	TH	1.00	2	1,600	0.001	ITS:	0.000
	LT	1.00	19	1,600	0.012		
Eastbound	RT	0.00	25	0	0.000	ICU:	0.755
	TH	2.00	1,635	3,200	0.519 *		
	LT	1.00	27	1,600	0.017	LOS:	C

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 7 - Medical Center Drive & Carson Street
Description: Existing plus 2030 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	Y
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.40	34	34	648	0.044		N-S(1):	0.053 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.000
	LT	0.60	45	50	952	0.053	*	E-W(1):	0.371
Westbound	RT	0.00	10	10	0	0.000		E-W(2):	0.602 *
	TH	2.00	1,890	1,890	3,200	0.594	*		
	LT	0.00	0	0	0	0.000		V/C:	0.655
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000		ITS:	0.000
	LT	0.00	0	0	0	0.000	*		
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.755
	TH	2.00	1,186	1,186	3,200	0.371			
	LT	1.00	13	13	1,600	0.008	*	LOS:	C

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.55	17	17	877	0.004		N-S(1):	0.019 *
	TH	0.00	0	0	0	0.000		N-S(2):	0.000
	LT	0.45	12	14	723	0.019	*	E-W(1):	0.569 *
Westbound	RT	0.00	25	25	0	0.000		E-W(2):	0.523
	TH	2.00	1,599	1,599	3,200	0.508			
	LT	0.00	0	0	0	0.000	*	V/C:	0.588
Northbound	RT	0.00	0	0	0	0.000		Lost Time:	0.100
	TH	0.00	0	0	0	0.000		ITS:	0.000
	LT	0.00	0	0	0	0.000	*		
Eastbound	RT	0.00	0	0	0	0.000		ICU:	0.688
	TH	2.00	1,820	1,820	3,200	0.569	*		
	LT	1.00	24	24	1,600	0.015		LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **8 - Vermont Avenue & Carson Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	235	1,600	0.067	N-S(1):	0.340 *
	TH	2.00	540	3,200	0.169	N-S(2):	0.277
	LT	1.00	124	1,600	0.078 *	E-W(1):	0.512
Westbound	RT	1.00	132	1,600	0.005	E-W(2):	0.542 *
	TH	2.00	1,479	3,200	0.462 *		
	LT	1.00	312	1,600	0.195	V/C:	0.882
Northbound	RT	1.00	234	1,600	0.000	Lost Time:	0.100
	TH	2.00	837	3,200	0.262 *	ITS:	0.000
	LT	1.00	172	1,600	0.108		
Eastbound	RT	1.00	87	1,600	0.000	ICU:	0.982
	TH	2.00	1,014	3,200	0.317		
	LT	1.00	128	1,600	0.080 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	188	1,600	0.031	N-S(1):	0.318
	TH	2.00	771	3,200	0.241 *	N-S(2):	0.328 *
	LT	1.00	272	1,600	0.170	E-W(1):	0.606 *
Westbound	RT	1.00	163	1,600	0.000	E-W(2):	0.485
	TH	2.00	1,277	3,200	0.399		
	LT	1.00	170	1,600	0.106 *	V/C:	0.934
Northbound	RT	1.00	403	1,600	0.146	Lost Time:	0.100
	TH	2.00	475	3,200	0.148	ITS:	0.000
	LT	1.00	139	1,600	0.087 *		
Eastbound	RT	1.00	128	1,600	0.000	ICU:	1.034
	TH	2.00	1,600	3,200	0.500 *		
	LT	1.00	138	1,600	0.086	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	656	1,600	0.410 *	N-S(1):	0.088
	TH	0.00	0	0	0.000	N-S(2):	0.410 *
	LT	1.00	141	1,600	0.088	E-W(1):	0.390
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.431 *
	TH	2.00	1,378	3,200	0.431 *		
	LT	1.00	174	1,600	0.109	V/C:	0.841
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	137	0	0.000	ICU:	0.941
	TH	3.00	1,213	4,800	0.281		
	LT	0.00	0	0	0.000 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	457	1,600	0.286 *	N-S(1):	0.168
	TH	0.00	0	0	0.000	N-S(2):	0.286 *
	LT	1.00	268	1,600	0.168	E-W(1):	0.588 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.375
	TH	2.00	1,200	3,200	0.375		
	LT	1.00	178	1,600	0.111 *	V/C:	0.874
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	290	0	0.000	ICU:	0.974
	TH	3.00	1,998	4,800	0.477 *		
	LT	0.00	0	0	0.000	LOS:	E

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 12 - Normandie Avenue & 220th Street
Description: Existing plus 2030 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	26	26	0	0.000	N-S(1):	0.374 *
	TH	2.00	402	402	3,200	0.134	N-S(2):	0.151
	LT	1.00	97	97	1,600	0.061 *	E-W(1):	0.156
Westbound	RT	0.00	106	106	0	0.000	E-W(2):	0.171 *
	TH	1.00	80	80	1,600	0.148 *		
	LT	0.00	46	51	1,600	0.032	V/C:	0.545
Northbound	RT	0.00	120	120	0	0.000	Lost Time:	0.100
	TH	2.00	883	883	3,200	0.313 *	ITS:	0.000
	LT	1.00	27	27	1,600	0.017		
Eastbound	RT	0.00	46	46	0	0.000	ICU:	0.645
	TH	1.00	116	116	1,600	0.124		
	LT	0.00	33	37	1,600	0.023 *	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	37	37	0	0.000	N-S(1):	0.227
	TH	2.00	795	795	3,200	0.260 *	N-S(2):	0.278 *
	LT	1.00	83	83	1,600	0.052	E-W(1):	0.121
Westbound	RT	0.00	115	115	0	0.000	E-W(2):	0.152 *
	TH	1.00	54	54	1,600	0.137 *		
	LT	0.00	45	50	1,600	0.031	V/C:	0.430
Northbound	RT	0.00	42	42	0	0.000	Lost Time:	0.100
	TH	2.00	517	517	3,200	0.175	ITS:	0.000
	LT	1.00	28	28	1,600	0.018 *		
Eastbound	RT	0.00	53	53	0	0.000	ICU:	0.530
	TH	1.00	67	67	1,600	0.090		
	LT	0.00	21	24	1,600	0.015 *	LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 13 - Meyler Street & 220th Street
Description: Existing plus 2030 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	4	4	0	0.000		N-S(1):	0.140 *
	TH	1.00	6	6	1,600	0.015		N-S(2):	0.081
	LT	0.00	12	14	1,600	0.009	*	E-W(1):	0.233 *
Westbound	RT	0.00	32	32	0	0.000		E-W(2):	0.206
	TH	1.00	150	150	1,600	0.193			
	LT	0.00	63	126	1,600	0.079	*	V/C:	0.373
Northbound	RT	0.00	74	74	0	0.000		Lost Time:	0.100
	TH	1.00	30	30	1,600	0.131	*	ITS:	0.000
	LT	0.00	96	106	1,600	0.066			
Eastbound	RT	0.00	51	51	0	0.000		ICU:	0.473
	TH	1.00	174	174	1,600	0.154	*		
	LT	0.00	19	21	1,600	0.013		LOS:	A

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	22	22	0	0.000		N-S(1):	0.087 *
	TH	1.00	32	32	1,600	0.064		N-S(2):	0.073
	LT	0.00	43	48	1,600	0.030	*	E-W(1):	0.210 *
Westbound	RT	0.00	7	7	0	0.000		E-W(2):	0.115
	TH	1.00	130	130	1,600	0.108			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.297
Northbound	RT	0.00	68	68	0	0.000		Lost Time:	0.100
	TH	1.00	8	8	1,600	0.057	*	ITS:	0.000
	LT	0.00	13	15	1,600	0.009			
Eastbound	RT	0.00	33	33	0	0.000		ICU:	0.397
	TH	1.00	257	257	1,600	0.188	*		
	LT	0.00	10	11	1,600	0.007		LOS:	A

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 14 - Vermont Avenue & 220th Street
Description: Existing plus 2030 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	307	307	0	0.000		N-S(1):	0.380
	TH	2.00	534	534	3,200	0.263	*	N-S(2):	0.422 *
	LT	1.00	56	56	1,600	0.035		E-W(1):	0.207 *
Westbound	RT	0.00	37	37	0	0.000		E-W(2):	0.163
	TH	1.00	27	27	1,600	0.052			
	LT	0.00	17	19	1,600	0.012	*	V/C:	0.629
Northbound	RT	0.00	40	40	0	0.000		Lost Time:	0.100
	TH	2.00	1,063	1,063	3,200	0.345		ITS:	0.000
	LT	1.00	255	255	1,600	0.159	*		
Eastbound	RT	0.00	102	102	0	0.000		ICU:	0.729
	TH	1.00	32	32	1,600	0.195	*		
	LT	0.00	161	178	1,600	0.111		LOS:	C

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	83	83	0	0.000		N-S(1):	0.202
	TH	2.00	970	970	3,200	0.329	*	N-S(2):	0.363 *
	LT	1.00	22	22	1,600	0.014		E-W(1):	0.371 *
Westbound	RT	0.00	43	43	0	0.000		E-W(2):	0.257
	TH	1.00	12	12	1,600	0.056			
	LT	0.00	31	35	1,600	0.022	*	V/C:	0.734
Northbound	RT	0.00	14	14	0	0.000		Lost Time:	0.100
	TH	2.00	588	588	3,200	0.188		ITS:	0.000
	LT	1.00	54	54	1,600	0.034	*		
Eastbound	RT	0.00	225	225	0	0.000		ICU:	0.834
	TH	1.00	13	13	1,600	0.349	*		
	LT	0.00	291	321	1,600	0.201		LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **17 - Normandie Avenue & 223rd Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	65	0	0.000	N-S(1):	0.324 *
	TH	2.00	376	3,200	0.138	N-S(2):	0.215
	LT	1.00	53	1,600	0.033 *	E-W(1):	0.286
Westbound	RT	0.00	105	0	0.000	E-W(2):	0.409 *
	TH	2.00	1,025	3,200	0.353 *		
	LT	1.00	121	1,600	0.076	V/C:	0.733
Northbound	RT	0.00	116	0	0.000	Lost Time:	0.100
	TH	2.00	815	3,200	0.291 *	ITS:	0.000
	LT	1.00	123	1,600	0.077		
Eastbound	RT	0.00	64	0	0.000	ICU:	0.833
	TH	2.00	609	3,200	0.210		
	LT	1.00	89	1,600	0.056 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	81	0	0.000	N-S(1):	0.232
	TH	2.00	708	3,200	0.247 *	N-S(2):	0.286 *
	LT	1.00	95	1,600	0.059	E-W(1):	0.458 *
Westbound	RT	0.00	96	0	0.000	E-W(2):	0.299
	TH	2.00	715	3,200	0.253		
	LT	1.00	105	1,600	0.066 *	V/C:	0.744
Northbound	RT	0.00	128	0	0.000	Lost Time:	0.100
	TH	2.00	425	3,200	0.173	ITS:	0.000
	LT	1.00	63	1,600	0.039 *		
Eastbound	RT	0.00	105	0	0.000	ICU:	0.844
	TH	2.00	1,148	3,200	0.392 *		
	LT	1.00	74	1,600	0.046	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 18 - Meyler Street & 223rd Street
Description: Existing plus 2030 Project plus Cumulative

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	57	57	0	0.000		N-S(1):	0.160 *
	TH	1.00	44	44	1,600	0.104		N-S(2):	0.155
	LT	0.00	60	66	1,600	0.041	*	E-W(1):	0.249
Westbound	RT	0.00	88	88	0	0.000		E-W(2):	0.427 *
	TH	2.00	1,154	1,154	3,200	0.388	*		
	LT	1.00	46	46	1,600	0.029		V/C:	0.587
Northbound	RT	0.00	69	69	0	0.000		Lost Time:	0.100
	TH	1.00	39	39	1,600	0.119	*	ITS:	0.000
	LT	0.00	74	82	1,600	0.051			
Eastbound	RT	0.00	24	24	0	0.000		ICU:	0.687
	TH	2.00	679	679	3,200	0.220			
	LT	1.00	62	62	1,600	0.039	*	LOS:	B

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	ADJ VOL	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	47	47	0	0.000		N-S(1):	0.081
	TH	1.00	15	15	1,600	0.069	*	N-S(2):	0.088 *
	LT	0.00	44	49	1,600	0.031		E-W(1):	0.425 *
Westbound	RT	0.00	51	51	0	0.000		E-W(2):	0.318
	TH	2.00	843	843	3,200	0.279			
	LT	1.00	59	59	1,600	0.037	*	V/C:	0.513
Northbound	RT	0.00	35	35	0	0.000		Lost Time:	0.100
	TH	1.00	15	15	1,600	0.050		ITS:	0.000
	LT	0.00	27	30	1,600	0.019	*		
Eastbound	RT	0.00	89	89	0	0.000		ICU:	0.613
	TH	2.00	1,152	1,152	3,200	0.388	*		
	LT	1.00	62	62	1,600	0.039		LOS:	B

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **19 - Vermont Avenue & 223rd Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	89	0	0.000	N-S(1):	0.368 *
	TH	2.00	412	3,200	0.157	N-S(2):	0.246
	LT	1.00	165	1,600	0.103 *	E-W(1):	0.280
Westbound	RT	0.00	385	0	0.000	E-W(2):	0.515 *
	TH	2.00	1,040	3,200	0.445 *		
	LT	2.00	250	2,880	0.087	V/C:	0.883
Northbound	RT	1.00	136	1,600	0.000	Lost Time:	0.100
	TH	2.00	849	3,200	0.265 *	ITS:	0.000
	LT	1.00	142	1,600	0.089		
Eastbound	RT	1.00	73	1,600	0.000	ICU:	0.983
	TH	2.00	619	3,200	0.193		
	LT	1.00	112	1,600	0.070 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	113	0	0.000	N-S(1):	0.367 *
	TH	2.00	773	3,200	0.277	N-S(2):	0.325
	LT	1.00	369	1,600	0.231 *	E-W(1):	0.440 *
Westbound	RT	0.00	153	0	0.000	E-W(2):	0.327
	TH	2.00	773	3,200	0.289		
	LT	2.00	271	2,880	0.094 *	V/C:	0.807
Northbound	RT	1.00	207	1,600	0.035	Lost Time:	0.100
	TH	2.00	434	3,200	0.136 *	ITS:	0.000
	LT	1.00	76	1,600	0.048		
Eastbound	RT	1.00	121	1,600	0.028	ICU:	0.907
	TH	2.00	1,106	3,200	0.346 *		
	LT	1.00	60	1,600	0.038	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing plus 2030 Project plus Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	535	1,600	0.334 *	N-S(1):	0.194
	TH	2.00	1	1,600	0.194	N-S(2):	0.334 *
	LT	0.00	310	1,600	0.194	E-W(1):	0.372 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.355
	TH	2.00	1,136	3,200	0.355		
	LT	1.00	174	1,600	0.109 *	V/C:	0.706
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	1.00	126	1,600	0.079	ICU:	0.806
	TH	2.00	843	3,200	0.263 *		
	LT	0.00	0	0	0.000	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	414	0	0.000	N-S(1):	0.274 *
	TH	2.00	2	1,600	0.260	N-S(2):	0.260
	LT	0.00	438	1,600	0.274 *	E-W(1):	0.521 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.251
	TH	2.00	803	3,200	0.251		
	LT	1.00	124	1,600	0.078 *	V/C:	0.795
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000		
Eastbound	RT	1.00	232	1,600	0.145	ICU:	0.895
	TH	2.00	1,417	3,200	0.443 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

INTERIM

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Interim**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	143	1,600	0.070	N-S(1):	0.439 *
	TH	2.00	758	3,200	0.237	N-S(2):	0.338
	LT	1.00	100	1,600	0.063 *	E-W(1):	0.359
Westbound	RT	0.00	171	0	0.000	E-W(2):	0.499 *
	TH	2.00	1,301	3,200	0.460 *		
	LT	1.00	70	1,600	0.044	V/C:	0.938
Northbound	RT	1.00	89	1,600	0.034	Lost Time:	0.100
	TH	2.00	1,203	3,200	0.376 *	ITS:	0.000
	LT	1.00	161	1,600	0.101		
Eastbound	RT	0.00	111	0	0.000	ICU:	1.038
	TH	2.00	896	3,200	0.315		
	LT	1.00	63	1,600	0.039 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	237	1,600	0.119	N-S(1):	0.373
	TH	2.00	1,384	3,200	0.433 *	N-S(2):	0.535 *
	LT	1.00	167	1,600	0.104	E-W(1):	0.503 *
Westbound	RT	0.00	156	0	0.000	E-W(2):	0.473
	TH	2.00	1,173	3,200	0.415		
	LT	1.00	75	1,600	0.047 *	V/C:	1.038
Northbound	RT	1.00	124	1,600	0.054	Lost Time:	0.100
	TH	2.00	861	3,200	0.269	ITS:	0.000
	LT	1.00	163	1,600	0.102 *		
Eastbound	RT	0.00	197	0	0.000	ICU:	1.138
	TH	2.00	1,261	3,200	0.456 *		
	LT	1.00	92	1,600	0.058	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Interim**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	158	1,600	0.061	N-S(1):	0.183
	TH	2.00	276	3,200	0.086 *	N-S(2):	0.204 *
	LT	2.00	48	2,560	0.019	E-W(1):	0.327
Westbound	RT	1.00	116	1,600	0.063	E-W(2):	0.426 *
	TH	2.00	1,122	3,200	0.351 *		
	LT	1.00	125	1,600	0.078	V/C:	0.630
Northbound	RT	1.00	211	1,600	0.093	Lost Time:	0.100
	TH	2.00	526	3,200	0.164	ITS:	0.000
	LT	2.00	301	2,560	0.118 *		
Eastbound	RT	1.00	482	1,600	0.184	ICU:	0.730
	TH	2.00	796	3,200	0.249		
	LT	1.00	120	1,600	0.075 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	172	1,600	0.074	N-S(1):	0.137
	TH	2.00	506	3,200	0.158 *	N-S(2):	0.244 *
	LT	2.00	150	2,560	0.059	E-W(1):	0.575 *
Westbound	RT	1.00	83	1,600	0.023	E-W(2):	0.393
	TH	2.00	1,043	3,200	0.326		
	LT	1.00	182	1,600	0.114 *	V/C:	0.819
Northbound	RT	1.00	204	1,600	0.071	Lost Time:	0.100
	TH	2.00	250	3,200	0.078	ITS:	0.000
	LT	2.00	221	2,560	0.086 *		
Eastbound	RT	1.00	608	1,600	0.294	ICU:	0.919
	TH	2.00	1,476	3,200	0.461 *		
	LT	1.00	107	1,600	0.067	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Interim**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	73	0	0.000	N-S(1):	0.470 *
	TH	2.00	937	3,200	0.316	N-S(2):	0.394
	LT	1.00	12	1,600	0.008 *	E-W(1):	0.134
Westbound	RT	0.00	38	0	0.000	E-W(2):	0.157 *
	TH	1.00	82	1,600	0.145 *		
	LT	0.00	112	1,600	0.070	V/C:	0.627
Northbound	RT	0.00	33	0	0.000	Lost Time:	0.100
	TH	2.00	1,444	3,200	0.462 *	ITS:	0.000
	LT	1.00	124	1,600	0.078		
Eastbound	RT	0.00	59	0	0.000	ICU:	0.727
	TH	1.00	25	1,600	0.064		
	LT	0.00	19	1,600	0.012 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	18	0	0.000	N-S(1):	0.340
	TH	2.00	1,547	3,200	0.489 *	N-S(2):	0.528 *
	LT	1.00	32	1,600	0.020	E-W(1):	0.242 *
Westbound	RT	0.00	20	0	0.000	E-W(2):	0.108
	TH	1.00	42	1,600	0.070		
	LT	0.00	50	1,600	0.031 *	V/C:	0.770
Northbound	RT	0.00	26	0	0.000	Lost Time:	0.100
	TH	2.00	999	3,200	0.320	ITS:	0.000
	LT	1.00	62	1,600	0.039 *		
Eastbound	RT	0.00	173	0	0.000	ICU:	0.870
	TH	1.00	104	1,600	0.211 *		
	LT	0.00	60	1,600	0.038	LOS:	D

* - Denotes critical movement

Project Title: Harbor-UCLA Medical Center
Intersection: 15 - Figueroa Street & 220th Street/I-110 NB Ramps
Description: Interim

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: AM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	411	1,600	0.179 *	N-S(1):	0.302
	TH	2.00	414	3,200	0.129	N-S(2):	0.502 *
	LT	1.00	137	1,600	0.086	E-W(1):	0.377 *
Westbound	RT	1.00	95	1,600	0.017	E-W(2):	0.000
	TH	1.00	221	1,600	0.196 *		
	LT	0.00	93	1,600	0.058	V/C:	0.879
Northbound	RT	1.00	155	1,600	0.068	Lost Time:	0.100
	TH	2.00	690	3,200	0.216	ITS:	0.000
	LT	1.00	517	1,600	0.323 *		
Eastbound	RT	1.00	52	1,600	0.000	ICU:	0.979
	TH	1.00	40	1,600	0.181 *		
	LT	0.00	249	1,600	0.156	LOS:	E

Date/Time: PM PEAK HOUR

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	525	1,600	0.248 *	N-S(1):	0.164
	TH	2.00	647	3,200	0.202	N-S(2):	0.529 *
	LT	1.00	80	1,600	0.050	E-W(1):	0.331 *
Westbound	RT	1.00	56	1,600	0.010	E-W(2):	0.000
	TH	1.00	111	1,600	0.107 *		
	LT	0.00	60	1,600	0.038	V/C:	0.860
Northbound	RT	1.00	53	1,600	0.014	Lost Time:	0.100
	TH	2.00	366	3,200	0.114	ITS:	0.000
	LT	1.00	450	1,600	0.281 *		
Eastbound	RT	1.00	115	1,600	0.000	ICU:	0.960
	TH	1.00	101	1,600	0.224 *		
	LT	0.00	258	1,600	0.161	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Interim**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	58	1,600	0.021	N-S(1):	0.472 *
	TH	2.00	961	3,200	0.300	N-S(2):	0.428
	LT	1.00	79	1,600	0.049 *	E-W(1):	0.292
Westbound	RT	0.00	194	0	0.000	E-W(2):	0.378 *
	TH	2.00	915	3,200	0.347 *		
	LT	1.00	263	1,600	0.164	V/C:	0.850
Northbound	RT	1.00	180	1,600	0.030	Lost Time:	0.100
	TH	2.00	1,355	3,200	0.423 *	ITS:	0.000
	LT	1.00	204	1,600	0.128		
Eastbound	RT	1.00	121	1,600	0.012	ICU:	0.950
	TH	2.00	411	3,200	0.128		
	LT	1.00	50	1,600	0.031 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	45	1,600	0.010	N-S(1):	0.428
	TH	2.00	1,452	3,200	0.454 *	N-S(2):	0.521 *
	LT	1.00	217	1,600	0.136	E-W(1):	0.363 *
Westbound	RT	0.00	96	0	0.000	E-W(2):	0.264
	TH	2.00	631	3,200	0.227		
	LT	1.00	85	1,600	0.053 *	V/C:	0.884
Northbound	RT	1.00	179	1,600	0.085	Lost Time:	0.100
	TH	2.00	934	3,200	0.292	ITS:	0.000
	LT	1.00	107	1,600	0.067 *		
Eastbound	RT	1.00	204	1,600	0.094	ICU:	0.984
	TH	2.00	991	3,200	0.310 *		
	LT	1.00	59	1,600	0.037	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Interim**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	193	1,600	0.019	N-S(1):	0.283 *
	TH	2.00	296	3,200	0.093	N-S(2):	0.161
	LT	1.00	73	1,600	0.046 *	E-W(1):	0.249
Westbound	RT	1.00	280	1,600	0.152	E-W(2):	0.517 *
	TH	2.00	1,000	3,200	0.313 *		
	LT	1.00	77	1,600	0.048	V/C:	0.800
Northbound	RT	1.00	159	1,600	0.075	Lost Time:	0.100
	TH	2.00	757	3,200	0.237 *	ITS:	0.000
	LT	1.00	109	1,600	0.068		
Eastbound	RT	1.00	190	1,600	0.085	ICU:	0.900
	TH	2.00	644	3,200	0.201		
	LT	1.00	326	1,600	0.204 *	LOS:	D

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	188	1,600	0.016	N-S(1):	0.230 *
	TH	2.00	476	3,200	0.149	N-S(2):	0.197
	LT	1.00	164	1,600	0.103 *	E-W(1):	0.456 *
Westbound	RT	1.00	154	1,600	0.045	E-W(2):	0.415
	TH	2.00	679	3,200	0.212		
	LT	1.00	79	1,600	0.049 *	V/C:	0.686
Northbound	RT	1.00	117	1,600	0.048	Lost Time:	0.100
	TH	2.00	406	3,200	0.127 *	ITS:	0.000
	LT	1.00	76	1,600	0.048		
Eastbound	RT	1.00	222	1,600	0.115	ICU:	0.786
	TH	2.00	1,301	3,200	0.407 *		
	LT	1.00	325	1,600	0.203	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Interim**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	287	1,600	0.102	N-S(1):	0.380
	TH	2.00	935	3,200	0.292 *	N-S(2):	0.385 *
	LT	1.00	86	1,600	0.054	E-W(1):	0.500
Westbound	RT	0.00	105	0	0.000	E-W(2):	0.532 *
	TH	3.00	1,710	4,800	0.378 *		
	LT	1.00	325	1,600	0.203	V/C:	0.917
Northbound	RT	1.00	317	1,600	0.097	Lost Time:	0.100
	TH	2.00	1,043	3,200	0.326	ITS:	0.000
	LT	1.00	148	1,600	0.093 *		
Eastbound	RT	0.00	77	0	0.000	ICU:	1.017
	TH	3.00	1,347	4,800	0.297		
	LT	1.00	247	1,600	0.154 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	148	1,600	0.021	N-S(1):	0.388
	TH	2.00	1,029	3,200	0.322 *	N-S(2):	0.443 *
	LT	1.00	188	1,600	0.118	E-W(1):	0.531 *
Westbound	RT	0.00	150	0	0.000	E-W(2):	0.481
	TH	3.00	1,474	4,800	0.338		
	LT	1.00	330	1,600	0.206 *	V/C:	0.974
Northbound	RT	1.00	343	1,600	0.111	Lost Time:	0.100
	TH	2.00	863	3,200	0.270	ITS:	0.000
	LT	1.00	194	1,600	0.121 *		
Eastbound	RT	0.00	128	0	0.000	ICU:	1.074
	TH	3.00	1,430	4,800	0.325 *		
	LT	1.00	228	1,600	0.143	LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	164	1	164	105	1	**105**
	Left-Through		0			0	
	Through	793	1	**475**	570	1	365
	Through-Right		1			1	
	Right	157	0	157	159	0	159
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	34	1	**34**	139	1	139
	Left-Through		0			0	
	Through	414	1	263	792	1	**482**
	Through-Right		1			1	
	Right	111	0	111	172	0	172
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	109	1	**109**	119	1	119
	Left-Through		0			0	
	Through	1053	1	571	1617	1	**872**
	Through-Right		1			1	
	Right	88	0	88	126	0	126
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	110	1	110	62	1	**62**
	Left-Through		0			0	
	Through	1625	1	**852**	1155	1	601
	Through-Right		1			1	
	Right	79	0	79	46	0	46
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	509		North-South:	587
			East-West:	961		East-West:	934
			SUM:	1470		SUM:	1521
VOLUME/CAPACITY (V/C) RATIO:				1.069			1.106
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.999**			**1.036**
LEVEL OF SERVICE (LOS):				**E**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>				
3	North-South Street:	Western Avenue	East-West Street:	Carson Street		
	Scenario:	Interim				
	Count Date:	1/0/1900	Analyst:	<Fehr & Peers>	Date:	<date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	161	1	161	163	1	**163**
	Left-Through		0			0	
	Through	1203	2	**602**	861	2	431
	Through-Right		0			0	
	Right	89	1	54	124	1	87
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	100	1	**100**	167	1	167
	Left-Through		0			0	
	Through	758	2	379	1384	2	**692**
	Through-Right		0			0	
	Right	143	1	112	237	1	191
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	63	1	**63**	92	1	92
	Left-Through		0			0	
	Through	896	1	504	1261	1	**729**
	Through-Right		1			1	
	Right	111	0	111	197	0	197
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	70	1	70	75	1	**75**
	Left-Through		0			0	
	Through	1301	1	**736**	1173	1	665
	Through-Right		1			1	
	Right	171	0	171	156	0	156
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	702		North-South:	855
			East-West:	799		East-West:	804
			SUM:	1501		SUM:	1659
VOLUME/CAPACITY (V/C) RATIO:				1.092			1.207
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.022**			**1.137**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	224	1	**224**	186	1	**186**
	Left-Through		0			0	
	Through	707	2	354	523	2	262
	Through-Right		0			0	
	Right	76	1	0	111	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	35	1	35	98	1	98
	Left-Through		0			0	
	Through	391	1	**276**	560	1	**373**
	Through-Right		1			1	
	Right	161	0	161	186	0	186
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	213	1	**213**	216	1	216
	Left-Through		0			0	
	Through	1049	2	525	1461	2	**731**
	Through-Right		0			0	
	Right	203	1	91	176	1	83
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	172	1	172	163	1	**163**
	Left-Through		0			0	
	Through	1373	2	**687**	1306	2	653
	Through-Right		0			0	
	Right	80	1	63	81	1	32
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	500		North-South:	559
			East-West:	900		East-West:	894
			SUM:	1400		SUM:	1453
VOLUME/CAPACITY (V/C) RATIO:				0.933			1.057
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.863**			**0.987**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	124	1	124	62	1	**62**
	Left-Through		0			0	
	Through	1444	1	**739**	999	1	513
	Through-Right		1			1	
	Right	33	0	33	26	0	26
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	12	1	**12**	32	1	32
	Left-Through		0			0	
	Through	937	1	505	1547	1	**783**
	Through-Right		1			1	
	Right	73	0	73	18	0	18
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	19	0	**19**	60	0	60
	Left-Through		0			0	
	Through	25	0	103	104	0	**337**
	Through-Right		0			0	
	Right	59	0	0	173	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	112	0	112	50	0	**50**
	Left-Through		0			0	
	Through	82	0	**232**	42	0	112
	Through-Right		0			0	
	Right	38	0	0	20	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	751		*North-South:*	845
			East-West:	251		*East-West:*	387
			SUM:	1002		*SUM:*	1232
VOLUME/CAPACITY *(V/C)* RATIO:				0.668			0.821
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.598**			**0.751**
LEVEL OF SERVICE (LOS):				**A**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	29	1	29	30	1	**30**
	Left-Through		0			0	
	Through	893	1	**509**	536	1	290
	Through-Right		1			1	
	Right	125	0	125	44	0	44
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	74	1	**74**	79	1	79
	Left-Through		0			0	
	Through	422	1	225	819	1	**429**
	Through-Right		1			1	
	Right	28	0	28	38	0	38
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	31	0	31	21	0	21
	Left-Through		1			1	
	Through	106	0	**137**	65	0	**86**
	Through-Right		0			0	
	Right	49	1	35	56	1	41
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	49	0	**49**	47	0	**47**
	Left-Through		1			1	
	Through	81	0	130	37	0	84
	Through-Right		0			0	
	Right	107	1	70	90	1	51
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	583		North-South:	459
			East-West:	186		East-West:	133
			SUM:	769		SUM:	592
VOLUME/CAPACITY (V/C) RATIO:				0.513			0.395
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.443**			**0.325**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	204	1	204	107	1	**107**
	Left-Through		0			0	
	Through	1355	2	**678**	934	2	467
	Through-Right		0			0	
	Right	180	1	49	179	1	137
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	79	1	**79**	217	1	217
	Left-Through		0			0	
	Through	961	2	481	1452	2	**726**
	Through-Right		0			0	
	Right	58	1	33	45	1	16
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	50	1	**50**	59	1	59
	Left-Through		0			0	
	Through	411	2	206	991	2	**496**
	Through-Right		0			0	
	Right	121	1	19	204	1	151
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	263	1	263	85	1	**85**
	Left-Through		0			0	
	Through	915	1	**555**	631	1	364
	Through-Right		1			1	
	Right	194	0	194	96	0	96
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	757		North-South:	833
			East-West:	605		East-West:	581
			SUM:	1362		SUM:	1414
VOLUME/CAPACITY (V/C) RATIO:				0.956			0.992
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.886**			**0.922**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	131	1	131	67	1	**67**
	Left-Through		0			0	
	Through	856	2	**428**	449	2	225
	Through-Right		0			0	
	Right	115	1	52	133	1	83
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	54	1	**54**	92	1	92
	Left-Through		0			0	
	Through	397	1	233	741	1	**411**
	Through-Right		1			1	
	Right	68	0	68	80	0	80
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	88	1	**88**	76	1	76
	Left-Through		0			0	
	Through	647	1	358	1224	1	**668**
	Through-Right		1			1	
	Right	68	0	68	112	0	112
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	127	1	127	101	1	**101**
	Left-Through		0			0	
	Through	1093	2	**547**	757	2	379
	Through-Right		0			0	
	Right	81	1	54	92	1	46
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	482		North-South:	478
			East-West:	635		East-West:	769
			SUM:	1117		SUM:	1247
VOLUME/CAPACITY (V/C) RATIO:				0.745			0.831
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.675**			**0.761**
LEVEL OF SERVICE (LOS):				**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Interim		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	148	1	**148**	194	1	**194**
	Left-Through		0			0	
	Through	1043	2	522	863	2	432
	Through-Right		0			0	
	Right	317	1	155	343	1	178
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	86	1	86	188	1	188
	Left-Through		0			0	
	Through	935	2	**468**	1029	2	**515**
	Through-Right		0			0	
	Right	287	1	164	148	1	34
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	247	1	**247**	228	1	228
	Left-Through		0			0	
	Through	1347	2	475	1430	2	**519**
	Through-Right		1			1	
	Right	77	0	77	128	0	128
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	325	1	325	330	1	**330**
	Left-Through		0			0	
	Through	1710	2	**605**	1474	2	541
	Through-Right		1			1	
	Right	105	0	105	150	0	150
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	616		*North-South:*	709
			East-West:	852		*East-West:*	849
			SUM:	1468		*SUM:*	1558
VOLUME/CAPACITY *(V/C)* RATIO:				1.068			1.133
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.998**			**1.063**
LEVEL OF SERVICE (LOS):				**E**			**F**

Version: 1i Beta; 8/4/2011

INTERIM PLUS 2023 PROJECT

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	143	1,600	0.070	N-S(1):	0.439 *
	TH	2.00	763	3,200	0.238	N-S(2):	0.339
	LT	1.00	100	1,600	0.063 *	E-W(1):	0.362
Westbound	RT	0.00	172	0	0.000	E-W(2):	0.500 *
	TH	2.00	1,302	3,200	0.461 *		
	LT	1.00	70	1,600	0.044	V/C:	0.939
Northbound	RT	1.00	89	1,600	0.034	Lost Time:	0.100
	TH	2.00	1,204	3,200	0.376 *	ITS:	0.000
	LT	1.00	161	1,600	0.101		
Eastbound	RT	0.00	113	0	0.000	ICU:	1.039
	TH	2.00	903	3,200	0.318		
	LT	1.00	63	1,600	0.039 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	237	1,600	0.119	N-S(1):	0.375
	TH	2.00	1,385	3,200	0.433 *	N-S(2):	0.536 *
	LT	1.00	167	1,600	0.104	E-W(1):	0.503 *
Westbound	RT	0.00	160	0	0.000	E-W(2):	0.477
	TH	2.00	1,181	3,200	0.419		
	LT	1.00	75	1,600	0.047 *	V/C:	1.039
Northbound	RT	1.00	124	1,600	0.054	Lost Time:	0.100
	TH	2.00	866	3,200	0.271	ITS:	0.000
	LT	1.00	164	1,600	0.103 *		
Eastbound	RT	0.00	197	0	0.000	ICU:	1.139
	TH	2.00	1,262	3,200	0.456 *		
	LT	1.00	92	1,600	0.058	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	163	1,600	0.064	N-S(1):	0.184
	TH	2.00	279	3,200	0.087 *	N-S(2):	0.207 *
	LT	2.00	48	2,560	0.019	E-W(1):	0.328
Westbound	RT	1.00	116	1,600	0.063	E-W(2):	0.430 *
	TH	2.00	1,134	3,200	0.354 *		
	LT	1.00	125	1,600	0.078	V/C:	0.637
Northbound	RT	1.00	211	1,600	0.093	Lost Time:	0.100
	TH	2.00	527	3,200	0.165	ITS:	0.000
	LT	2.00	307	2,560	0.120 *		
Eastbound	RT	1.00	490	1,600	0.186	ICU:	0.737
	TH	2.00	800	3,200	0.250		
	LT	1.00	121	1,600	0.076 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	173	1,600	0.073	N-S(1):	0.138
	TH	2.00	507	3,200	0.158 *	N-S(2):	0.245 *
	LT	2.00	150	2,560	0.059	E-W(1):	0.579 *
Westbound	RT	1.00	83	1,600	0.023	E-W(2):	0.397
	TH	2.00	1,045	3,200	0.327		
	LT	1.00	182	1,600	0.114 *	V/C:	0.824
Northbound	RT	1.00	204	1,600	0.071	Lost Time:	0.100
	TH	2.00	253	3,200	0.079	ITS:	0.000
	LT	2.00	222	2,560	0.087 *		
Eastbound	RT	1.00	647	1,600	0.318	ICU:	0.924
	TH	2.00	1,488	3,200	0.465 *		
	LT	1.00	112	1,600	0.070	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	73	0	0.000	N-S(1):	0.474 *
	TH	2.00	937	3,200	0.316	N-S(2):	0.394
	LT	1.00	19	1,600	0.012 *	E-W(1):	0.134
Westbound	RT	0.00	39	0	0.000	E-W(2):	0.158 *
	TH	1.00	82	1,600	0.146 *		
	LT	0.00	112	1,600	0.070	V/C:	0.632
Northbound	RT	0.00	33	0	0.000	Lost Time:	0.100
	TH	2.00	1,444	3,200	0.462 *	ITS:	0.000
	LT	1.00	124	1,600	0.078		
Eastbound	RT	0.00	59	0	0.000	ICU:	0.732
	TH	1.00	25	1,600	0.064		
	LT	0.00	19	1,600	0.012 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	18	0	0.000	N-S(1):	0.341
	TH	2.00	1,547	3,200	0.489 *	N-S(2):	0.528 *
	LT	1.00	33	1,600	0.021	E-W(1):	0.242 *
Westbound	RT	0.00	25	0	0.000	E-W(2):	0.111
	TH	1.00	42	1,600	0.073		
	LT	0.00	50	1,600	0.031 *	V/C:	0.770
Northbound	RT	0.00	26	0	0.000	Lost Time:	0.100
	TH	2.00	999	3,200	0.320	ITS:	0.000
	LT	1.00	62	1,600	0.039 *		
Eastbound	RT	0.00	173	0	0.000	ICU:	0.870
	TH	1.00	104	1,600	0.211 *		
	LT	0.00	60	1,600	0.038	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	419	1,600	0.182 *	N-S(1):	0.302
	TH	2.00	417	3,200	0.130	N-S(2):	0.507 *
	LT	1.00	137	1,600	0.086	E-W(1):	0.380 *
Westbound	RT	1.00	95	1,600	0.017	E-W(2):	0.000
	TH	1.00	221	1,600	0.196 *		
	LT	0.00	93	1,600	0.058	V/C:	0.887
Northbound	RT	1.00	155	1,600	0.068	Lost Time:	0.100
	TH	2.00	691	3,200	0.216	ITS:	0.000
	LT	1.00	520	1,600	0.325 *		
Eastbound	RT	1.00	62	1,600	0.000	ICU:	0.987
	TH	1.00	40	1,600	0.184 *		
	LT	0.00	255	1,600	0.159	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	563	1,600	0.271 *	N-S(1):	0.165
	TH	2.00	648	3,200	0.203	N-S(2):	0.562 *
	LT	1.00	80	1,600	0.050	E-W(1):	0.332 *
Westbound	RT	1.00	56	1,600	0.010	E-W(2):	0.000
	TH	1.00	111	1,600	0.107 *		
	LT	0.00	60	1,600	0.038	V/C:	0.894
Northbound	RT	1.00	53	1,600	0.014	Lost Time:	0.100
	TH	2.00	369	3,200	0.115	ITS:	0.000
	LT	1.00	465	1,600	0.291 *		
Eastbound	RT	1.00	117	1,600	0.000	ICU:	0.994
	TH	1.00	101	1,600	0.225 *		
	LT	0.00	259	1,600	0.162	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	58	1,600	0.021	N-S(1):	0.472 *
	TH	2.00	961	3,200	0.300	N-S(2):	0.428
	LT	1.00	79	1,600	0.049 *	E-W(1):	0.293
Westbound	RT	0.00	194	0	0.000	E-W(2):	0.378 *
	TH	2.00	915	3,200	0.347 *		
	LT	1.00	263	1,600	0.164	V/C:	0.850
Northbound	RT	1.00	182	1,600	0.032	Lost Time:	0.100
	TH	2.00	1,355	3,200	0.423 *	ITS:	0.000
	LT	1.00	204	1,600	0.128		
Eastbound	RT	1.00	121	1,600	0.012	ICU:	0.950
	TH	2.00	413	3,200	0.129		
	LT	1.00	50	1,600	0.031 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	45	1,600	0.010	N-S(1):	0.428
	TH	2.00	1,452	3,200	0.454 *	N-S(2):	0.521 *
	LT	1.00	217	1,600	0.136	E-W(1):	0.364 *
Westbound	RT	0.00	96	0	0.000	E-W(2):	0.265
	TH	2.00	633	3,200	0.228		
	LT	1.00	87	1,600	0.054 *	V/C:	0.885
Northbound	RT	1.00	179	1,600	0.085	Lost Time:	0.100
	TH	2.00	934	3,200	0.292	ITS:	0.000
	LT	1.00	107	1,600	0.067 *		
Eastbound	RT	1.00	204	1,600	0.094	ICU:	0.985
	TH	2.00	991	3,200	0.310 *		
	LT	1.00	59	1,600	0.037	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	206	1,600	0.026	N-S(1):	0.283 *
	TH	2.00	296	3,200	0.093	N-S(2):	0.162
	LT	1.00	73	1,600	0.046 *	E-W(1):	0.250
Westbound	RT	1.00	281	1,600	0.153	E-W(2):	0.521 *
	TH	2.00	1,009	3,200	0.315 *		
	LT	1.00	77	1,600	0.048	V/C:	0.804
Northbound	RT	1.00	159	1,600	0.075	Lost Time:	0.100
	TH	2.00	757	3,200	0.237 *	ITS:	0.000
	LT	1.00	111	1,600	0.069		
Eastbound	RT	1.00	190	1,600	0.084	ICU:	0.904
	TH	2.00	647	3,200	0.202		
	LT	1.00	330	1,600	0.206 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	191	1,600	0.013	N-S(1):	0.230 *
	TH	2.00	476	3,200	0.149	N-S(2):	0.197
	LT	1.00	165	1,600	0.103 *	E-W(1):	0.458 *
Westbound	RT	1.00	154	1,600	0.045	E-W(2):	0.427
	TH	2.00	681	3,200	0.213		
	LT	1.00	79	1,600	0.049 *	V/C:	0.688
Northbound	RT	1.00	117	1,600	0.048	Lost Time:	0.100
	TH	2.00	406	3,200	0.127 *	ITS:	0.000
	LT	1.00	77	1,600	0.048		
Eastbound	RT	1.00	224	1,600	0.116	ICU:	0.788
	TH	2.00	1,310	3,200	0.409 *		
	LT	1.00	342	1,600	0.214	LOS:	C

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Interim plus Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	287	1,600	0.102	N-S(1):	0.381
	TH	2.00	935	3,200	0.292 *	N-S(2):	0.385 *
	LT	1.00	86	1,600	0.054	E-W(1):	0.500
Westbound	RT	0.00	105	0	0.000	E-W(2):	0.532 *
	TH	3.00	1,710	4,800	0.378 *		
	LT	1.00	325	1,600	0.203	V/C:	0.917
Northbound	RT	1.00	317	1,600	0.097	Lost Time:	0.100
	TH	2.00	1,045	3,200	0.327	ITS:	0.000
	LT	1.00	148	1,600	0.093 *		
Eastbound	RT	0.00	77	0	0.000	ICU:	1.017
	TH	3.00	1,347	4,800	0.297		
	LT	1.00	247	1,600	0.154 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	148	1,600	0.021	N-S(1):	0.388
	TH	2.00	1,031	3,200	0.322 *	N-S(2):	0.443 *
	LT	1.00	188	1,600	0.118	E-W(1):	0.531 *
Westbound	RT	0.00	150	0	0.000	E-W(2):	0.481
	TH	3.00	1,474	4,800	0.338		
	LT	1.00	330	1,600	0.206 *	V/C:	0.974
Northbound	RT	1.00	343	1,600	0.111	Lost Time:	0.100
	TH	2.00	863	3,200	0.270	ITS:	0.000
	LT	1.00	194	1,600	0.121 *		
Eastbound	RT	0.00	128	0	0.000	ICU:	1.074
	TH	3.00	1,430	4,800	0.325 *		
	LT	1.00	228	1,600	0.143	LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB--	0	NB-- 0	SB--	0
		EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	AM Volume	AM No. of Lanes	AM Lane Volume	PM Volume	PM No. of Lanes	PM Lane Volume
NORTHBOUND	Left	164	1	164	105	1	**105**
	Left-Through		0			0	
	Through	797	1	**477**	587	1	374
	Through-Right		1			1	
	Right	157	0	157	160	0	160
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	34	1	**34**	139	1	139
	Left-Through		0			0	
	Through	432	1	272	796	1	**484**
	Through-Right		1			1	
	Right	111	0	111	172	0	172
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	109	1	**109**	119	1	119
	Left-Through		0			0	
	Through	1053	1	572	1617	1	**872**
	Through-Right		1			1	
	Right	91	0	91	127	0	127
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	111	1	111	62	1	**62**
	Left-Through		0			0	
	Through	1625	1	**852**	1155	1	601
	Through-Right		1			1	
	Right	79	0	79	46	0	46
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	511		North-South:	589
			East-West:	961		East-West:	934
			SUM:	1472		SUM:	1523
VOLUME/CAPACITY (V/C) RATIO:				1.071			1.108
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.001**			**1.038**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
3	North-South Street:	Western Avenue	East-West Street:	Carson Street
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	161	1	161	164	1	**164**
	Left-Through		0			0	
	Through	1204	2	**602**	866	2	433
	Through-Right		0			0	
	Right	89	1	54	124	1	87
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	100	1	**100**	167	1	167
	Left-Through		0			0	
	Through	763	2	382	1385	2	**693**
	Through-Right		0			0	
	Right	143	1	112	237	1	191
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	63	1	**63**	92	1	92
	Left-Through		0			0	
	Through	903	1	508	1262	1	**730**
	Through-Right		1			1	
	Right	113	0	113	197	0	197
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	70	1	70	75	1	**75**
	Left-Through		0			0	
	Through	1302	1	**737**	1181	1	671
	Through-Right		1			1	
	Right	172	0	172	160	0	160
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	702		North-South:	857
			East-West:	800		East-West:	805
			SUM:	1502		SUM:	1662
VOLUME/CAPACITY (V/C) RATIO:				1.092			1.209
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.022**			**1.139**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	225	1	**225**	194	1	**194**
	Left-Through		0			0	
	Through	710	2	355	538	2	269
	Through-Right		0			0	
	Right	81	1	0	124	1	41
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	41	1	41	99	1	99
	Left-Through		0			0	
	Through	408	1	**285**	563	1	**375**
	Through-Right		1			1	
	Right	161	0	161	186	0	186
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	213	1	**213**	216	1	216
	Left-Through		0			0	
	Through	1052	2	526	1461	2	**731**
	Through-Right		0			0	
	Right	208	1	96	177	1	80
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	178	1	178	166	1	**166**
	Left-Through		0			0	
	Through	1374	2	**687**	1310	2	655
	Through-Right		0			0	
	Right	81	1	61	84	1	35
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	510		North-South:	569
			East-West:	900		East-West:	897
			SUM:	1410		SUM:	1466
VOLUME/CAPACITY (V/C) RATIO:				0.940			1.066
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.870**			**0.996**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	124	1	124	62	1	**62**
	Left-Through		0			0	
	Through	1444	1	**739**	999	1	513
	Through-Right		1			1	
	Right	33	0	33	26	0	26
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	19	1	**19**	33	1	33
	Left-Through		0			0	
	Through	937	1	505	1547	1	**783**
	Through-Right		1			1	
	Right	73	0	73	18	0	18
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	19	0	**19**	60	0	60
	Left-Through		0			0	
	Through	25	0	103	104	0	**337**
	Through-Right		0			0	
	Right	59	0	0	173	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	112	0	112	50	0	**50**
	Left-Through		0			0	
	Through	82	0	**233**	42	0	117
	Through-Right		0			0	
	Right	39	0	0	25	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	758		*North-South:*	845
			East-West:	252		*East-West:*	387
			SUM:	1010		*SUM:*	1232
VOLUME/CAPACITY *(V/C)* RATIO:				0.673			0.821
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.603**			**0.751**
LEVEL OF SERVICE (LOS):				**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	29	1	29	30	1	**30**
	Left-Through		0			0	
	Through	908	1	**517**	539	1	292
	Through-Right		1			1	
	Right	126	0	126	44	0	44
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	83	1	**83**	81	1	81
	Left-Through		0			0	
	Through	423	1	226	828	1	**433**
	Through-Right		1			1	
	Right	28	0	28	38	0	38
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	32	0	32	21	0	21
	Left-Through		1			1	
	Through	112	0	**144**	66	0	**87**
	Through-Right		0			0	
	Right	49	1	35	56	1	41
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	49	0	**49**	47	0	**47**
	Left-Through		1			1	
	Through	82	0	131	42	0	89
	Through-Right		0			0	
	Right	109	1	68	99	1	59
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	600		North-South:	463
			East-West:	193		East-West:	134
			SUM:	793		SUM:	597
VOLUME/CAPACITY (V/C) RATIO:				0.529			0.398
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.459**			**0.328**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	204	1	204	107	1	**107**
	Left-Through		0			0	
	Through	1355	2	**678**	934	2	467
	Through-Right		0			0	
	Right	182	1	51	179	1	136
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	79	1	**79**	217	1	217
	Left-Through		0			0	
	Through	961	2	481	1452	2	**726**
	Through-Right		0			0	
	Right	58	1	33	45	1	16
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	50	1	**50**	59	1	59
	Left-Through		0			0	
	Through	413	2	207	991	2	**496**
	Through-Right		0			0	
	Right	121	1	19	204	1	151
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	263	1	263	87	1	**87**
	Left-Through		0			0	
	Through	915	1	**555**	633	1	365
	Through-Right		1			1	
	Right	194	0	194	96	0	96
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	757		North-South:	833
			East-West:	605		East-West:	583
			SUM:	1362		SUM:	1416
VOLUME/CAPACITY (V/C) RATIO:				0.956			0.994
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.886**			**0.924**
LEVEL OF SERVICE (LOS):				**D**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	131	1	131	67	1	**67**
	Left-Through		0			0	
	Through	860	2	**430**	450	2	225
	Through-Right		0			0	
	Right	118	1	55	133	1	81
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	55	1	**55**	95	1	95
	Left-Through		0			0	
	Through	398	1	233	745	1	**414**
	Through-Right		1			1	
	Right	68	0	68	82	0	82
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	91	1	**91**	76	1	76
	Left-Through		0			0	
	Through	648	1	358	1224	1	**668**
	Through-Right		1			1	
	Right	68	0	68	112	0	112
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	127	1	127	104	1	**104**
	Left-Through		0			0	
	Through	1093	2	**547**	759	2	380
	Through-Right		0			0	
	Right	90	1	63	94	1	47
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	485		*North-South:*	481
			East-West:	638		*East-West:*	772
			SUM:	1123		*SUM:*	1253
VOLUME/CAPACITY *(V/C)* RATIO:				0.749			0.835
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.679**			**0.765**
LEVEL OF SERVICE (LOS):				**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Interim plus 2023 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM				PM			
No. of Phases					4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB--		0	NB-- 0	SB--		0
		EB-- 0	WB--		0	EB-- 0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?					1				1
Override Capacity					0				0
	MOVEMENT	Volume	No. of Lanes	Lane Volume		Volume	No. of Lanes	Lane Volume	
NORTHBOUND	Left	148	1	**148**		194	1	**194**	
	Left-Through		0				0		
	Through	1045	2	523		863	2	432	
	Through-Right		0				0		
	Right	317	1	155		343	1	178	
	Left-Through-Right		0				0		
	Left-Right		0				0		
SOUTHBOUND	Left	86	1	86		188	1	188	
	Left-Through		0				0		
	Through	935	2	**468**		1031	2	**516**	
	Through-Right		0				0		
	Right	287	1	164		148	1	34	
	Left-Through-Right		0				0		
	Left-Right		0				0		
EASTBOUND	Left	247	1	**247**		228	1	228	
	Left-Through		0				0		
	Through	1347	2	475		1430	2	**519**	
	Through-Right		1				1		
	Right	77	0	77		128	0	128	
	Left-Through-Right		0				0		
	Left-Right		0				0		
WESTBOUND	Left	325	1	325		330	1	**330**	
	Left-Through		0				0		
	Through	1710	2	**605**		1474	2	541	
	Through-Right		1				1		
	Right	105	0	105		150	0	150	
	Left-Through-Right		0				0		
	Left-Right		0				0		
CRITICAL VOLUMES			*North-South:*	616			*North-South:*	710	
			East-West:	852			*East-West:*	849	
			SUM:	1468			*SUM:*	1559	
VOLUME/CAPACITY *(V/C)* RATIO:				1.068				1.134	
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.998**				**1.064**	
LEVEL OF SERVICE (LOS):				**E**				**F**	

Version: 1i Beta; 8/4/2011

CUMULATIVE

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	150	1,600	0.073	N-S(1):	0.462 *
	TH	2.00	798	3,200	0.249	N-S(2):	0.355
	LT	1.00	105	1,600	0.066 *	E-W(1):	0.376
Westbound	RT	0.00	180	0	0.000	E-W(2):	0.523 *
	TH	2.00	1,363	3,200	0.482 *		
	LT	1.00	74	1,600	0.046	V/C:	0.985
Northbound	RT	1.00	93	1,600	0.035	Lost Time:	0.100
	TH	2.00	1,266	3,200	0.396 *	ITS:	0.000
	LT	1.00	170	1,600	0.106		
Eastbound	RT	0.00	117	0	0.000	ICU:	1.085
	TH	2.00	938	3,200	0.330		
	LT	1.00	66	1,600	0.041 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	249	1,600	0.126	N-S(1):	0.393
	TH	2.00	1,456	3,200	0.455 *	N-S(2):	0.563 *
	LT	1.00	176	1,600	0.110	E-W(1):	0.525 *
Westbound	RT	0.00	163	0	0.000	E-W(2):	0.493
	TH	2.00	1,223	3,200	0.433		
	LT	1.00	79	1,600	0.049 *	V/C:	1.088
Northbound	RT	1.00	130	1,600	0.057	Lost Time:	0.100
	TH	2.00	905	3,200	0.283	ITS:	0.000
	LT	1.00	172	1,600	0.108 *		
Eastbound	RT	0.00	208	0	0.000	ICU:	1.188
	TH	2.00	1,316	3,200	0.476 *		
	LT	1.00	96	1,600	0.060	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	166	1,600	0.064	N-S(1):	0.193
	TH	2.00	291	3,200	0.091 *	N-S(2):	0.215 *
	LT	2.00	50	2,560	0.020	E-W(1):	0.342
Westbound	RT	1.00	121	1,600	0.066	E-W(2):	0.447 *
	TH	2.00	1,176	3,200	0.368 *		
	LT	1.00	131	1,600	0.082	V/C:	0.662
Northbound	RT	1.00	220	1,600	0.097	Lost Time:	0.100
	TH	2.00	553	3,200	0.173	ITS:	0.000
	LT	2.00	317	2,560	0.124 *		
Eastbound	RT	1.00	507	1,600	0.193	ICU:	0.762
	TH	2.00	832	3,200	0.260		
	LT	1.00	126	1,600	0.079 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	181	1,600	0.078	N-S(1):	0.143
	TH	2.00	532	3,200	0.166 *	N-S(2):	0.257 *
	LT	2.00	157	2,560	0.061	E-W(1):	0.600 *
Westbound	RT	1.00	87	1,600	0.024	E-W(2):	0.410
	TH	2.00	1,087	3,200	0.340		
	LT	1.00	188	1,600	0.118 *	V/C:	0.857
Northbound	RT	1.00	212	1,600	0.074	Lost Time:	0.100
	TH	2.00	263	3,200	0.082	ITS:	0.000
	LT	2.00	233	2,560	0.091 *		
Eastbound	RT	1.00	640	1,600	0.309	ICU:	0.957
	TH	2.00	1,543	3,200	0.482 *		
	LT	1.00	112	1,600	0.070	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	76	0	0.000	N-S(1):	0.494 *
	TH	2.00	986	3,200	0.332	N-S(2):	0.413
	LT	1.00	12	1,600	0.008 *	E-W(1):	0.142
Westbound	RT	0.00	40	0	0.000	E-W(2):	0.166 *
	TH	1.00	87	1,600	0.153 *		
	LT	0.00	118	1,600	0.074	V/C:	0.660
Northbound	RT	0.00	35	0	0.000	Lost Time:	0.100
	TH	2.00	1,519	3,200	0.486 *	ITS:	0.000
	LT	1.00	130	1,600	0.081		
Eastbound	RT	0.00	62	0	0.000	ICU:	0.760
	TH	1.00	26	1,600	0.068		
	LT	0.00	20	1,600	0.013 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	19	0	0.000	N-S(1):	0.358
	TH	2.00	1,627	3,200	0.514 *	N-S(2):	0.555 *
	LT	1.00	34	1,600	0.021	E-W(1):	0.254 *
Westbound	RT	0.00	21	0	0.000	E-W(2):	0.113
	TH	1.00	44	1,600	0.074		
	LT	0.00	53	1,600	0.033 *	V/C:	0.809
Northbound	RT	0.00	27	0	0.000	Lost Time:	0.100
	TH	2.00	1,051	3,200	0.337	ITS:	0.000
	LT	1.00	65	1,600	0.041 *		
Eastbound	RT	0.00	182	0	0.000	ICU:	0.909
	TH	1.00	109	1,600	0.221 *		
	LT	0.00	63	1,600	0.039	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	432	1,600	0.188 *	N-S(1):	0.316
	TH	2.00	434	3,200	0.136	N-S(2):	0.527 *
	LT	1.00	144	1,600	0.090	E-W(1):	0.397 *
Westbound	RT	1.00	100	1,600	0.018	E-W(2):	0.000
	TH	1.00	233	1,600	0.207 *		
	LT	0.00	98	1,600	0.061	V/C:	0.924
Northbound	RT	1.00	163	1,600	0.071	Lost Time:	0.100
	TH	2.00	724	3,200	0.226	ITS:	0.000
	LT	1.00	543	1,600	0.339 *		
Eastbound	RT	1.00	55	1,600	0.000	ICU:	1.024
	TH	1.00	42	1,600	0.190 *		
	LT	0.00	262	1,600	0.164	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	552	1,600	0.260 *	N-S(1):	0.172
	TH	2.00	677	3,200	0.212	N-S(2):	0.556 *
	LT	1.00	84	1,600	0.053	E-W(1):	0.350 *
Westbound	RT	1.00	58	1,600	0.010	E-W(2):	0.000
	TH	1.00	117	1,600	0.113 *		
	LT	0.00	63	1,600	0.039	V/C:	0.906
Northbound	RT	1.00	56	1,600	0.015	Lost Time:	0.100
	TH	2.00	382	3,200	0.119	ITS:	0.000
	LT	1.00	473	1,600	0.296 *		
Eastbound	RT	1.00	121	1,600	0.000	ICU:	1.006
	TH	1.00	107	1,600	0.237 *		
	LT	0.00	272	1,600	0.170	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	61	1,600	0.022	N-S(1):	0.497 *
	TH	2.00	1,011	3,200	0.316	N-S(2):	0.450
	LT	1.00	83	1,600	0.052 *	E-W(1):	0.308
Westbound	RT	0.00	204	0	0.000	E-W(2):	0.397 *
	TH	2.00	962	3,200	0.364 *		
	LT	1.00	276	1,600	0.173	V/C:	0.894
Northbound	RT	1.00	189	1,600	0.032	Lost Time:	0.100
	TH	2.00	1,425	3,200	0.445 *	ITS:	0.000
	LT	1.00	214	1,600	0.134		
Eastbound	RT	1.00	127	1,600	0.013	ICU:	0.994
	TH	2.00	432	3,200	0.135		
	LT	1.00	53	1,600	0.033 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	47	1,600	0.010	N-S(1):	0.450
	TH	2.00	1,527	3,200	0.477 *	N-S(2):	0.547 *
	LT	1.00	228	1,600	0.143	E-W(1):	0.382 *
Westbound	RT	0.00	101	0	0.000	E-W(2):	0.278
	TH	2.00	663	3,200	0.239		
	LT	1.00	89	1,600	0.056 *	V/C:	0.929
Northbound	RT	1.00	188	1,600	0.090	Lost Time:	0.100
	TH	2.00	983	3,200	0.307	ITS:	0.000
	LT	1.00	112	1,600	0.070 *		
Eastbound	RT	1.00	214	1,600	0.099	ICU:	1.029
	TH	2.00	1,043	3,200	0.326 *		
	LT	1.00	62	1,600	0.039	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	203	1,600	0.020	N-S(1):	0.297 *
	TH	2.00	310	3,200	0.097	N-S(2):	0.169
	LT	1.00	77	1,600	0.048 *	E-W(1):	0.262
Westbound	RT	1.00	295	1,600	0.160	E-W(2):	0.542 *
	TH	2.00	1,051	3,200	0.328 *		
	LT	1.00	81	1,600	0.051	V/C:	0.839
Northbound	RT	1.00	167	1,600	0.079	Lost Time:	0.100
	TH	2.00	796	3,200	0.249 *	ITS:	0.000
	LT	1.00	115	1,600	0.072		
Eastbound	RT	1.00	200	1,600	0.089	ICU:	0.939
	TH	2.00	676	3,200	0.211		
	LT	1.00	342	1,600	0.214 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	197	1,600	0.017	N-S(1):	0.241 *
	TH	2.00	499	3,200	0.156	N-S(2):	0.206
	LT	1.00	172	1,600	0.108 *	E-W(1):	0.479 *
Westbound	RT	1.00	161	1,600	0.047	E-W(2):	0.436
	TH	2.00	713	3,200	0.223		
	LT	1.00	83	1,600	0.052 *	V/C:	0.720
Northbound	RT	1.00	124	1,600	0.052	Lost Time:	0.100
	TH	2.00	425	3,200	0.133 *	ITS:	0.000
	LT	1.00	80	1,600	0.050		
Eastbound	RT	1.00	234	1,600	0.121	ICU:	0.820
	TH	2.00	1,367	3,200	0.427 *		
	LT	1.00	341	1,600	0.213	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Cumulative**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	1.00	302	1,600	0.108		N-S(1):	0.399
	TH	2.00	984	3,200	0.308	*	N-S(2):	0.406 *
	LT	1.00	90	1,600	0.056		E-W(1):	0.526
Westbound	RT	0.00	111	0	0.000		E-W(2):	0.561 *
	TH	3.00	1,800	4,800	0.398	*		
	LT	1.00	342	1,600	0.214		V/C:	0.967
Northbound	RT	1.00	334	1,600	0.102		Lost Time:	0.100
	TH	2.00	1,097	3,200	0.343		ITS:	0.000
	LT	1.00	156	1,600	0.098	*		
Eastbound	RT	0.00	81	0	0.000		ICU:	1.067
	TH	3.00	1,418	4,800	0.312			
	LT	1.00	260	1,600	0.163	*	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	1.00	155	1,600	0.022		N-S(1):	0.406
	TH	2.00	1,083	3,200	0.338	*	N-S(2):	0.466 *
	LT	1.00	197	1,600	0.123		E-W(1):	0.558 *
Westbound	RT	0.00	158	0	0.000		E-W(2):	0.506
	TH	3.00	1,551	4,800	0.356			
	LT	1.00	347	1,600	0.217	*	V/C:	1.024
Northbound	RT	1.00	361	1,600	0.117		Lost Time:	0.100
	TH	2.00	907	3,200	0.283		ITS:	0.000
	LT	1.00	204	1,600	0.128	*		
Eastbound	RT	0.00	135	0	0.000		ICU:	1.124
	TH	3.00	1,504	4,800	0.341	*		
	LT	1.00	240	1,600	0.150		LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	173	1	173	110	1	**110**
	Left-Through		0			0	
	Through	834	1	**500**	599	1	383
	Through-Right		1			1	
	Right	165	0	165	167	0	167
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	36	1	**36**	146	1	146
	Left-Through		0			0	
	Through	435	1	276	833	1	**507**
	Through-Right		1			1	
	Right	116	0	116	181	0	181
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	115	1	**115**	125	1	125
	Left-Through		0			0	
	Through	1104	1	599	1693	1	**913**
	Through-Right		1			1	
	Right	93	0	93	132	0	132
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	116	1	116	65	1	**65**
	Left-Through		0			0	
	Through	1706	1	**895**	1209	1	629
	Through-Right		1			1	
	Right	83	0	83	48	0	48
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	536		North-South:	617
			East-West:	1010		East-West:	978
			SUM:	1546		SUM:	1595
VOLUME/CAPACITY (V/C) RATIO:				1.124			1.160
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.054**			**1.090**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
3	North-South Street:	Western Avenue	East-West Street:	Carson Street
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	170	1	170	172	1	**172**
	Left-Through		0			0	
	Through	1266	2	**633**	905	2	453
	Through-Right		0			0	
	Right	93	1	56	130	1	91
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	105	1	**105**	176	1	176
	Left-Through		0			0	
	Through	798	2	399	1456	2	**728**
	Through-Right		0			0	
	Right	150	1	117	249	1	201
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	66	1	**66**	96	1	96
	Left-Through		0			0	
	Through	938	1	528	1316	1	**762**
	Through-Right		1			1	
	Right	117	0	117	208	0	208
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	74	1	74	79	1	**79**
	Left-Through		0			0	
	Through	1363	1	**772**	1223	1	693
	Through-Right		1			1	
	Right	180	0	180	163	0	163
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	738		North-South:	900
			East-West:	838		East-West:	841
			SUM:	1576		SUM:	1741
VOLUME/CAPACITY (V/C) RATIO:				1.146			1.266
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.076**			**1.196**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	236	1	**236**	195	1	**195**
	Left-Through		0			0	
	Through	743	2	372	550	2	275
	Through-Right		0			0	
	Right	80	1	0	117	1	31
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	37	1	37	103	1	103
	Left-Through		0			0	
	Through	411	1	**290**	589	1	**392**
	Through-Right		1			1	
	Right	169	0	169	195	0	195
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	224	1	**224**	228	1	228
	Left-Through		0			0	
	Through	1098	2	549	1526	2	**763**
	Through-Right		0			0	
	Right	213	1	95	185	1	88
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	181	1	181	172	1	**172**
	Left-Through		0			0	
	Through	1439	2	**720**	1363	2	682
	Through-Right		0			0	
	Right	84	1	66	85	1	34
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	526		*North-South:*	587
			East-West:	944		*East-West:*	935
			SUM:	1470		*SUM:*	1522
VOLUME/CAPACITY *(V/C)* RATIO:				0.980			1.107
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.910**			**1.037**
LEVEL OF SERVICE (LOS):				**E**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	130	1	130	65	1	**65**
	Left-Through		0			0	
	Through	1519	1	**777**	1051	1	539
	Through-Right		1			1	
	Right	35	0	35	27	0	27
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	12	1	**12**	34	1	34
	Left-Through		0			0	
	Through	986	1	531	1627	1	**823**
	Through-Right		1			1	
	Right	76	0	76	19	0	19
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	20	0	**20**	63	0	63
	Left-Through		0			0	
	Through	26	0	108	109	0	**354**
	Through-Right		0			0	
	Right	62	0	0	182	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	118	0	118	53	0	**53**
	Left-Through		0			0	
	Through	87	0	**245**	44	0	118
	Through-Right		0			0	
	Right	40	0	0	21	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	789		North-South:	888
			East-West:	265		East-West:	407
			SUM:	1054		SUM:	1295
VOLUME/CAPACITY (V/C) RATIO:				0.703			0.863
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.633**			**0.793**
LEVEL OF SERVICE (LOS):				**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	30	1	30	31	1	**31**
	Left-Through		0			0	
	Through	940	1	**536**	563	1	305
	Through-Right		1			1	
	Right	131	0	131	46	0	46
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	78	1	**78**	83	1	83
	Left-Through		0			0	
	Through	443	1	236	862	1	**451**
	Through-Right		1			1	
	Right	29	0	29	40	0	40
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	33	0	33	22	0	22
	Left-Through		1			1	
	Through	111	0	**144**	69	0	**91**
	Through-Right		0			0	
	Right	51	1	36	59	1	44
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	52	0	**52**	49	0	**49**
	Left-Through		1			1	
	Through	85	0	137	39	0	88
	Through-Right		0			0	
	Right	112	1	73	94	1	53
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	614		*North-South:*	482
			East-West:	196		*East-West:*	140
			SUM:	810		*SUM:*	622
VOLUME/CAPACITY *(V/C)* RATIO:				0.540			0.415
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.470**			**0.345**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	214	1	214	112	1	**112**
	Left-Through		0			0	
	Through	1425	2	**713**	983	2	492
	Through-Right		0			0	
	Right	189	1	51	188	1	144
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	83	1	**83**	228	1	228
	Left-Through		0			0	
	Through	1011	2	506	1527	2	**764**
	Through-Right		0			0	
	Right	61	1	35	47	1	16
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	53	1	**53**	62	1	62
	Left-Through		0			0	
	Through	432	2	216	1043	2	**522**
	Through-Right		0			0	
	Right	127	1	20	214	1	158
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	276	1	276	89	1	**89**
	Left-Through		0			0	
	Through	962	1	**583**	663	1	382
	Through-Right		1			1	
	Right	204	0	204	101	0	101
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	796		*North-South:*	876
			East-West:	636		*East-West:*	611
			SUM:	1432		*SUM:*	1487
VOLUME/CAPACITY *(V/C)* RATIO:				1.005			1.044
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.935**			**0.974**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	
	EB-- 0	WB--	0	EB-- 0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?			1			1	
Override Capacity			0			0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	138	1	138	71	1	**71**
	Left-Through		0			0	
	Through	901	2	**451**	472	2	236
	Through-Right		0			0	
	Right	121	1	55	140	1	87
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	57	1	**57**	96	1	96
	Left-Through		0			0	
	Through	417	1	245	779	1	**432**
	Through-Right		1			1	
	Right	72	0	72	84	0	84
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	92	1	**92**	80	1	80
	Left-Through		0			0	
	Through	680	1	376	1287	1	**703**
	Through-Right		1			1	
	Right	72	0	72	118	0	118
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	133	1	133	106	1	**106**
	Left-Through		0			0	
	Through	1150	2	**575**	796	2	398
	Through-Right		0			0	
	Right	85	1	57	96	1	48
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	508		*North-South:*	503
			East-West:	667		*East-West:*	809
			SUM:	1175		*SUM:*	1312
VOLUME/CAPACITY *(V/C)* RATIO:				0.783			0.875
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.713**			**0.805**
LEVEL OF SERVICE (LOS):				**C**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Cumulative		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	AM Volume	AM No. of Lanes	AM Lane Volume	PM Volume	PM No. of Lanes	PM Lane Volume
NORTHBOUND	Left	156	1	**156**	204	1	**204**
	Left-Through		0			0	
	Through	1097	2	549	907	2	454
	Through-Right		0			0	
	Right	334	1	163	361	1	188
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	90	1	90	197	1	197
	Left-Through		0			0	
	Through	984	2	**492**	1083	2	**542**
	Through-Right		0			0	
	Right	302	1	172	155	1	35
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	260	1	**260**	240	1	240
	Left-Through		0			0	
	Through	1418	2	500	1504	2	**546**
	Through-Right		1			1	
	Right	81	0	81	135	0	135
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	342	1	342	347	1	**347**
	Left-Through		0			0	
	Through	1800	2	**637**	1551	2	570
	Through-Right		1			1	
	Right	111	0	111	158	0	158
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			*North-South:*	648		*North-South:*	746
			East-West:	897		*East-West:*	893
			SUM:	1545		*SUM:*	1639
VOLUME/CAPACITY *(V/C)* RATIO:				1.124			1.192
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.054**			**1.122**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

CUMULATIVE PLUS 2030 PROJECT

Project Title: **Harbor-UCLA Medical Center**
Intersection: **3 - Western Avenue & Carson Street**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	150	1,600	0.073	N-S(1):	0.463 *
	TH	2.00	813	3,200	0.254	N-S(2):	0.361
	LT	1.00	106	1,600	0.066 *	E-W(1):	0.384
Westbound	RT	0.00	183	0	0.000	E-W(2):	0.526 *
	TH	2.00	1,369	3,200	0.485 *		
	LT	1.00	74	1,600	0.046	V/C:	0.989
Northbound	RT	1.00	93	1,600	0.035	Lost Time:	0.100
	TH	2.00	1,269	3,200	0.397 *	ITS:	0.000
	LT	1.00	171	1,600	0.107		
Eastbound	RT	0.00	122	0	0.000	ICU:	1.089
	TH	2.00	959	3,200	0.338		
	LT	1.00	66	1,600	0.041 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	249	1,600	0.126	N-S(1):	0.398
	TH	2.00	1,461	3,200	0.457 *	N-S(2):	0.566 *
	LT	1.00	176	1,600	0.110	E-W(1):	0.528 *
Westbound	RT	0.00	177	0	0.000	E-W(2):	0.506
	TH	2.00	1,249	3,200	0.446		
	LT	1.00	79	1,600	0.049 *	V/C:	1.094
Northbound	RT	1.00	130	1,600	0.057	Lost Time:	0.100
	TH	2.00	921	3,200	0.288	ITS:	0.000
	LT	1.00	175	1,600	0.109 *		
Eastbound	RT	0.00	210	0	0.000	ICU:	1.194
	TH	2.00	1,323	3,200	0.479 *		
	LT	1.00	96	1,600	0.060	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **10 - Figueroa Street & Carson Street**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	EBR,		
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	181	1,600	0.073	N-S(1):	0.193
	TH	2.00	300	3,200	0.094 *	N-S(2):	0.226 *
	LT	2.00	50	2,560	0.020	E-W(1):	0.345
Westbound	RT	1.00	121	1,600	0.066	E-W(2):	0.460 *
	TH	2.00	1,212	3,200	0.379 *		
	LT	1.00	131	1,600	0.082	V/C:	0.686
Northbound	RT	1.00	220	1,600	0.097	Lost Time:	0.100
	TH	2.00	555	3,200	0.173	ITS:	0.000
	LT	2.00	337	2,560	0.132 *		
Eastbound	RT	1.00	534	1,600	0.202	ICU:	0.786
	TH	2.00	841	3,200	0.263		
	LT	1.00	129	1,600	0.081 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	186	1,600	0.076	N-S(1):	0.146
	TH	2.00	535	3,200	0.167 *	N-S(2):	0.261 *
	LT	2.00	157	2,560	0.061	E-W(1):	0.613 *
Westbound	RT	1.00	87	1,600	0.024	E-W(2):	0.424
	TH	2.00	1,099	3,200	0.343		
	LT	1.00	188	1,600	0.118 *	V/C:	0.874
Northbound	RT	1.00	212	1,600	0.074	Lost Time:	0.100
	TH	2.00	273	3,200	0.085	ITS:	0.000
	LT	2.00	240	2,560	0.094 *		
Eastbound	RT	1.00	773	1,600	0.389	ICU:	0.974
	TH	2.00	1,583	3,200	0.495 *		
	LT	1.00	130	1,600	0.081	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **11 - Western Avenue & 220th Street**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	76	0	0.000	N-S(1):	0.506 *
	TH	2.00	986	3,200	0.332	N-S(2):	0.413
	LT	1.00	32	1,600	0.020 *	E-W(1):	0.142
Westbound	RT	0.00	44	0	0.000	E-W(2):	0.169 *
	TH	1.00	87	1,600	0.156 *		
	LT	0.00	118	1,600	0.074	V/C:	0.675
Northbound	RT	0.00	36	0	0.000	Lost Time:	0.100
	TH	2.00	1,519	3,200	0.486 *	ITS:	0.000
	LT	1.00	130	1,600	0.081		
Eastbound	RT	0.00	62	0	0.000	ICU:	0.775
	TH	1.00	26	1,600	0.068		
	LT	0.00	20	1,600	0.013 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	19	0	0.000	N-S(1):	0.363
	TH	2.00	1,627	3,200	0.514 *	N-S(2):	0.555 *
	LT	1.00	41	1,600	0.026	E-W(1):	0.255 *
Westbound	RT	0.00	40	0	0.000	E-W(2):	0.125
	TH	1.00	44	1,600	0.086		
	LT	0.00	54	1,600	0.034 *	V/C:	0.810
Northbound	RT	0.00	27	0	0.000	Lost Time:	0.100
	TH	2.00	1,051	3,200	0.337	ITS:	0.000
	LT	1.00	65	1,600	0.041 *		
Eastbound	RT	0.00	182	0	0.000	ICU:	0.910
	TH	1.00	109	1,600	0.221 *		
	LT	0.00	63	1,600	0.039	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	459	1,600	0.199 *	N-S(1):	0.317
	TH	2.00	443	3,200	0.138	N-S(2):	0.545 *
	LT	1.00	144	1,600	0.090	E-W(1):	0.409 *
Westbound	RT	1.00	100	1,600	0.018	E-W(2):	0.000
	TH	1.00	233	1,600	0.207 *		
	LT	0.00	98	1,600	0.061	V/C:	0.954
Northbound	RT	1.00	163	1,600	0.071	Lost Time:	0.100
	TH	2.00	727	3,200	0.227	ITS:	0.000
	LT	1.00	553	1,600	0.346 *		
Eastbound	RT	1.00	88	1,600	0.000	ICU:	1.054
	TH	1.00	42	1,600	0.202 *		
	LT	0.00	281	1,600	0.176	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	683	1,600	0.340 *	N-S(1):	0.176
	TH	2.00	681	3,200	0.213	N-S(2):	0.667 *
	LT	1.00	84	1,600	0.053	E-W(1):	0.354 *
Westbound	RT	1.00	58	1,600	0.010	E-W(2):	0.000
	TH	1.00	117	1,600	0.113 *		
	LT	0.00	63	1,600	0.039	V/C:	1.021
Northbound	RT	1.00	56	1,600	0.015	Lost Time:	0.100
	TH	2.00	393	3,200	0.123	ITS:	0.000
	LT	1.00	523	1,600	0.327 *		
Eastbound	RT	1.00	132	1,600	0.000	ICU:	1.121
	TH	1.00	107	1,600	0.241 *		
	LT	0.00	278	1,600	0.174	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **16 - Western Avenue & 223rd Street**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	61	1,600	0.022	N-S(1):	0.498 *
	TH	2.00	1,011	3,200	0.316	N-S(2):	0.450
	LT	1.00	83	1,600	0.052 *	E-W(1):	0.310
Westbound	RT	0.00	204	0	0.000	E-W(2):	0.398 *
	TH	2.00	963	3,200	0.365 *		
	LT	1.00	277	1,600	0.173	V/C:	0.896
Northbound	RT	1.00	193	1,600	0.034	Lost Time:	0.100
	TH	2.00	1,426	3,200	0.446 *	ITS:	0.000
	LT	1.00	214	1,600	0.134		
Eastbound	RT	1.00	127	1,600	0.013	ICU:	0.996
	TH	2.00	437	3,200	0.137		
	LT	1.00	53	1,600	0.033 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	47	1,600	0.010	N-S(1):	0.450
	TH	2.00	1,528	3,200	0.478 *	N-S(2):	0.548 *
	LT	1.00	228	1,600	0.143	E-W(1):	0.386 *
Westbound	RT	0.00	101	0	0.000	E-W(2):	0.280
	TH	2.00	669	3,200	0.241		
	LT	1.00	94	1,600	0.059 *	V/C:	0.934
Northbound	RT	1.00	190	1,600	0.089	Lost Time:	0.100
	TH	2.00	983	3,200	0.307	ITS:	0.000
	LT	1.00	112	1,600	0.070 *		
Eastbound	RT	1.00	214	1,600	0.099	ICU:	1.034
	TH	2.00	1,045	3,200	0.327 *		
	LT	1.00	62	1,600	0.039	LOS:	F

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **21 - Figueroa Street & 223rd Street**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	245	1,600	0.043	N-S(1):	0.297 *
	TH	2.00	310	3,200	0.097	N-S(2):	0.172
	LT	1.00	77	1,600	0.048 *	E-W(1):	0.264
Westbound	RT	1.00	296	1,600	0.161	E-W(2):	0.559 *
	TH	2.00	1,081	3,200	0.338 *		
	LT	1.00	81	1,600	0.051	V/C:	0.856
Northbound	RT	1.00	167	1,600	0.079	Lost Time:	0.100
	TH	2.00	796	3,200	0.249 *	ITS:	0.000
	LT	1.00	120	1,600	0.075		
Eastbound	RT	1.00	202	1,600	0.089	ICU:	0.956
	TH	2.00	683	3,200	0.213		
	LT	1.00	354	1,600	0.221 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	211	1,600	0.007	N-S(1):	0.242 *
	TH	2.00	499	3,200	0.156	N-S(2):	0.207
	LT	1.00	174	1,600	0.109 *	E-W(1):	0.489 *
Westbound	RT	1.00	162	1,600	0.047	E-W(2):	0.477
	TH	2.00	722	3,200	0.226		
	LT	1.00	83	1,600	0.052 *	V/C:	0.731
Northbound	RT	1.00	124	1,600	0.052	Lost Time:	0.100
	TH	2.00	425	3,200	0.133 *	ITS:	0.000
	LT	1.00	82	1,600	0.051		
Eastbound	RT	1.00	240	1,600	0.124	ICU:	0.831
	TH	2.00	1,399	3,200	0.437 *		
	LT	1.00	401	1,600	0.251	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **22 - Western Avenue & Sepulveda Blvd**
Description: **Cumulative plus 2030 Project**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	302	1,600	0.108	N-S(1):	0.400
	TH	2.00	985	3,200	0.308 *	N-S(2):	0.406 *
	LT	1.00	90	1,600	0.056	E-W(1):	0.526
Westbound	RT	0.00	111	0	0.000	E-W(2):	0.561 *
	TH	3.00	1,800	4,800	0.398 *		
	LT	1.00	342	1,600	0.214	V/C:	0.967
Northbound	RT	1.00	334	1,600	0.102	Lost Time:	0.100
	TH	2.00	1,102	3,200	0.344	ITS:	0.000
	LT	1.00	156	1,600	0.098 *		
Eastbound	RT	0.00	81	0	0.000	ICU:	1.067
	TH	3.00	1,418	4,800	0.312		
	LT	1.00	260	1,600	0.163 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	155	1,600	0.022	N-S(1):	0.407
	TH	2.00	1,089	3,200	0.340 *	N-S(2):	0.468 *
	LT	1.00	197	1,600	0.123	E-W(1):	0.558 *
Westbound	RT	0.00	158	0	0.000	E-W(2):	0.506
	TH	3.00	1,551	4,800	0.356		
	LT	1.00	347	1,600	0.217 *	V/C:	1.026
Northbound	RT	1.00	361	1,600	0.117	Lost Time:	0.100
	TH	2.00	909	3,200	0.284	ITS:	0.000
	LT	1.00	204	1,600	0.128 *		
Eastbound	RT	0.00	135	0	0.000	ICU:	1.126
	TH	3.00	1,504	4,800	0.341 *		
	LT	1.00	240	1,600	0.150	LOS:	F

* - Denotes critical movement

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
1	North-South Street:	Normandie Avenue	East-West Street:	Torrance Bloulevard
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB--	0	NB-- 0	SB--	0
		EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	AM Volume	AM No. of Lanes	AM Lane Volume	PM Volume	PM No. of Lanes	PM Lane Volume
NORTHBOUND	Left	173	1	173	110	1	**110**
	Left-Through		0			0	
	Through	845	1	**506**	657	1	414
	Through-Right		1			1	
	Right	166	0	166	170	0	170
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	36	1	**36**	146	1	146
	Left-Through		0			0	
	Through	494	1	305	851	1	**516**
	Through-Right		1			1	
	Right	116	0	116	181	0	181
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	115	1	**115**	125	1	125
	Left-Through		0			0	
	Through	1104	1	603	1693	1	**914**
	Through-Right		1			1	
	Right	102	0	102	135	0	135
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	119	1	119	66	1	**66**
	Left-Through		0			0	
	Through	1706	1	**895**	1209	1	629
	Through-Right		1			1	
	Right	83	0	83	48	0	48
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	542		North-South:	626
			East-West:	1010		East-West:	980
			SUM:	1552		SUM:	1606
VOLUME/CAPACITY (V/C) RATIO:				1.129			1.168
V/C LESS ATSAC/ATCS ADJUSTMENT:				1.059			1.098
LEVEL OF SERVICE (LOS):				F			F

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
3	North-South Street:	Western Avenue	East-West Street:	Carson Street
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	171	1	171	175	1	**175**
	Left-Through		0			0	
	Through	1269	2	**635**	921	2	461
	Through-Right		0			0	
	Right	93	1	56	130	1	91
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	106	1	**106**	176	1	176
	Left-Through		0			0	
	Through	813	2	407	1461	2	**731**
	Through-Right		0			0	
	Right	150	1	117	249	1	201
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	66	1	**66**	96	1	96
	Left-Through		0			0	
	Through	959	1	541	1323	1	**767**
	Through-Right		1			1	
	Right	122	0	122	210	0	210
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	74	1	74	79	1	**79**
	Left-Through		0			0	
	Through	1369	1	**776**	1249	1	713
	Through-Right		1			1	
	Right	183	0	183	177	0	177
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	741		North-South:	906
			East-West:	842		East-West:	846
			SUM:	1583		SUM:	1752
VOLUME/CAPACITY (V/C) RATIO:				1.151			1.274
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.081**			**1.204**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
4	North-South Street:	Normandie Avenue	East-West Street:	Carson Street
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	242	1	**242**	221	1	**221**
	Left-Through		0			0	
	Through	752	2	376	601	2	301
	Through-Right		0			0	
	Right	94	1	0	163	1	71
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	55	1	55	109	1	109
	Left-Through		0			0	
	Through	464	1	**317**	606	1	**401**
	Through-Right		1			1	
	Right	169	0	169	195	0	195
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	224	1	**224**	228	1	228
	Left-Through		0			0	
	Through	1106	2	553	1529	2	**765**
	Through-Right		0			0	
	Right	227	1	106	190	1	80
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	202	1	202	184	1	**184**
	Left-Through		0			0	
	Through	1442	2	**721**	1378	2	689
	Through-Right		0			0	
	Right	86	1	59	96	1	42
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	559		North-South:	622
			East-West:	945		East-West:	949
			SUM:	1504		SUM:	1571
VOLUME/CAPACITY (V/C) RATIO:				1.003			1.143
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.933**			**1.073**
LEVEL OF SERVICE (LOS):				**E**			**F**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
11	North-South Street:	Western Avenue	East-West Street:	220th Street
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	130	1	130	65	1	**65**
	Left-Through		0			0	
	Through	1519	1	**778**	1051	1	539
	Through-Right		1			1	
	Right	36	0	36	27	0	27
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	32	1	**32**	41	1	41
	Left-Through		0			0	
	Through	986	1	531	1627	1	**823**
	Through-Right		1			1	
	Right	76	0	76	19	0	19
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	20	0	**20**	63	0	63
	Left-Through		0			0	
	Through	26	0	108	109	0	**354**
	Through-Right		0			0	
	Right	62	0	0	182	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	118	0	118	54	0	**54**
	Left-Through		0			0	
	Through	87	0	**249**	44	0	138
	Through-Right		0			0	
	Right	44	0	0	40	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	810		North-South:	888
			East-West:	269		East-West:	408
			SUM:	1079		SUM:	1296
VOLUME/CAPACITY (V/C) RATIO:				0.719			0.864
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.649**			**0.794**
LEVEL OF SERVICE (LOS):				**B**			**C**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
12	North-South Street:	Normandie Avenue	East-West Street:	220th Street
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	30	1	30	31	1	**31**
	Left-Through		0			0	
	Through	986	1	**560**	578	1	313
	Through-Right		1			1	
	Right	134	0	134	47	0	47
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	106	1	**106**	92	1	92
	Left-Through		0			0	
	Through	449	1	239	889	1	**465**
	Through-Right		1			1	
	Right	29	0	29	41	0	41
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	37	0	37	23	0	23
	Left-Through		1			1	
	Through	128	0	**165**	75	0	**98**
	Through-Right		0			0	
	Right	51	1	36	59	1	44
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	52	0	**52**	50	0	**50**
	Left-Through		1			1	
	Through	89	0	141	58	0	108
	Through-Right		0			0	
	Right	118	1	65	125	1	79
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	666		North-South:	496
			East-West:	217		East-West:	148
			SUM:	883		SUM:	644
VOLUME/CAPACITY (V/C) RATIO:				0.589			0.429
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.519**			**0.359**
LEVEL OF SERVICE (LOS):				**A**			**A**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
16	North-South Street:	Western Avenue	East-West Street:	223rd Street
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	AM Volume	AM No. of Lanes	AM Lane Volume	PM Volume	PM No. of Lanes	PM Lane Volume
NORTHBOUND	Left	214	1	214	112	1	**112**
	Left-Through		0			0	
	Through	1426	2	**713**	983	2	492
	Through-Right		0			0	
	Right	193	1	55	190	1	143
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	83	1	**83**	228	1	228
	Left-Through		0			0	
	Through	1011	2	506	1528	2	**764**
	Through-Right		0			0	
	Right	61	1	35	47	1	16
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	53	1	**53**	62	1	62
	Left-Through		0			0	
	Through	437	2	219	1045	2	**523**
	Through-Right		0			0	
	Right	127	1	20	214	1	158
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	277	1	277	94	1	**94**
	Left-Through		0			0	
	Through	963	1	**584**	669	1	385
	Through-Right		1			1	
	Right	204	0	204	101	0	101
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	796		North-South:	876
			East-West:	637		East-West:	617
			SUM:	1433		SUM:	1493
VOLUME/CAPACITY (V/C) RATIO:				1.006			1.048
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.936**			**0.978**
LEVEL OF SERVICE (LOS):				**E**			**E**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
17	North-South Street:	Normandie Avenue	East-West Street:	223rd Street
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--		0	NB-- 0	SB--	0
	EB-- 0	WB--		0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				1			1
Override Capacity				0			0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	138	1	138	71	1	**71**
	Left-Through		0			0	
	Through	914	2	**457**	476	2	238
	Through-Right		0			0	
	Right	129	1	62	143	1	85
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	59	1	**59**	105	1	105
	Left-Through		0			0	
	Through	420	1	247	792	1	**441**
	Through-Right		1			1	
	Right	73	0	73	90	0	90
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	99	1	**99**	83	1	83
	Left-Through		0			0	
	Through	683	1	378	1288	1	**703**
	Through-Right		1			1	
	Right	72	0	72	118	0	118
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	135	1	135	116	1	**116**
	Left-Through		0			0	
	Through	1151	2	**576**	801	2	401
	Through-Right		0			0	
	Right	114	1	85	106	1	54
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	516		North-South:	512
			East-West:	675		East-West:	819
			SUM:	1191		SUM:	1331
VOLUME/CAPACITY (V/C) RATIO:				0.794			0.887
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.724**			**0.817**
LEVEL OF SERVICE (LOS):				**C**			**D**

Version: 1i Beta; 8/4/2011

Level of Service Worksheet
(Circular 212 Method)

I/S #:	PROJECT TITLE:	<Project Name>		
22	North-South Street:	Western Avenue	East-West Street:	Sepulveda Blvd
	Scenario:	Cumulative plus 2030 Project		
	Count Date:	1/0/1900	Analyst: <Fehr & Peers>	Date: <date>

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0		NB-- 0	SB--	0
	EB-- 0	WB--	0		EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			1				1
Override Capacity			0				0

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	156	1	**156**	204	1	**204**
	Left-Through		0			0	
	Through	1102	2	551	909	2	455
	Through-Right		0			0	
	Right	334	1	163	361	1	188
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	90	1	90	197	1	197
	Left-Through		0			0	
	Through	985	2	**493**	1089	2	**545**
	Through-Right		0			0	
	Right	302	1	172	155	1	35
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	260	1	**260**	240	1	240
	Left-Through		0			0	
	Through	1418	2	500	1504	2	**546**
	Through-Right		1			1	
	Right	81	0	81	135	0	135
	Left-Through-Right		0			0	
	Left-Right		0			0	
WESTBOUND	Left	342	1	342	347	1	**347**
	Left-Through		0			0	
	Through	1800	2	**637**	1551	2	570
	Through-Right		1			1	
	Right	111	0	111	158	0	158
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES			North-South:	649		North-South:	749
			East-West:	897		East-West:	893
			SUM:	1546		SUM:	1642
VOLUME/CAPACITY (V/C) RATIO:				1.124			1.194
V/C LESS ATSAC/ATCS ADJUSTMENT:				**1.054**			**1.124**
LEVEL OF SERVICE (LOS):				**F**			**F**

Version: 1i Beta; 8/4/2011

EXISTING PLUS 2030 PROJECT PLUS MITIGATION

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing Plus 2030 Project Plus Mitigation**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.66	650	2,660	0.244 *	N-S(1):	0.244 *
	TH	0.00	0	0	0.000	N-S(2):	0.244 *
	LT	0.34	132	540	0.244 *	E-W(1):	0.369
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.401 *
	TH	2.00	1,282	3,200	0.401 *		
	LT	1.00	174	1,600	0.109	V/C:	0.645
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	137	0	0.000	ICU:	0.745
	TH	3.00	1,113	4,800	0.260		
	LT	0.00	0	0	0.000 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.25	435	1,994	0.218 *	N-S(1):	0.218 *
	TH	0.00	0	0	0.000	N-S(2):	0.218 *
	LT	0.75	263	1,206	0.218 *	E-W(1):	0.544 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.315
	TH	2.00	1,007	3,200	0.315		
	LT	1.00	178	1,600	0.111 *	V/C:	0.762
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	290	0	0.000	ICU:	0.862
	TH	3.00	1,790	4,800	0.433 *		
	LT	0.00	0	0	0.000	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Existing Plus 2030 Project Plus Mitigation**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.56	406	2,495	0.084	N-S(1):	0.239
	TH	1.44	375	2,305	0.163 *	N-S(2):	0.465 *
	LT	1.00	128	1,600	0.080	E-W(1):	0.342 *
Westbound	RT	1.00	89	1,600	0.016	E-W(2):	0.000
	TH	1.00	207	1,600	0.184 *		
	LT	0.00	87	1,600	0.054	V/C:	0.807
Northbound	RT	0.00	145	0	0.000	Lost Time:	0.100
	TH	3.00	618	4,800	0.159	ITS:	0.000
	LT	1.00	483	1,600	0.302 *		
Eastbound	RT	0.00	80	0	0.000	ICU:	0.907
	TH	1.00	37	1,600	0.073		
	LT	1.00	252	1,600	0.158 *	LOS:	E

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.57	606	2,518	0.163	N-S(1):	0.120
	TH	1.43	549	2,282	0.241 *	N-S(2):	0.526 *
	LT	1.00	75	1,600	0.047	E-W(1):	0.255 *
Westbound	RT	1.00	52	1,600	0.009	E-W(2):	0.000
	TH	1.00	104	1,600	0.100 *		
	LT	0.00	56	1,600	0.035	V/C:	0.781
Northbound	RT	0.00	50	0	0.000	Lost Time:	0.100
	TH	3.00	298	4,800	0.073	ITS:	0.000
	LT	1.00	456	1,600	0.285 *		
Eastbound	RT	0.00	114	0	0.000	ICU:	0.881
	TH	1.00	95	1,600	0.131		
	LT	1.00	248	1,600	0.155 *	LOS:	D

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing Plus 2030 Project Plus Mitigation**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.27	533	2,035	0.262	N-S(1):	0.190
	TH	0.73	1	1,165	0.262 *	N-S(2):	0.262 *
	LT	0.00	304	1,600	0.190	E-W(1):	0.304
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.351 *
	TH	2.00	1,122	3,200	0.351 *		
	LT	1.00	172	1,600	0.108	V/C:	0.613
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	125	0	0.000	ICU:	0.713
	TH	3.00	817	4,800	0.196		
	LT	0.00	0	0	0.000 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	406	1,600	0.254	N-S(1):	0.266
	TH	1.00	2	1,600	0.268 *	N-S(2):	0.268 *
	LT	0.00	426	1,600	0.266	E-W(1):	0.411 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.240
	TH	2.00	767	3,200	0.240		
	LT	1.00	120	1,600	0.075 *	V/C:	0.679
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	231	0	0.000	ICU:	0.779
	TH	3.00	1,383	4,800	0.336 *		
	LT	0.00	0	0	0.000	LOS:	C

* - Denotes critical movement

EXISTING PLUS 2030 PROJECT PLUS CUMULATIVE PLUS MITIGATION

Project Title: **Harbor-UCLA Medical Center**
Intersection: **9 - I-110 SB Ramps & Carson Street**
Description: **Existing Plus 2030 Project Plus Cumulative Plus Mitigation**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.65	656	2,634	0.249 *	N-S(1):	0.249 *
	TH	0.00	0	0	0.000	N-S(2):	0.249 *
	LT	0.35	141	566	0.249 *	E-W(1):	0.390
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.431 *
	TH	2.00	1,378	3,200	0.431 *		
	LT	1.00	174	1,600	0.109	V/C:	0.680
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	137	0	0.000	ICU:	0.780
	TH	3.00	1,213	4,800	0.281		
	LT	0.00	0	0	0.000 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.26	457	2,017	0.227 *	N-S(1):	0.227 *
	TH	0.00	0	0	0.000	N-S(2):	0.227 *
	LT	0.74	268	1,183	0.227 *	E-W(1):	0.588 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.375
	TH	2.00	1,200	3,200	0.375		
	LT	1.00	178	1,600	0.111 *	V/C:	0.815
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000 *	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	290	0	0.000	ICU:	0.915
	TH	3.00	1,998	4,800	0.477 *		
	LT	0.00	0	0	0.000	LOS:	E

* - Denotes critical movement

Project Title: **Harbor-UCLA Medical Center**
Intersection: **20 - I-110 SB Ramps & 223rd Street**
Description: **Existing Plus 2030 Project Plus Cumulative Plus Mitigation**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.26	535	2,024	0.264	N-S(1):	0.194
	TH	0.74	1	1,176	0.264 *	N-S(2):	0.264 *
	LT	0.00	310	1,600	0.194	E-W(1):	0.311
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.355 *
	TH	2.00	1,136	3,200	0.355 *		
	LT	1.00	174	1,600	0.109	V/C:	0.619
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	126	0	0.000	ICU:	0.719
	TH	3.00	843	4,800	0.202		
	LT	0.00	0	0	0.000 *	LOS:	C

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	414	1,600	0.259	N-S(1):	0.274
	TH	1.00	2	1,600	0.275 *	N-S(2):	0.275 *
	LT	0.00	438	1,600	0.274	E-W(1):	0.422 *
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.251
	TH	2.00	803	3,200	0.251		
	LT	1.00	124	1,600	0.078 *	V/C:	0.697
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.100
	TH	0.00	0	0	0.000	ITS:	0.000
	LT	0.00	0	0	0.000 *		
Eastbound	RT	0.00	232	0	0.000	ICU:	0.797
	TH	3.00	1,417	4,800	0.344 *		
	LT	0.00	0	0	0.000	LOS:	C

* - Denotes critical movement

CUMULATIVE PLUS 2030 PROJECT PLUS MITIGATION

Project Title: **Harbor-UCLA Medical Center**
Intersection: **15 - Figueroa Street & 220th Street/I-110 NB Ramps**
Description: **Cumulative Plus 2030 Project With Mitigation**

Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	Y
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.53	459	2,443	0.100	N-S(1):	0.275
	TH	1.47	443	2,357	0.188 *	N-S(2):	0.534 *
	LT	1.00	144	1,600	0.090	E-W(1):	0.383 *
Westbound	RT	1.00	100	1,600	0.018	E-W(2):	0.000
	TH	1.00	233	1,600	0.207 *		
	LT	0.00	98	1,600	0.061	V/C:	0.917
Northbound	RT	0.00	163	0	0.000	Lost Time:	0.100
	TH	3.00	727	4,800	0.185	ITS:	0.000
	LT	1.00	553	1,600	0.346 *		
Eastbound	RT	0.00	88	0	0.000	ICU:	1.017
	TH	1.00	42	1,600	0.081		
	LT	1.00	281	1,600	0.176 *	LOS:	F

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.50	683	2,404	0.197	N-S(1):	0.147
	TH	1.50	681	2,396	0.284 *	N-S(2):	0.611 *
	LT	1.00	84	1,600	0.053	E-W(1):	0.287 *
Westbound	RT	1.00	58	1,600	0.010	E-W(2):	0.000
	TH	1.00	117	1,600	0.113 *		
	LT	0.00	63	1,600	0.039	V/C:	0.898
Northbound	RT	0.00	56	0	0.000	Lost Time:	0.100
	TH	3.00	393	4,800	0.094	ITS:	0.000
	LT	1.00	523	1,600	0.327 *		
Eastbound	RT	0.00	132	0	0.000	ICU:	0.998
	TH	1.00	107	1,600	0.149		
	LT	1.00	278	1,600	0.174 *	LOS:	E

* - Denotes critical movement

APPENDIX D: QUEUING ANALYSIS

OFF RAMP QUEUEING ANALYSIS

EXISTING - AM



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1309	189	1316	143	585
v/c Ratio	0.72	0.73	0.68	0.22	0.96
Control Delay	32.8	61.3	20.2	26.3	60.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	61.3	20.2	26.3	60.2
Queue Length 50th (ft)	288	129	336	70	374
Queue Length 95th (ft)	357	207	412	124	#634
Internal Link Dist (ft)	1597		1799		
Turn Bay Length (ft)		150		380	
Base Capacity (vph)	1829	320	2054	642	610
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.72	0.59	0.64	0.22	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	293	51	320	97	514	826	139	398	412
v/c Ratio	4.97	0.11	1.27	0.25	1.03	0.67	0.82	0.67	0.72
Control Delay	1826.0	0.5	188.7	4.0	91.1	33.9	86.8	51.2	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1826.0	0.5	188.7	4.0	91.1	33.9	86.8	51.2	15.1
Queue Length 50th (ft)	~385	0	~311	0	~427	267	105	148	30
Queue Length 95th (ft)	#566	0	#496	19	#644	338	#213	203	140
Internal Link Dist (ft)	960		1640			2105		1965	
Turn Bay Length (ft)				120	290		110		100
Base Capacity (vph)	59	453	252	384	497	1287	179	670	597
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	4.97	0.11	1.27	0.25	1.03	0.64	0.78	0.59	0.69

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

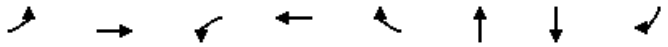
Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	865	130	187	1136	849
v/c Ratio	0.49	0.15	0.49	0.51	0.95dr
Control Delay	21.4	3.8	14.3	13.4	41.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	3.8	14.3	13.4	41.2
Queue Length 50th (ft)	216	0	54	229	276
Queue Length 95th (ft)	320	36	99	322	355
Internal Link Dist (ft)	2332			2520	1384
Turn Bay Length (ft)		210	190		
Base Capacity (vph)	1764	854	510	2216	1194
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.15	0.37	0.51	0.71

Intersection Summary

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	626	629	101	1448	35	150
v/c Ratio	0.32	0.54	0.45	0.40	0.14	0.43
Control Delay	10.1	3.0	35.4	4.5	29.2	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	3.0	35.4	4.5	29.2	9.9
Queue Length 50th (ft)	76	0	42	75	14	0
Queue Length 95th (ft)	121	48	85	94	40	49
Internal Link Dist (ft)	1292			1703	816	
Turn Bay Length (ft)		170	50			
Base Capacity (vph)	1969	1159	450	4078	613	647
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.54	0.22	0.36	0.06	0.23

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	83	685	2	888	253	2	21	668
v/c Ratio	0.29	0.21	0.00	0.37	0.22	0.01	0.06	0.42
Control Delay	24.2	1.2	7.0	6.8	1.9	21.0	20.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	1.2	7.0	6.8	1.9	21.0	20.9	0.8
Queue Length 50th (ft)	19	0	0	52	0	0	4	0
Queue Length 95th (ft)	71	63	4	176	33	6	27	0
Internal Link Dist (ft)		1703		1175		880	1493	
Turn Bay Length (ft)	70		90		180			650
Base Capacity (vph)	606	3408	532	2586	1225	869	869	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.20	0.00	0.34	0.21	0.00	0.02	0.42

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1200	601	608	41	635
v/c Ratio	0.70	0.67	0.42	0.16	0.43
Control Delay	25.9	18.4	24.9	23.9	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	18.4	24.9	23.9	26.0
Queue Length 50th (ft)	357	223	166	19	180
Queue Length 95th (ft)	436	358	216	46	232
Internal Link Dist (ft)	2167		1154		936
Turn Bay Length (ft)		470		110	
Base Capacity (vph)	1713	895	1458	261	1477
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.67	0.42	0.16	0.43

Intersection Summary

EXISTING - PM



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	2023	193	1070	286	435
v/c Ratio	0.97	0.70	0.49	0.57	0.85
Control Delay	43.8	54.8	12.7	34.7	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	54.8	12.7	34.7	43.0
Queue Length 50th (ft)	450	116	184	152	209
Queue Length 95th (ft)	#732	211	305	243	346
Internal Link Dist (ft)	1597		1799		
Turn Bay Length (ft)		150		380	
Base Capacity (vph)	2086	367	2352	735	708
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	0.53	0.45	0.39	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	366	112	174	57	441	366	82	592	516
v/c Ratio	6.54	0.24	0.85	0.16	0.94	0.26	0.57	0.86	0.93
Control Delay	2547.9	4.5	81.7	1.0	70.4	24.0	67.2	59.1	44.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2547.9	4.5	81.7	1.0	70.4	24.0	67.2	59.1	44.0
Queue Length 50th (ft)	~512	0	129	0	325	95	61	235	176
Queue Length 95th (ft)	#707	29	#238	0	#518	138	114	#338	#400
Internal Link Dist (ft)	960		1640			2105		1965	
Turn Bay Length (ft)				120	290		110		100
Base Capacity (vph)	56	463	241	392	513	1389	184	691	556
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	6.54	0.24	0.72	0.15	0.86	0.26	0.45	0.86	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	1397	222	130	807	887
v/c Ratio	0.77	0.25	0.57	0.36	0.83
Control Delay	27.0	7.8	25.2	10.9	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	7.8	25.2	10.9	36.5
Queue Length 50th (ft)	400	29	34	134	254
Queue Length 95th (ft)	621	89	103	206	332
Internal Link Dist (ft)	2332			2520	1384
Turn Bay Length (ft)		210	190		
Base Capacity (vph)	1820	881	395	2249	1291
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.25	0.33	0.36	0.69

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1038	893	88	1228	25	93
v/c Ratio	0.48	0.70	0.39	0.31	0.10	0.30
Control Delay	11.3	5.4	34.0	3.6	28.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	5.4	34.0	3.6	28.2	10.0
Queue Length 50th (ft)	146	22	36	59	10	0
Queue Length 95th (ft)	218	123	76	76	31	38
Internal Link Dist (ft)	1292			1703	816	
Turn Bay Length (ft)		170	50			
Base Capacity (vph)	2179	1276	476	4307	648	639
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.70	0.18	0.29	0.04	0.15

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	120	1008	2	804	353	5	3	25	514
v/c Ratio	0.40	0.32	0.01	0.37	0.32	0.02	0.01	0.07	0.32
Control Delay	26.8	2.6	9.5	9.1	2.3	24.2	0.0	23.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	2.6	9.5	9.1	2.3	24.2	0.0	23.7	0.5
Queue Length 50th (ft)	23	0	0	46	0	1	0	4	0
Queue Length 95th (ft)	95	101	4	167	40	11	0	31	0
Internal Link Dist (ft)		1703		1175		880		1493	
Turn Bay Length (ft)	70		90		180		10		650
Base Capacity (vph)	599	3324	392	2623	1265	735	774	858	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.30	0.01	0.31	0.28	0.01	0.00	0.03	0.32

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1122	349	630	84	1038
v/c Ratio	0.67	0.37	0.42	0.32	0.68
Control Delay	25.3	3.7	19.6	27.8	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	3.7	19.6	27.8	30.5
Queue Length 50th (ft)	322	10	141	43	343
Queue Length 95th (ft)	396	59	191	88	421
Internal Link Dist (ft)	2167		1154		936
Turn Bay Length (ft)		470		110	
Base Capacity (vph)	1761	968	1506	262	1518
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.36	0.42	0.32	0.68

Intersection Summary

CUMULATIVE - AM



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1581	212	1583	171	663
v/c Ratio	0.86	0.78	0.81	0.27	1.10
Control Delay	38.8	65.4	24.2	27.8	101.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	65.4	24.2	27.8	101.3
Queue Length 50th (ft)	387	149	461	90	~533
Queue Length 95th (ft)	461	#233	560	146	#764
Internal Link Dist (ft)	1597		1799		
Turn Bay Length (ft)		150		380	
Base Capacity (vph)	1839	315	2017	631	600
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.67	0.78	0.27	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	331	60	360	109	590	964	157	472	470
v/c Ratio	5.71	0.13	1.47	0.29	1.20	0.77	0.90	0.74	0.82
Control Delay	2147.5	0.6	268.5	5.5	147.2	37.7	99.5	53.8	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2147.5	0.6	268.5	5.5	147.2	37.7	99.5	53.8	25.0
Queue Length 50th (ft)	~449	0	~381	0	~553	332	121	181	85
Queue Length 95th (ft)	#636	0	#571	30	#775	414	#248	241	#257
Internal Link Dist (ft)	960		1640			2105		1965	
Turn Bay Length (ft)				120	290		110		100
Base Capacity (vph)	58	449	245	381	491	1270	176	662	582
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	5.71	0.13	1.47	0.29	1.20	0.76	0.89	0.71	0.81

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	1000	148	212	1291	964
v/c Ratio	0.61	0.18	0.63	0.60	1.03dr
Control Delay	27.0	5.8	20.4	16.4	47.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	5.8	20.4	16.4	47.3
Queue Length 50th (ft)	300	8	72	319	346
Queue Length 95th (ft)	417	51	118	388	#438
Internal Link Dist (ft)	2332			2520	1384
Turn Bay Length (ft)		210	190		
Base Capacity (vph)	1634	800	441	2138	1140
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.18	0.48	0.60	0.85

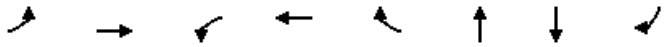
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	715	713	113	1651	39	168
v/c Ratio	0.37	0.60	0.48	0.45	0.16	0.46
Control Delay	10.8	3.4	36.2	4.8	29.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	3.4	36.2	4.8	29.7	9.9
Queue Length 50th (ft)	92	0	47	90	15	0
Queue Length 95th (ft)	145	52	94	115	43	51
Internal Link Dist (ft)	1292			1703	816	
Turn Bay Length (ft)		170	50			
Base Capacity (vph)	1957	1194	448	4051	609	655
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.60	0.25	0.41	0.06	0.26

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	92	783	2	1015	285	2	24	759
v/c Ratio	0.34	0.25	0.00	0.44	0.25	0.01	0.07	0.48
Control Delay	28.0	2.3	9.0	9.0	2.4	25.0	24.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	2.3	9.0	9.0	2.4	25.0	24.4	1.0
Queue Length 50th (ft)	20	0	0	63	1	0	5	0
Queue Length 95th (ft)	77	73	4	213	39	7	29	0
Internal Link Dist (ft)		1703		1175		880	1493	
Turn Bay Length (ft)	70		90		180			650
Base Capacity (vph)	570	3293	457	2447	1178	816	816	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.24	0.00	0.41	0.24	0.00	0.03	0.48

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1359	675	682	47	713
v/c Ratio	0.79	0.77	0.47	0.21	0.48
Control Delay	29.2	25.0	25.9	25.4	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	25.0	25.9	25.4	26.9
Queue Length 50th (ft)	435	319	192	23	208
Queue Length 95th (ft)	529	490	247	53	265
Internal Link Dist (ft)	2167		1154		936
Turn Bay Length (ft)		470		110	
Base Capacity (vph)	1713	875	1457	228	1477
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.77	0.47	0.21	0.48

Intersection Summary

CUMULATIVE - PM



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	2497	217	1411	326	512
v/c Ratio	1.31	0.77	0.69	0.56	0.91
Control Delay	173.9	62.5	19.0	33.6	53.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	173.9	62.5	19.0	33.6	53.2
Queue Length 50th (ft)	~895	151	377	187	310
Queue Length 95th (ft)	#1000	#249	460	280	#511
Internal Link Dist (ft)	1597		1799		
Turn Bay Length (ft)		150		380	
Base Capacity (vph)	1904	334	2142	670	634
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.31	0.65	0.66	0.49	0.81

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	412	132	195	63	514	476	91	736	600
v/c Ratio	7.63	0.29	0.92	0.17	1.04	0.36	0.63	1.11	1.13
Control Delay	3054.6	7.3	92.2	1.0	94.8	26.6	71.2	113.3	104.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3054.6	7.3	92.2	1.0	94.8	26.6	71.2	113.3	104.0
Queue Length 50th (ft)	~588	0	148	0	~432	133	68	~342	~345
Queue Length 95th (ft)	#789	45	#282	0	#644	182	123	#466	#572
Internal Link Dist (ft)	960		1640			2105		1965	
Turn Bay Length (ft)				120	290		110		100
Base Capacity (vph)	54	450	226	381	492	1340	177	663	530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	7.63	0.29	0.86	0.17	1.04	0.36	0.51	1.11	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	1607	250	151	946	1019
v/c Ratio	0.95	0.30	0.67	0.44	0.89
Control Delay	43.2	10.2	37.1	13.8	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	10.2	37.1	13.8	43.7
Queue Length 50th (ft)	609	49	62	202	342
Queue Length 95th (ft)	#863	115	131	251	436
Internal Link Dist (ft)	2332			2520	1384
Turn Bay Length (ft)		210	190		
Base Capacity (vph)	1694	828	368	2136	1202
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.95	0.30	0.41	0.44	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1187	1016	99	1405	28	105
v/c Ratio	0.55	0.80	0.42	0.36	0.11	0.33
Control Delay	12.5	9.9	34.6	3.8	28.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	9.9	34.6	3.8	28.7	10.0
Queue Length 50th (ft)	180	53	41	71	11	0
Queue Length 95th (ft)	269	#435	84	90	34	41
Internal Link Dist (ft)	1292			1703	816	
Turn Bay Length (ft)		170	50			
Base Capacity (vph)	2171	1273	474	4289	645	644
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.80	0.21	0.33	0.04	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	135	1154	2	918	397	5	3	28	588
v/c Ratio	0.44	0.37	0.01	0.42	0.35	0.02	0.01	0.08	0.37
Control Delay	28.0	2.6	10.0	9.6	2.4	25.4	0.0	25.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	2.6	10.0	9.6	2.4	25.4	0.0	25.0	0.7
Queue Length 50th (ft)	27	0	0	56	0	1	0	5	0
Queue Length 95th (ft)	105	121	4	202	42	11	0	33	0
Internal Link Dist (ft)		1703		1175		880		1493	
Turn Bay Length (ft)	70		90		180		10		650
Base Capacity (vph)	594	3256	324	2510	1238	745	768	851	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.35	0.01	0.37	0.32	0.01	0.00	0.03	0.37

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1276	392	708	95	1166
v/c Ratio	0.75	0.42	0.48	0.43	0.79
Control Delay	27.5	6.9	21.6	32.5	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	6.9	21.6	32.5	34.8
Queue Length 50th (ft)	393	48	168	52	406
Queue Length 95th (ft)	479	116	223	107	495
Internal Link Dist (ft)	2167		1154		936
Turn Bay Length (ft)		470		110	
Base Capacity (vph)	1721	930	1475	220	1484
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.74	0.42	0.48	0.43	0.79

Intersection Summary

CUMULATIVE PLUS PROJECT- AM



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1629	212	1660	171	785
v/c Ratio	0.88	0.78	0.84	0.27	1.31
Control Delay	39.9	65.7	25.9	27.9	183.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	65.7	25.9	27.9	183.4
Queue Length 50th (ft)	405	149	502	90	~723
Queue Length 95th (ft)	#510	#233	612	146	#964
Internal Link Dist (ft)	1597		1799		
Turn Bay Length (ft)		150		380	
Base Capacity (vph)	1856	313	2004	627	597
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.68	0.83	0.27	1.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	351	96	360	109	601	967	157	482	499
v/c Ratio	6.05	0.21	1.48	0.29	1.23	0.77	0.90	0.76	0.85
Control Delay	2300.6	3.0	274.0	5.5	156.1	37.7	99.5	54.4	28.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2300.6	3.0	274.0	5.5	156.1	37.7	99.5	54.4	28.0
Queue Length 50th (ft)	~481	0	~383	0	~571	334	121	185	101
Queue Length 95th (ft)	#673	16	#573	30	#794	415	#248	246	#291
Internal Link Dist (ft)	960		1640			2105		1965	
Turn Bay Length (ft)				120	290		110		100
Base Capacity (vph)	58	449	243	381	490	1272	176	662	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	6.05	0.21	1.48	0.29	1.23	0.76	0.89	0.73	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

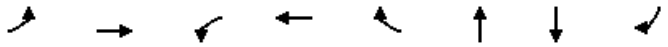
Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	1023	153	212	1375	1025
v/c Ratio	0.64	0.19	0.65	0.65	1.12dr
Control Delay	28.5	6.1	22.6	17.9	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	6.1	22.6	17.9	52.7
Queue Length 50th (ft)	312	10	72	353	385
Queue Length 95th (ft)	433	54	129	427	#521
Internal Link Dist (ft)	2332			2520	1384
Turn Bay Length (ft)		210	190		
Base Capacity (vph)	1597	785	425	2107	1113
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.19	0.50	0.65	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	717	720	113	1685	39	168
v/c Ratio	0.37	0.60	0.48	0.46	0.16	0.46
Control Delay	10.8	3.4	36.2	4.9	29.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	3.4	36.2	4.9	29.7	9.9
Queue Length 50th (ft)	92	0	47	93	15	0
Queue Length 95th (ft)	146	52	94	119	43	51
Internal Link Dist (ft)	1292			1703	816	
Turn Bay Length (ft)		170	50			
Base Capacity (vph)	1957	1197	448	4051	609	655
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.60	0.25	0.42	0.06	0.26

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	92	785	2	1021	285	2	24	787
v/c Ratio	0.34	0.25	0.00	0.44	0.25	0.01	0.07	0.50
Control Delay	28.0	2.3	9.0	9.1	2.4	25.0	24.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	2.3	9.0	9.1	2.4	25.0	24.5	1.1
Queue Length 50th (ft)	20	0	0	63	1	0	5	0
Queue Length 95th (ft)	77	74	4	215	39	7	29	0
Internal Link Dist (ft)		1703		1175		880	1493	
Turn Bay Length (ft)	70		90		180			650
Base Capacity (vph)	569	3293	457	2445	1176	816	816	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.24	0.00	0.42	0.24	0.00	0.03	0.50

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1387	675	682	47	713
v/c Ratio	0.81	0.77	0.47	0.21	0.48
Control Delay	30.0	25.0	25.9	25.4	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	25.0	25.9	25.4	26.9
Queue Length 50th (ft)	451	319	192	23	208
Queue Length 95th (ft)	548	490	247	53	265
Internal Link Dist (ft)	2167		1154		936
Turn Bay Length (ft)		470		110	
Base Capacity (vph)	1713	875	1457	228	1477
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.77	0.47	0.21	0.48

Intersection Summary

CUMULATIVE PLUS PROJECT- PM



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	2736	217	1436	326	550
v/c Ratio	1.47	0.78	0.72	0.53	0.94
Control Delay	245.3	64.1	20.5	32.9	57.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	245.3	64.1	20.5	32.9	57.9
Queue Length 50th (ft)	~1032	152	388	189	353
Queue Length 95th (ft)	#1134	#249	473	280	#575
Internal Link Dist (ft)	1597		1799		
Turn Bay Length (ft)		150		380	
Base Capacity (vph)	1855	325	2080	650	617
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.47	0.67	0.69	0.50	0.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	418	143	195	63	568	488	91	740	742
v/c Ratio	7.74	0.32	0.92	0.17	1.15	0.36	0.63	1.12	1.27
Control Delay	3104.8	8.3	92.9	1.0	129.8	26.8	71.2	115.5	156.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3104.8	8.3	92.9	1.0	129.8	26.8	71.2	115.5	156.4
Queue Length 50th (ft)	~597	0	148	0	~518	137	68	~345	~487
Queue Length 95th (ft)	#801	53	#283	0	#738	187	123	#469	#726
Internal Link Dist (ft)	960		1640			2105		1965	
Turn Bay Length (ft)				120	290		110		100
Base Capacity (vph)	54	452	225	381	492	1340	177	663	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	7.74	0.32	0.87	0.17	1.15	0.36	0.51	1.12	1.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	1713	279	151	973	1038
v/c Ratio	1.02	0.34	0.68	0.46	0.91
Control Delay	58.0	11.2	37.3	14.1	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	11.2	37.3	14.1	45.5
Queue Length 50th (ft)	~703	60	62	210	357
Queue Length 95th (ft)	#953	134	131	260	#480
Internal Link Dist (ft)	2332			2520	1384
Turn Bay Length (ft)		210	190		
Base Capacity (vph)	1684	827	366	2125	1190
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	0.34	0.41	0.46	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1193	1047	99	1416	28	105
v/c Ratio	0.55	0.82	0.42	0.36	0.11	0.33
Control Delay	12.5	10.8	34.6	3.8	28.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	10.8	34.6	3.8	28.7	10.0
Queue Length 50th (ft)	181	55	41	72	11	0
Queue Length 95th (ft)	271	#458	84	91	34	41
Internal Link Dist (ft)	1292			1703	816	
Turn Bay Length (ft)		170	50			
Base Capacity (vph)	2171	1281	474	4289	645	644
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.82	0.21	0.33	0.04	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	135	1160	2	921	397	5	3	28	597
v/c Ratio	0.44	0.37	0.01	0.42	0.35	0.02	0.01	0.08	0.38
Control Delay	28.1	2.6	10.0	9.6	2.4	25.4	0.0	25.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	2.6	10.0	9.6	2.4	25.4	0.0	25.0	0.7
Queue Length 50th (ft)	27	0	0	56	0	1	0	5	0
Queue Length 95th (ft)	105	122	4	203	42	11	0	33	0
Internal Link Dist (ft)		1703		1175		880		1493	
Turn Bay Length (ft)	70		90		180		10		650
Base Capacity (vph)	594	3256	322	2509	1237	744	768	851	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.36	0.01	0.37	0.32	0.01	0.00	0.03	0.38

Intersection Summary

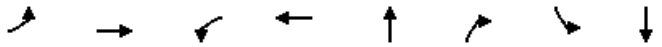


Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1285	392	708	95	1166
v/c Ratio	0.75	0.42	0.48	0.43	0.79
Control Delay	27.6	6.9	21.7	32.7	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	6.9	21.7	32.7	35.0
Queue Length 50th (ft)	397	48	168	52	406
Queue Length 95th (ft)	484	116	223	107	495
Internal Link Dist (ft)	2167		1154		936
Turn Bay Length (ft)		470		110	
Base Capacity (vph)	1717	929	1472	219	1481
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.42	0.48	0.43	0.79

Intersection Summary

NEW DRIVEWAY TURN POCKET QUEUEING ANALYSIS

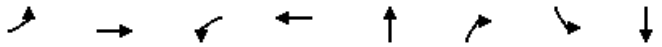
EXISTING PLUS PROJECT - AM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	1149	237	1566	41	133	33	38
v/c Ratio	0.22	0.64	0.47	0.59	0.15	0.33	0.13	0.12
Control Delay	20.9	23.5	11.6	7.8	43.0	9.4	42.7	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	23.5	11.6	7.8	43.0	9.4	42.7	16.7
Queue Length 50th (ft)	14	328	46	245	27	0	22	3
Queue Length 95th (ft)	38	402	119	297	61	54	52	34
Internal Link Dist (ft)		937		1073	625			513
Turn Bay Length (ft)	150		150			70	50	
Base Capacity (vph)	153	1792	504	2648	266	398	249	324
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.64	0.47	0.59	0.15	0.33	0.13	0.12

Intersection Summary

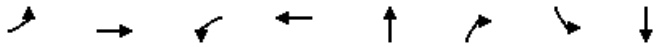
EXISTING PLUS PROJECT - PM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	1584	107	1376	59	155	33	38
v/c Ratio	0.14	0.71	0.38	0.51	0.26	0.39	0.15	0.13
Control Delay	10.8	16.8	9.6	6.1	47.0	9.9	44.8	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	16.8	9.6	6.1	47.0	9.9	44.8	17.5
Queue Length 50th (ft)	10	398	17	180	40	0	22	3
Queue Length 95th (ft)	26	481	45	218	82	59	53	35
Internal Link Dist (ft)		937		1073	625			513
Turn Bay Length (ft)	150		150			70	50	
Base Capacity (vph)	232	2237	281	2703	230	393	223	297
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.71	0.38	0.51	0.26	0.39	0.15	0.13

Intersection Summary

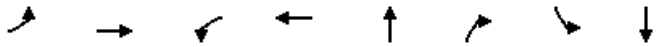
CUMULATIVE PLUS PROJECT- AM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	1199	237	1620	36	133	33	33
v/c Ratio	0.23	0.67	0.48	0.61	0.14	0.33	0.13	0.10
Control Delay	21.6	24.2	14.0	8.1	42.9	9.4	42.7	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	24.2	14.0	8.1	42.9	9.4	42.7	2.4
Queue Length 50th (ft)	14	351	52	262	24	0	22	0
Queue Length 95th (ft)	39	428	133	316	55	54	52	8
Internal Link Dist (ft)		937		1073	625			513
Turn Bay Length (ft)	150		150			70	50	
Base Capacity (vph)	144	1792	490	2648	251	398	250	343
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.67	0.48	0.61	0.14	0.33	0.13	0.10

Intersection Summary

CUMULATIVE PLUS PROJECT- PM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	1742	107	1586	54	155	33	33
v/c Ratio	0.19	0.77	0.45	0.59	0.24	0.39	0.15	0.10
Control Delay	11.9	18.1	17.7	7.0	46.6	9.9	44.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	18.1	17.7	7.0	46.6	9.9	44.8	0.6
Queue Length 50th (ft)	10	464	17	230	37	0	22	0
Queue Length 95th (ft)	27	559	72	278	77	59	53	3
Internal Link Dist (ft)		937		1073	625			513
Turn Bay Length (ft)	150		150			70	50	
Base Capacity (vph)	177	2267	239	2706	228	393	224	324
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.77	0.45	0.59	0.24	0.39	0.15	0.10

Intersection Summary

APPENDIX E: HCM ARTERIAL ANALYSIS

Appendix J

Water Supply Assessment

HARBOR UCLA MEDICAL CENTER CAMPUS

SB610 WATER SUPPLY ASSESSMENT

April 21, 2016

Prepared by:

Yarne & Associates, Inc.

For

California Water Service Company
2632 West 237th Street
Torrance, California 90505

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Introduction and Project Description

California Water Service Company (Cal Water) is submitting the following California SB 610 Water Supply Assessment (WSA) for the proposed Harbor UCLA Medical Center Campus Master Plan hereafter called the Harbor UCLA Project.

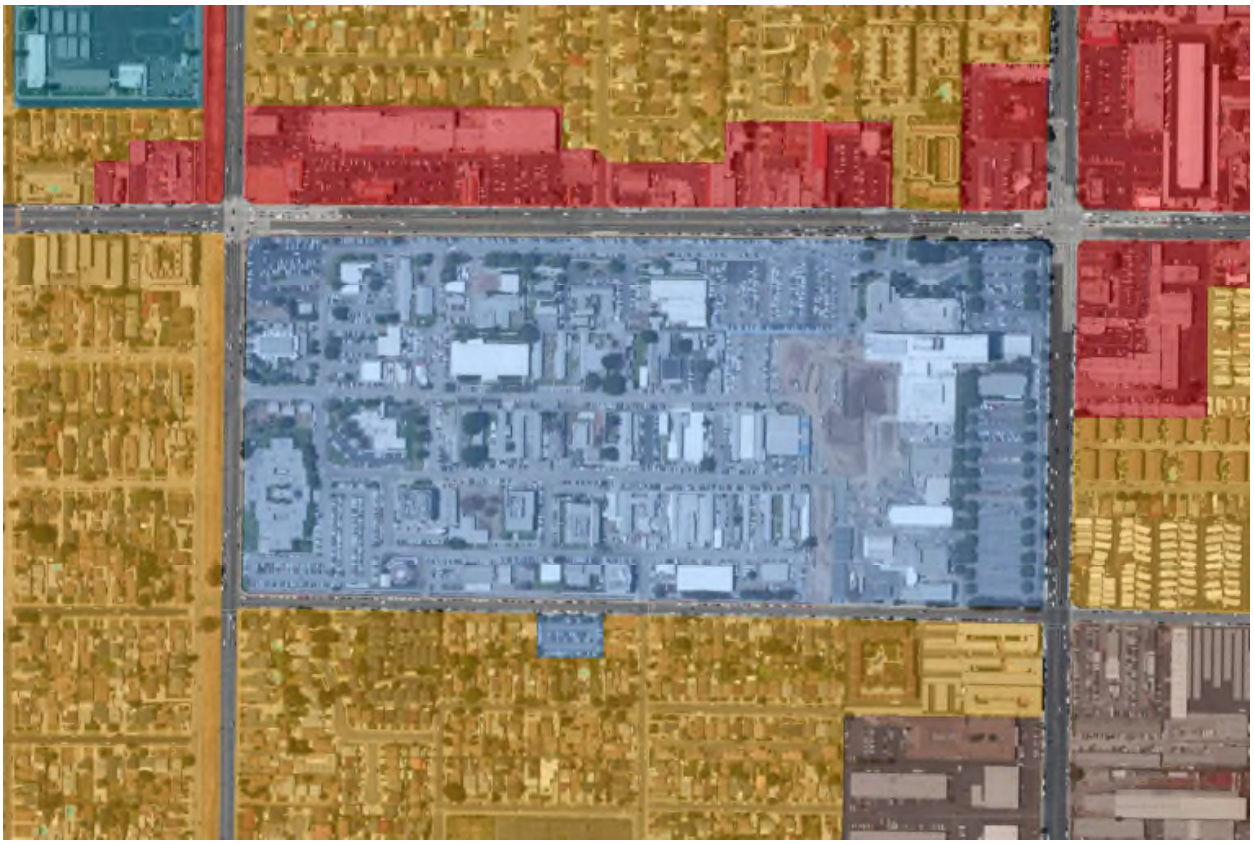
The 72 acre Campus is located in the unincorporated County of Los Angeles community of West Carson, which roughly encompasses 2.3 square miles between the Harbor Freeway (I-110) on the east and Normandie Avenue on the west, Del Amo Boulevard on the north and Lomita Boulevard on the south. The Campus is bordered by Carson Street on the north, 220th Street on the south, Vermont Avenue on the east, and Normandie Avenue on the west. The Harbor UCLA Medical Center Campus location is shown in Figure 1.

Figure 1: Harbor UCLA Medical Campus Location



Figure 2 is an aerial photo of the existing site (shown in blue) and neighborhood surroundings.

Figure 2: Existing Medical Campus Site Aerial Photo



The existing Harbor UCLA Medical Center Campus contains approximately 1,279,300 square feet of developed floor area, including the recently completed Surgery and Emergency Room Replacement Project (Replacement Project). The Master Plan Project includes construction of a new Hospital tower (New Hospital Tower) that meets current seismic building codes, renovation of the existing Hospital building to house non-acute care support uses, replacement of aging facilities, reconfigured vehicular and pedestrian access to and circulation within the Harbor-UCLA Campus, and implementation of a cohesive site design that enhances the experience of staff, patients, and visitors.

Harbor-UCLA Medical Center is a County-owned and operated tertiary-care medical center and one of only five Level 1 Trauma Centers in the County. Tertiary care hospitals generally refer to major facilities with specialized facilities and personnel which can provide a comprehensive range of medical treatments including general medicine, pediatrics, obstetrics, surgery, and various subspecialties. Trauma centers are equipped and staffed to provide comprehensive emergency medical services to patients suffering traumatic injuries. Level 1 centers provide the highest level of surgical trauma care and have a full range of specialist and equipment available for 24-hour coverage. Harbor-UCLA Medical Center serves southwestern Los Angeles County and provides healthcare services to more than 700,000 residents within 15 miles of the Campus.

The existing Hospital is licensed for 453 inpatient beds, of which 373 beds (or 82% of the licensed beds) are budgeted/staffed beds. The larger Harbor-UCLA Medical Center Campus houses more than 70 primary and secondary care clinics. A premiere teaching Hospital with residency and fellowship programs in many medical and surgical specialties and a strong research focus, the hospital employs approximately 300 full-time faculty physicians, more than 120 part-time faculty physicians, and 360 volunteer faculty physicians, with more than 500 residents and fellows completing graduate studies at the hospital. Total employment for the entire Harbor-UCLA Campus (including the Hospital and other tenants) is approximately 5,500.

Three major tenants are co-located on the Campus together with the Hospital and outpatient clinics. LA BioMed, the largest tenant is one of the largest independent not-for-profit biomedical research institutes in the nation. It conducts and supports research, training, and education activities, provides community services including childhood immunization and nutrition assistance, and maintains an affiliation with the Hospital. The Harbor-UCLA Medical Foundation, Inc. (MFI) provides clinical patient care and uses its revenues to fund clinical, research, and educational activities at the Harbor-UCLA Medical Center. Children's Institute International (CII) specializes in the treatment and prevention of child abuse and neglect, and provides services to families in the South Bay and adjacent communities. A number of other County departments, including an outpatient mental health clinic operated by the Department of Mental Health, occupy buildings on the Campus.

Harbor-UCLA Medical Center expects increasing demand in its service area, which currently encompasses 10 million people and is expected to grow by 600,000 persons by 2030. The population served includes a large proportion of uninsured, underinsured, or those otherwise dependent on the LA County Department of Health Services (DHS). It is projected that the service area will include an additional 190,000 Medicare-eligible patients by 2030. This will affect demand for services as well as the number of patient visits, which is expected to increase by 20 % by 2030.

Existing Campus Facilities

LA BioMed, which employs approximately 700, presently occupies a number of older buildings (World War II-era structures) scattered throughout an approximately 16.5-acre area encompassing the central portion of the Harbor-UCLA Campus, and is proposing to consolidate its operations within a smaller 11.4-acre leasehold (LA BioMed Campus) in the south-central portion of the Campus. Four new buildings have been constructed on the LA BioMed Campus since 2000, and LA BioMed will vacate approximately 95,000 square feet of floor space within the buildings it occupies elsewhere on the larger Campus as it consolidates.
Other newer facilities constructed on the Harbor-UCLA Campus since the 1980s include buildings housing Hospital-related outpatient services and the buildings housing major tenants MFI and CII at the western end of the Campus. Since 1989, MFI has occupied the Harbor UCLA Professional Building (also known as the MFI Professional Building) at the west end of the Campus, with related outpatient services housed in nearby buildings. The Harbor UCLA

Professional Building houses nine clinical departments that provide a range of clinical subspecialties, a laboratory, radiology, nuclear medicine and a pharmacy. CII occupies a 23,435-square-foot facility known as its Burton E. Green Campus in the northwestern corner of the Harbor-UCLA Campus, near the intersection of Carson Street and Normandie Avenue. Overall, however, the existing layout of the Harbor-UCLA Campus reflects its piecemeal growth over time, and the scattered, aging buildings and infrastructure have become inefficient to operate and maintain, contributing to serious logistical obstacles and service deficiencies. The Hospital (including the PCDC) and outpatient clinics are currently running at or near capacity, and existing facilities provide no physical room for growth. Other facility and programmatic shortfalls include a lack of on-site amenities for patients and visitors and a shortage of adequate teaching space for the medical school internship and continuing education programs.

Central Plant, Infrastructure and Materials Management

A number of infrastructure facilities and systems on the Harbor-UCLA Medical Center Campus are at the end of their useful life or inadequate for current and future needs and require replacement, upgrading or new facilities. These include:

1. Electrical system (normal and emergency power): substations, distribution systems and lighting systems
2. Security systems which are lacking
3. Water distribution system and backup supply system
4. Recycled water for non-potable use
5. Sewer laterals and main known to serve the Campus; and an aging and fragile
6. Storm water runoff retention and conveyance system to comply with County requirements
7. Central Plant (heating and cooling) upgrades to meet requirements of the newly expanded Hospital
8. Information Technology (IT) improvements for communications and data management and processing

Materials management encompassing everything from loading docks, handling and provision of medical supplies and equipment, technology, linens, and food requires overhauling improvements.
Waste management facilities and systems require improvements in collection, staging, and processing and disposal to comply with more stringent mandatory State and local regulations.

Landscaping

Landscaping in the existingHarbor-UCLA Campus is limited and discontinuous. There are several landscaped courtyards mainly at the western end of the Campus surrounding the MFI and CII buildings and on the LA BioMed Campus and in scattered locations in the north-central Campus. Most of the Campus lacks landscaping. With the exception of the main entrance to the Hospital on Carson Street, which is planted with mature trees, shrubs, and lawn, there is landscaping at other Campus entrances and for long stretches of the perimeter, which mostly is demarcated with chain- link fences and concrete block walls. The western half of the block

fronting on Carson Street, a portion of the Normandie Avenue frontage, and the western two-thirds of the 220th Street perimeter are enclosed with chain link fence planted with bougainvillea vines. The Vermont Avenue frontage, adjacent to the new parking structure and Hospital parking lot, and the corner of the Campus at Carson Street and Vermont Avenue, are the most heavily landscaped portions of the Campus perimeter, with mature trees and a landscape setback from the sidewalk. There are no landscaped parkways or street trees along any of the Campus street frontages.

Description of the Proposed Project

Proposed Master Plan Project facilities include the following:

1. New Hospital Tower
2. New and renovated outpatient care facilities (to be provided in new outpatient buildings and in portions of the renovated Hospital building)
3. Other services and facilities, including administrative office, warehouse/storage areas, day care, limited commercial services
4. Long-term build out of the LA BioMed Campus
5. New Bioscience Tech Park
6. Campus support facilities, including new and renovated infrastructure, utilities, parking, roadways, and pedestrian and bicycle circulation improvements.

These proposed uses are itemized in the following table prepared by PCR titled “Harbor-UCLA Master Plan Project Existing and Proposed Land Use Summary”.

Harbor-UCLA Master Plan Project Existing and Proposed Land Use Summary													
								Master Plan at Year 2023			Master Plan at Buildout 2030		
Land Use [a]	Existing		To Be Demolished		Proposed New Construction			(Existing – Demolition + New)			(Existing – Demolition + New)		
		LA		LA		LA	Bioscience		LA	Bioscience		LA	Bioscience
	HUCLA	BioMed	HUCLA	BioMed	HUCLA	BioMed[b]	Tech Park	HUCLA	BioMed [b]	Tech Park	HUCLA	BioMed [b]	Tech Park
Administrative Office	23,435	-	-	-	-	-	-		-	-		-	-
								52,635			130,635		
Day-Care Center	4,360	-	-	-	-	-	-	4,360	-	-	4,360	-	-
Utilities/Indust/Infrastr	112,719	-	102,434	-	118,920	-	-	118,920	-	-	129,205	-	-
Hospital/Inpatient	648,810	-	167,255	-	955,100	-	-	648,810	-	-	1,202,655	-	-
Hospital Beds	453	-	453	-	446	-	-	453	-	-	446	-	-
Library	22,500	-	22,500	-	-	-	-	22,500	-	-	-	-	-
Medical Office/Outpatient	327,304	-	327,304	-	324,500	-	-	338,700 [c]	-	-	480,500 [d]	-	-
Biomedical R&D	-	94,754	-	94,754	-	225,000	250,000	-	112,500	125,000	-	225,000	250,000
Warehouse/Storage	45,402	-	45,402	-	-	-	-	45,402	-	-	-	-	-
Retail	-	-	-	-	35,000	-	-	-	-	-	35,000	-	-
TOTAL:	1,279,284		759,649		1,908,520			1,400,425			2,457,355		
NET NEW								121,141			1,178,071		

[a] Square footages do not include parking structures or surface parking areas.

[b] The total development for the LA BioMed Campus represents net new square footage anticipated to be developed on the 11.4-acre LA BioMed Campus leasehold within the HUCLA Campus within the timeframe of HUCLA Master Plan buildout. In addition, the development of 70,700 net new square feet of floor area on the LA BioMed Campus, intended to consolidate existing LA BioMed facilities elsewhere on the HUCLA Campus, was approved in September 2014 through separate County environmental review.

[c] Total Medical Office Uses at Interim Year 2023 includes 227,500 square feet of medical office uses for the Outpatient Mental Health Building and Outpatient Building A, as well as 111,200 square feet of modular medical office space (constructed in Phase M) that would be removed from the Medical Campus during Phase 6 and thus is not included in the Medical Office totals at Project buildout.

[d] Medical Office space at Project buildout would include 227,500 square feet of medical office uses for the Outpatient Mental Health Building and Outpatient Building A, 97,000 square feet for Outpatient Building B, and 156,000 square feet of medical office, campus support and other "back of house" uses within the renovated Hospital tower, less 111,200 square feet of modular medical office space placed on-site during Phase M.

Source: PCR Services Corporation, 2015

The Harbor UCLA Medical Center Master Plan Project Site Plan, Figure 3, is the proposed conceptual layout of existing buildings to be retained and proposed new development.

Figure 3: UCLA Medical Center Master Plan



The proposed Project has a total of approximately 2,457,400 square feet of developed floor area - an increase of approximately 1,178,000 square feet over the existing approximately 1,279,300 square feet.

The following table, prepared by PCR, indicates the square footages of existing facilities to remain and to be demolished. The previous summary table also includes the square footage of the new facilities to be constructed.

Harbor –UCLA Master Plan Project Summary of Disposition of Existing Buildings

Existing Buildings to Remain	Square Feet
Existing Hospital (to be re-used for outpatient support and administration)	234,000 square feet
Primary Care and Diagnostics Center	57,555 square feet
Surgery and Emergency Room Replacement Project	190,000 square feet
Children's Institute International	23,435 square feet
Cooling Towers	3,750 square feet
Emergency Generator	6,535 square feet
Child Care Center (off-site)	4,360 square feet

Existing Buildings to Remain	Square Feet
Existing Buildings to be Removed	**Square Feet**
Phase M: Buildings N6, N7, N8, N9, N11, N12	11,578 square feet
Phase M: Buildings F4.5 Trailer, F5, F5 Trailer, F6, F7, F8, F9, F9 Annex	23,452 square feet
Phase 1: Buildings B1, B2, B2 West, B3, B3 Annex, B4, B4 Annex, C1, C1 Annex, C2, C3, N14, N16, N17, N18, N20, N21	75,828 square feet
Phase 1: D2 Annex, D5 Annex	2,962 square feet
Phase C: Buildings F10, M1, T1	8,007 square feet
Phase C: Buildings D2.5, D3, F2, H1	9,661 square feet
Phase C: Storage Containers	3,200 square feet
Phase 3: Buildings D3.5, D4, D4.5, D5, D5.5, D6, D6 Ramp Office, D9, F3, F3.5, F4, F9, F9 Annex	44,128 square feet
Phase 5: Hospital North and South Wings	167,255 square feet
Phase 5: Parlow Library	22,500 square feet
Phase 5: Building 1 East	6,600 square feet
Phase 5: Building 2 East	1,500 square feet
Phase 5: Building 1 South	9,850 square feet
Phase 5: Building 2 South	5,385 square feet
Phase 5: Building 3 South	12,240 square feet
Phase 5: Building Warehouse 1 / Central Plant	37,075 square feet
Phase 5: Building Warehouse 2	5,127 square feet
Phase 6: Hazardous Materials Storage, Paint Shop, Buildings N22, N24, N25, N26, N26A Trailer, N26B Trailer, N26C, N28, N31, N32, N33, N34, 14, 16, 18, Imaging Center, Storage Containers	102,434 square feet
Phase 6: Harbor-UCLA Professional Building	54,087 square feet

Source: PCR Services Corporation, 2015.

Following is a summary description of the facilities for the "Proposed Project" for the proposed Harbor UCLA Master Plan Project as of January 29, 2016, prepared by PCR

New Hospital Tower and Outpatient Care Facilities

The New Hospital Tower/Inpatient facilities would contain a total floor area of approximately 1,202,655 square feet and 446 staffed patient beds, interventional services, and an inpatient imaging department at Project build out. As is the case for the existing Hospital, the total number of budgeted/staffed inpatient beds in the New Hospital Tower would be 379 beds, or approximately 85% of the 446 licensed beds. The existing Hospital and PCDC department would be retained and used for outpatient and hospital support, outpatient imaging, administrative offices, and other related uses. An additional 156,000 square feet of medical office and other outpatient services would also be accommodated in the renovated existing Hospital tower.

Proposed outpatient services would be clustered in up to three outpatient buildings occupying a total floor area of approximately 324,500 square feet at build out, including medical offices, primary and specialty medical clinics, classrooms, labs, a library, and outpatient imaging including MRI and CT, as well as mental health and social services. Two temporary modular outpatient buildings totaling 111,200 square feet would be placed on the Campus following demolition of various existing structures. The outpatient buildings would also have allocated space for other program uses, such as retail, or other expanded programing including community support functions.

Other new facilities would total approximately 62,795 square feet and provide space for meetings, wellness training, post-medical care, nutrition classes, and similar uses.

Campus support facilities including a Central Plant (heating and cooling), water treatment, warehouses/material management, Southern California Edison (SCE) electrical substation, and loading dock would total approximately 129,205 square feet.

Biomedical Research Facilities

The Project proposes the development of up to 250,000 square feet of new biomedical research facilities, collectively referred to as the Bioscience Tech Park, on the western end of the Campus. It is assumed that development of the Bioscience Tech Park would be implemented over a 10-year period between 2020 and Master Plan Project build out in 2030, and would consist of multiple buildings and associated surface and structured parking. It is further assumed, for the purposes of analysis presented in this Draft EIR, that approximately 50 percent of the Bioscience Tech Park, or approximately 125,000 square feet, would be constructed by the year 2023, with the remainder constructed by 2030.

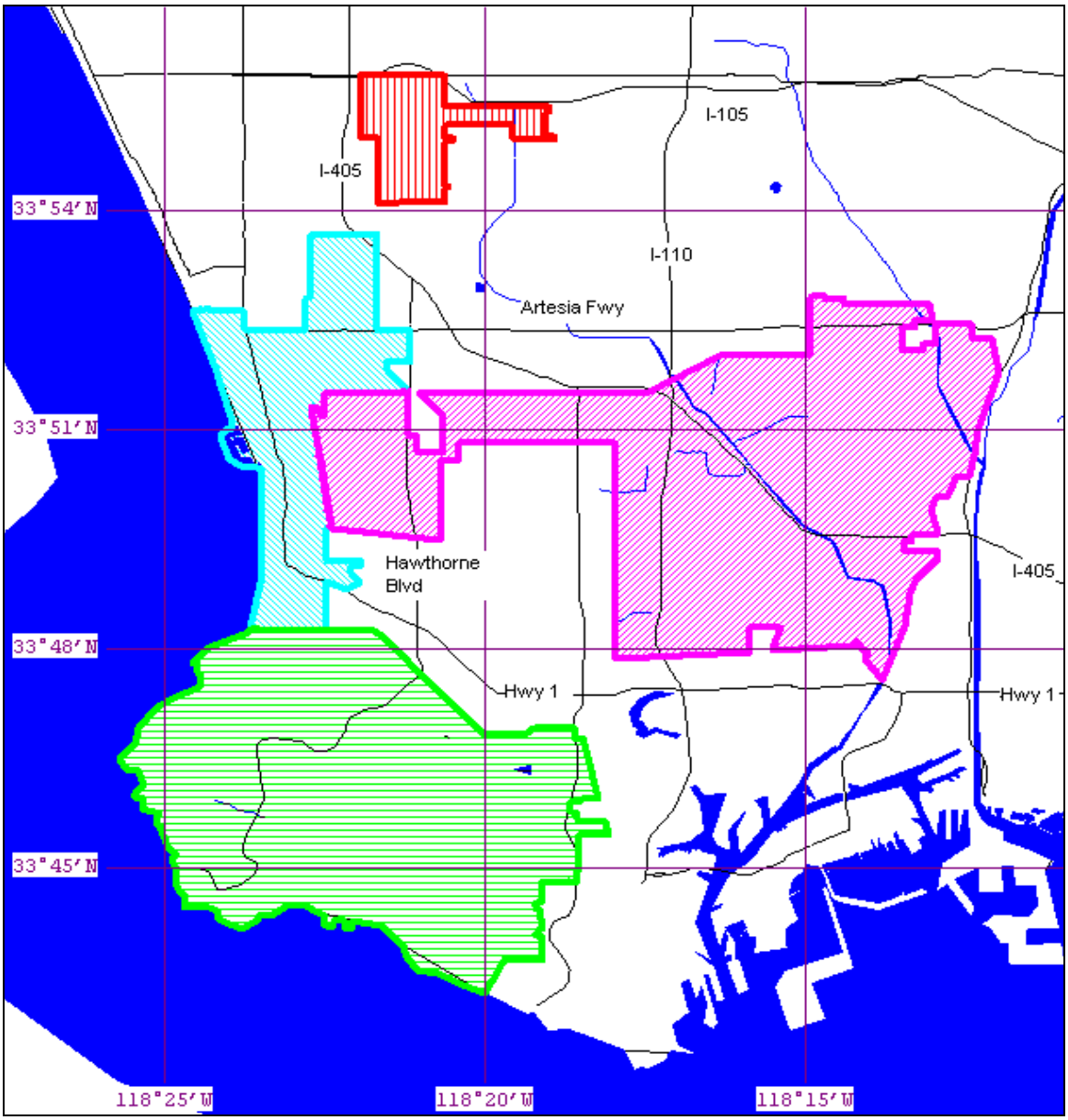
Dominguez District Background Information

The Dominguez system within the Rancho Dominguez District of Cal Water currently provides water service to the existing Harbor UCLA Medical Center Campus.

Cal Water's Rancho Dominguez District is located in the southern corner of Los Angeles County approximately ten miles north of Los Angeles Harbor. The Rancho Dominguez District includes three separate regulated water systems, a leased system, and various operations and billing contracts. Information in this WSA pertains to the Dominguez system only.

The Dominguez system serves most of the City of Carson, as well as a portion of the City of Torrance and small sections of the cities of Compton, Long Beach and Los Angeles and unincorporated Los Angeles County. The service area covers approximately 25 square miles and is bounded on the north by the cities of Redondo Beach, Torrance, Los Angeles, Carson and Compton, on the east by Long Beach, on the south by the cities of Los Angeles, Lomita and Torrance, and on the west by Redondo Beach. Figure 4 shows the location of the Dominguez system.

Figure 4: Location of Dominguez System (Area Shaded Pink)



The Harbor UCLA Project is not specifically included in Cal Water's Dominguez system 2010 Urban Water Management Plan (UWMP); therefore, its water requirements are addressed in this WSA. The 2010 UWMP is based on data recorded through 2010 and is still the most recent UWMP document. Cal Water is currently preparing a 2015 Draft UWMP and has collected and compiled data on population growth, water demand and water supplies from 2010 to 2015. These data, where available have been used in this WSA. The Dominguez system 2010 UWMP document can be referenced for more detailed information on historic water demand and supply. In June 2009, Cal Water completed a Water Supply and Facilities Master Plan (WSFMP) for the Dominguez system that also included an assessment of future water demand and supply, which has information that has been used in preparing by Cal Water in preparing its UWMP.

Senate Bill 610 (Chapter 643, Statutes of 2001) (SB 610) amended state law as of January 1, 2002, to include consideration of water supply availability when cities and counties are making land use development decisions. SB 610 requires information on water supply availability be provided to local public agency decision-makers prior to approval of development projects that meet or exceed any of the following criteria:

1. A residential development of more than 500 dwelling units.
2. A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet.
3. A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A hotel or motel with more than 500 rooms.
5. An industrial, manufacturing or processing plant or industrial park planned to house more than 1,000 persons occupying more than 40 acres of land or having more than 650,000 square feet of floor area.
6. A mixed-used project that includes one or more of the projects specified above.
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Depending on the definitions used, the proposed Harbor UCLA Project exceeds criteria 2, 3, 5, 6 and 7 above, and as such, a WSA is required. This WSA assesses the adequacy of the water supply to meet the estimated demands of the proposed Harbor UCLA Project over the next 20 years and those of Cal Water's Dominguez system customers and projected new users under normal, single dry year and multiple dry year conditions (Water Code §10911(a)). SB 610 requires that the information presented in a WSA be included in the administrative record that is the basis for an approval action by the local public agency.

SB 610 recognizes local control and decision-making regarding availability of water for projects and approval of projects. A WSA is to be provided to local governments for inclusion in environmental documentation for projects subject to the California Environmental Quality Act (as defined in Water Code 10912 [a]).

Cal Water uses U.S. Census data in estimating populations in all of its districts in California. Its methodology for estimating existing and future populations has been reviewed and accepted by the California Public Utilities Commission (CPUC), which provides regulatory oversight of privately owned water and wastewater utilities. In its 2010 UWMP, Cal Water used year 2000 census data because 2010 data were not available to local governments until the beginning of 2012. Cal Water is using 2010 U.S. Census data in the Dominguez 2015 UWMP. That data and more recent projections of population growth in the service area are the basis for water demand forecasts.

Estimates of the population serviced by Cal Water in the Dominguez system are based on overlaying the 2010 U.S. Census Tract Block data with the service area as indicated in Figure 1. LandView 5 and MARPLOT® software were used to generate data.

A summary of the census data for 2010 for the Dominguez system is shown in Table 1.

Table 1: Summary of Census 2010 Data for Dominguez System			
	Census Tract Block	**Population**	**Dwelling Units**
Dominguez Service Area	**889**	**141,105**	**45,021**

Table 1 data were used as a baseline for estimating future population in the Dominguez system. To forecast population to 2040, the 2010 Census population was divided by the total number of dwelling units served by Cal Water in 2000 to obtain an average of 3.134 persons per dwelling unit. This average number of persons per dwelling unit value was multiplied by the projected number of dwelling units in the Dominguez system for future years to obtain the population forecast.

To estimate future residential service counts, Cal Water used the 10-year average annual growth rate of 0.873 percent calculated from service counts using U.S. Census data from 2000 and 2010. To estimate total population, the projected residential service counts are multiplied by the estimated number of persons per residential unit based on U.S. Census data.

Table 2 is Cal Water's projected population for the Dominguez system in five-year increments based on the 10-year long-term average service connection growth rates and 2010 US Census data used to determine persons per dwelling unit.

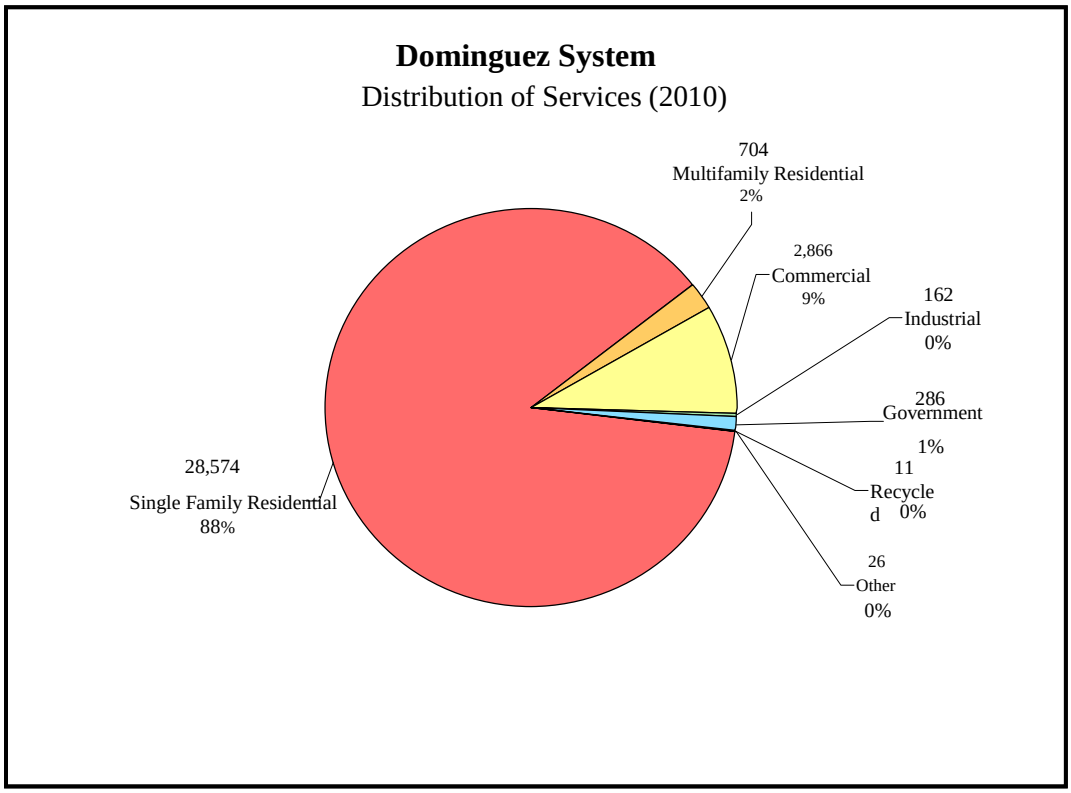
Table 2: Dominguez System Population Projections								
	2005	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Persons/ Dwelling Unit	3.127	3.134	3.134	3.134	3.134	3.134	3.134	3.134
Total Dwelling Units	44,946	45,024	45,382	46,012	46,650	47,297	47,954	48,619
Number of Persons	140,546	141,105	142,227	144,201	146,202	148,230	150,287	152,372

Cal Water's user classes for customer services are as follows:

- Single-family Residential
- Multi-family Residential
- Commercial
- Industrial
- Government
- Other

Figure 5 is a graph of the distribution of services by customer based on 2010 U.S Census data.

Figure 5: Dominguez System: Distribution of Services



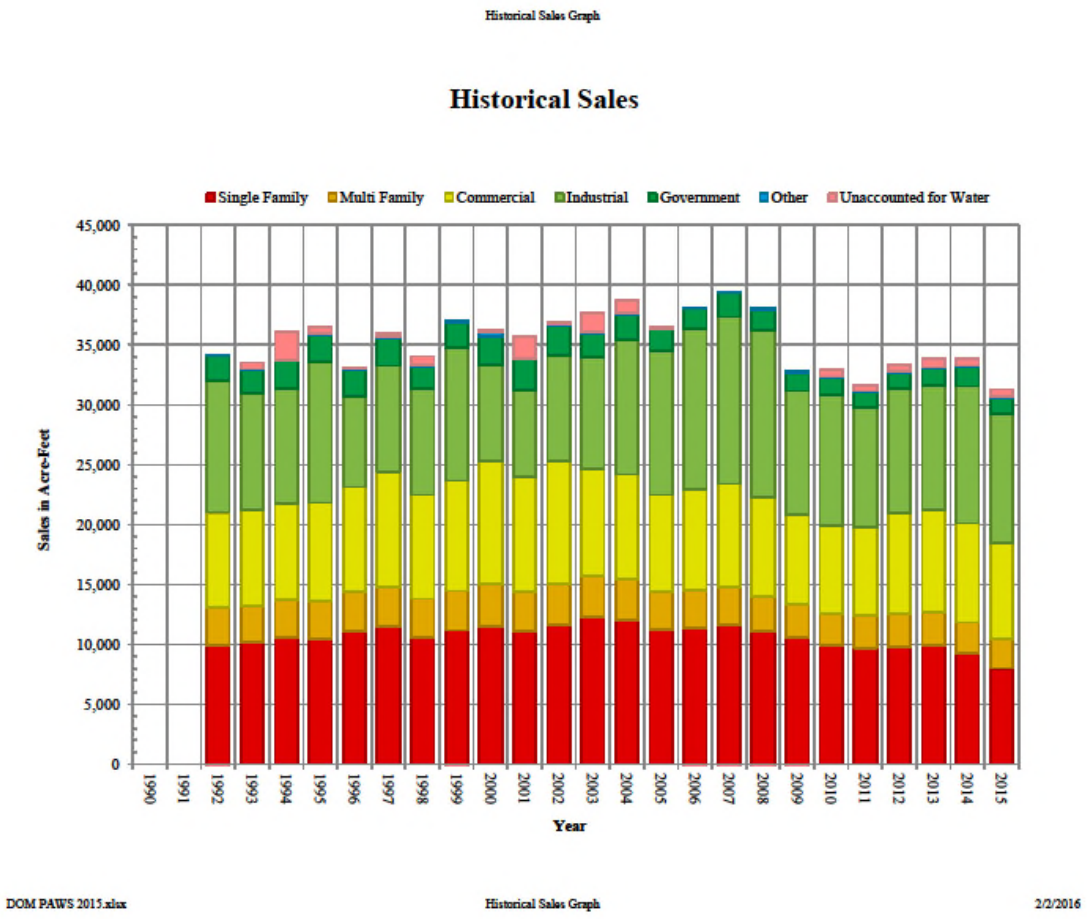
The total number of customer services for the Dominguez system for 2010 was 32,629. In 2012, total customer services were 32,737 or an increase of 108 services in 2 years or 54 services per year. Virtually all of these were residential with single-family being 66% of the increase. Hence, the following 2010 data continues to be an accurate indicator of water use by user class.

Single-family residential services totaled 28,574 (88 percent of total). Multi-family residential services totaled 704 (2 percent of total) and commercial totaled 2,866 (9 percent of total). All other user classes comprised the remaining 1 percent of total. The distribution of services for the year 2010 is shown in Figure 5. Classes using the most water are single-family residential, commercial, and industrial. Single-family residential and commercial uses increased constantly from 1992 until about 2003/2004, after which they have declined to almost 1992 levels. Water use in the residential sector is for permanent single- and multi-family residences. There are no seasonal customers. The industrial sector has had some fluctuations, but overall is fairly constant. Multi-residential and governmental sectors have been constant since 1992. Recycled water was not available in the Dominguez system until early 2000.

Historical and Current Water Demand

Historical water demand or sales by user class for the Dominguez system is shown in Figure 6.

Figure 6: Dominguez System Water Sales by User Class



Dominguez System Water Demand

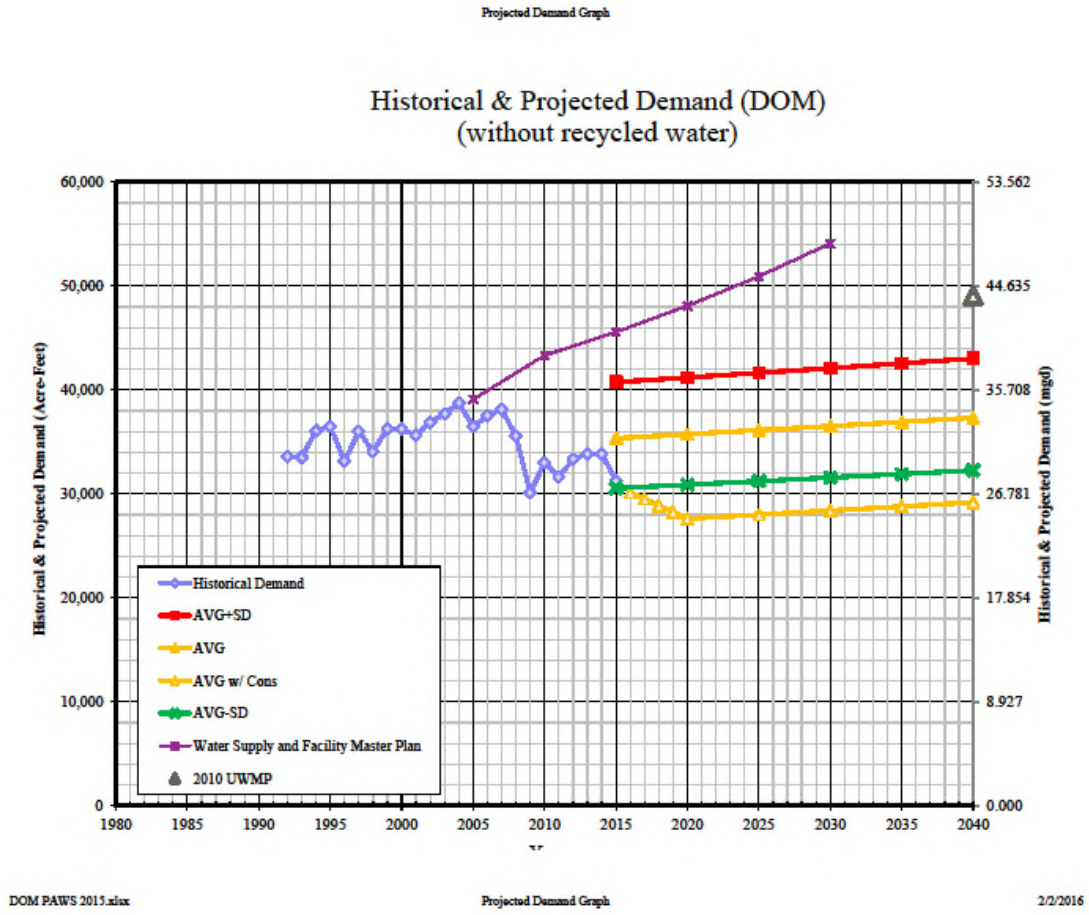
Projected increases in the number of customers in each user class are based on historic growth rates for that class unless a particular growth rate was determined to be non-representative then the overall customer growth rate was used.

Historically, Cal Water projected demand by multiplying the projected number of services for each user class by one of three (high, average and low) historic service rates for that class. The three service rates were derived from customer water records. The sum of the projected demands for each user class equals the total projected demand for the Dominguez system. Three separate demand projections for the Dominguez system were calculated in this manner: high, average and low. After the passage of Senate Bill 7 (SBx7-7) the above method is no longer used by Cal Water as the primary method for making projected demands. However, these calculations are still used as the basis for projected services, population, and distribution of demand among user classes.

Demand projections in the 2010 UWMP were made in accordance with SBx7-7 requirements. Two demand projections were made: 1) an unadjusted baseline demand and 2) a target demand. The

unadjusted baseline water demand projection is the total demand expected without any conservation. It is equal to forecasted population multiplied by the base per capita water use, which is the average for the period from 2005 to 2009 or 225 gallons per person per day. Updated demand projections were made by Cal Water in 2015 which reflect different methods and sources as shown in Figure 7.

Figure 7: Comparison of Different Demand Projections for the Dominguez System



The target water demand projection includes conservation savings due to both passive and active demand management. Target demand is calculated by multiplying SBx7-7 target per capita water use values by the projected population. It is shown in the figure as "Ave w/Cons" in Figure 7 which also shows the WSFMP demand projection, which was based in part on projected land use development and does not include savings due to increased water conservation.

The water demand projection calculation used for SBx7-7 compliance is based on future population projections and per capita per day water use target values. Projected water demand based on user class (customer type) cannot be determined by this method. To obtain a breakdown of future demand by user class, Cal Water calculated the ratio of demand for each user class to total demand. This ratio was applied to the total baseline demand forecast to develop projected potable water demands by user class for 2020 to 2040 and in shown in Figure 6 as the "Avg" line. The SBx7-7 demand

forecast includes conservation savings associated with the demand management measures described in this section. Table 3 shows that total potable water use in the Dominguez system for 2015 was 31,291 AF which was 1,701AF less than total water use in 2010. So even with an estimated population increase of 1,122 people in 5 years, increased water conservation due in part to measures implemented by Cal Water resulted in less water use.

Table 3: Actual 2010 and 2015 Potable Water Use Dominguez System – AF

	2010		2015		Difference
Water Use Sectors	# of accounts	Use	# of accounts	Use	Use
Single family	28,574	9,937	28,732	8,012	-1,925
Multi-family	704	2,661	742	2,428	-233
Commercial	2,866	7,308	2,869	8,077	+769
Industrial	162	10,953	158	10,772	-181
Institutional/government	286	1,438	278	1,312	-126
Other	26	67	34	59	-8
Unaccounted for	-	628	-	631	+3
Total	**32,629**	**32,992**	**32,813**	**31,291**	**-1,701**

California Senate Bill x7- 7 Baseline and Targets

Cal Water is expanding water conservation programs for its 24 California service districts. Over the next five years, conservation program expenditures will increase significantly due to the state requiring future reductions in per capita urban water use. Senate Bill No. 7 (SBx7-7) adopted in November 2009 mandates a statewide 20 percent reduction in per capita urban water use by December 31, 2020. The CPUC is directing Class A and B water utilities to adopt conservation programs and rate structures designed to achieve reductions in per capita water use. In preparing to achieve increased water conservation, Cal Water in 2010 developed five-year conservation program plans for each of its service districts. The complete Dominguez District Conservation Master Plan is in Appendix G of the 2010 UWMP. An updated Conservation Master Plan will be included in the 2015 UWMP.

SBx7-7 required progress toward the 2020 goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. SBx7-7 requires each urban retail water supplier to develop 2015 and 2020 urban water use targets in accordance with specific requirements and provides several ways to calculate water use reduction targets. Retail water suppliers can also form regional alliances within the same hydrologic region to achieve compliance. Cal Water plans to include the Dominguez system in a regional alliance with four other Cal Water districts in the South Coast hydrologic region. For the five districts, Cal Water has calculated both district-specific targets and a regional alliance target.

The specific targets for Dominguez system are:

1. 193 gallons per capita per day (gpcd) by 2015
2. 171 gpcd by 2020

Dominguez system 2015 demand including distribution system losses averaged 27,911,572 gallons/day for an estimated population of 142,227 persons which equals 196.2 gpcd or 3.2 gpcd more than the 2015 target value or an exceedance of 1.6%.

For 2020, per capita demand is to decrease by 25.2 gpcd or 12.8 percent to meet the Dominguez system target.

Table 4 provides two projected potable water demand forecasts for the Dominguez water system: 1) based on historic water use by user class and projected growth in each user class minus one standard deviation, 2) the SBx7-7 method described above. The reason for presenting two is that achieving SBx7-7 compliance based on using the 171 gpcd by 2020 will be challenging since it depends on achieving in higher levels of water conservation than what was realized in 2015.

The Cal Water method selected would result in a per capita water use of 191 gpcd in 2020 and 188.8 gpcd in 2040, which are below the 2015 SBx7-7 target value but above the 2020 value.

To be conservative, the WSA uses the higher demand forecast (Cal Water Ave – Standard Deviation) shown in Table 4.

Table 4: Dominguez System Potable Water Demand Actual and Projected - AF

	2005*	2010*	2015*	2020	2025	2030	2035	2040
Cal Water: Ave - SD	36,499	32,992	31,291	30,884	31,221	31,567	31,910	32,260
SBx7-7	36,499	32,992	31,291	27,643	28,028	28,416	28,810	29,210
Difference				3,241	3,193	3,147	3,100	3,050

*Actual

Recycled Water

Cal Water purchases recycled water from West Basin Municipal Water District (WBMWD) and provides it to a number of customers for non-potable uses, thereby reducing use of potable water. Table 5 provides updated projections on recycled water use. The quantity of recycled water delivered to the distribution system is greater than recorded or projected customer use due to pipe leakage, authorized but unmeasured water use and unauthorized and unmeasured use. More information on the recycled water source and system for delivery and existing and projected customers is provided later.

Table 5: Actual and Projected Recycled Water Use in Dominguez System - AF

	2010	2015	2020	2025	2030	2035	2040
Recycled Water Use	4,515	5,089	6,776	7,481	8,260	9,120	10,069

Actual and projected total demand (potable and recycled water use) for the Dominguez system is shown in Table 6.

Table 6: Dominguez System Total Water Demand: Potable and Recycled Water Use Actual and Projected - AF								
	2005 (Actual)	2010 (Actual)	2015	2020	2025	2030	2035	2040
Water Use	40,356	37,507	36,280	37,660	38,702	39,823	41,030	42,279

Dominguez System Demand Management

Cal Water has and is significantly expanding its water conservation programs. State law, CPUC directives and a state water conservation organization are focused on reducing urban water use and have provided much of the impetus for this emphasis.
This includes:

1. Recent decisions by the CPUC directing regulated water utilities to reduce per capita urban water demand.
2. State legislation mandating urban water suppliers reduce per capita demand 20 percent by 2020.
3. Memorandum of Understanding Regarding Urban Water Conservation in California (MOU).

Following is a brief summary of each.

The CPUC's Decision 07-05-062 directed Class A and B water utilities to submit a plan to achieve a 5 percent reduction in average customer water use over each three-year rate cycle. This policy was refined under Decision 08-02-036, which established a water use reduction goal of 3 to 6 percent in per customer or service connection consumption every three years once a full conservation program, with price and non-price components, is in place. These decisions anticipated enactment of policies by the State legislature to reduce urban water use in California 20 percent by 2020.

SBx7-7 requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. SBx7-7 requires each urban retail water supplier to develop interim and 2020 urban water use targets. Urban retail water suppliers will not be eligible for state water grants or loans unless they comply with SBx7-7's requirements.

There are three ways in which a water supplier can comply with the MOU. The first way is to implement a set of water conservation best management practices (BMPs) according to the requirements and schedules set forth in Exhibit 1 of the MOU. The second way, called Flex Track compliance, is to implement conservation programs expected to save an equivalent or greater volume of water than the BMPs. The third way, similar to SBx7-7, is to reduce per capita water use. Each of these compliance options is briefly described below.

Originally, the MOU established a set of BMPs that signatories agreed to implement in good faith. For each BMP, the MOU established the actions required by the water supplier (e.g. site surveys, fixture and appliance rebates, water use budgets, volumetric pricing and conservation rate designs),

the implementation schedule, and the required level of effort (in the MOU this is referred to as the coverage requirement). Additionally, the MOU established the terms by which a water supplier could opt out of implementing a BMP.

BMPs are grouped into five categories. Two categories, Utility Operations and Education, are "Foundational BMPs" because they are considered essential water conservation activities by any utility and are adopted for implementation by all signatories to the MOU as ongoing practices with no time limits. The remaining BMPs are "Programmatic BMPs" and are organized into Residential, Commercial, Industrial, and Institutional (CII), and Landscape categories. Table 7 lists the BMPs by category. The requirements and coverage levels of each BMP are set forth in Exhibit 1 of the MOU. Cal Water's CUWCC annual reports, which detail BMP implementation, are included in the 2010 UWMP as Appendix G.

Under Flex Track, a water supplier can estimate the expected water savings over the 10-year period 2009-2018 if it were to implement the programmatic BMPs in accordance with the MOU's schedule, coverage, and exemption requirements, and then achieve these water savings through any combination of programs it desires. Thus, through the Flex Track compliance option, a water supplier agrees to save a certain volume of water using whatever it determines to be the best combination of programs. Because the savings target depends on the programmatic BMP coverage requirements, which in turn are functions of service area size and composition of demand, the volume of water to be saved under this compliance option must be calculated separately for each supplier. The methodologies and tools for water suppliers to implement these calculations had not been developed by the CUWCC at the time of preparation of the 2010 UWMP. They will be used in the 2015 Dominguez system UWMP.

Table 7: MOU Best Management Practices

BMP Group	BMP Name
1. Utility Operations Programs (F)	Conservation Coordinator
	Water Waste Prevention
	Wholesale Agency Assistance Programs
	Water Loss Control
	Metering & Volumetric Rates
	Retail Conservation Pricing
2. Education Programs (F)	Public Information Programs
	School Education Programs
3. Residential (P)	Residential Assistance Program
	Landscape Water Surveys
	High Efficiency Clothes Washer Program
	Watersense Toilet Program
	Watersense Specifications for Residential Development
4. Commercial, Industrial, Institutional (P)	Reduce baseline CII water use by 10% in 10 years
5. Landscape (P)	Large Landscape Water Budget Programs
	Large Landscape Water Surveys
F = Foundational BMP, P = Programmatic BMP	

Under the gpcd option, a water supplier can comply with the MOU by reducing its baseline gpcd by 18 percent by 2018. The baseline is the ten-year period 1997-2006. The MOU also establishes interim gpcd targets and the highest acceptable levels of water use deemed to be in compliance with this option. The MOU's gpcd option is similar to using Method 1 to set the SBx7-7 target, except that it uses a fixed baseline period and only runs through 2018. This compliance option may be difficult to achieve for Cal Water districts that are part of a regional alliance for purposes of SBx7-7 compliance because savings as a percent of demand will vary considerably among the districts in the alliance. It may also conflict with district-specific SBx7-7 targets set using method 3 (hydrologic region-based target). Because of these potential conflicts, this is not considered a viable MOU compliance option for Cal Water districts.

Cal Water uses Flex Track to comply with the MOU. This compliance option offers the most flexibility in selecting conservation programs suited to each Cal Water district and allows for more streamlined reporting. Because CUWCC tools for calculating a district's Flex Track savings target were not available in the 2010 UWMP, Cal Water developed its own target estimates. Cal Water will update these estimates in the 2015 UWMP using the CUWCC Flex Track target calculator.

Water Conservation Master Plans

To comply with requirements for urban water use reduction, Cal Water developed Water Conservation Master Plans (WCMP) for each of its service districts. WCMPs set forth a framework for compliance and describe Cal Water's specific conservation actions to be implemented in the next five years. Major tasks in the WCMPs include:

1. A complete review of State policies and development of a compliance strategy
2. Calculating all appropriate per capita targets
3. Determining water savings required from new programs
4. Performing an analysis of conservation programs
5. Developing a portfolio of conservation program actions
6. Creating a plan for monitoring and updating the WCMP

The Water Conservation Master Plan for the Dominguez system is included in its entirety as Appendix G in the Dominguez District 2010 UWMP and will be included in the 2015 UWMP. A discussion of baseline and target water use is in Section 3 of the UWMP. Details on water savings requirements and the programs to be implemented are also provided that document. Table 8 is a summary of water conservation programs selected for evaluation.

Table 8: Cal Water Conservation Programs

Program Name	Description	Target Market
CORE PROGRAMS		
Rebate/Vouchers for toilets, urinals, and clothes washers	Provide customer rebates for high-efficiency toilets, urinals, and clothes washers	All customer segments
Residential Surveys	Provide residential surveys to low-income customers, high-bill customers, and upon customer request or as pre-screen for participation in direct install programs	All residential market segments

Residential Showerhead/Water Conservation Kit Distribution	Provide residential showerhead/water conservation kits to customers upon request, as part of residential surveys, and as part of school education curriculum	All residential market segments
Pop-Up Nozzle Irrigation System Distribution	Offer high-efficiency pop-up irrigation nozzles through customer vouchers or direct install.	All customer segments
Public Information/Education	Provide conservation messaging via radio, bill inserts, direct mail, and other appropriate methods. Provide schools with age appropriate educational materials and activities. Continue sponsorship of Disney Planet Challenge program.	All customer segments
NON-CORE PROGRAMS		
Toilet/Urinal Direct Install Program	Offer direct installation programs for replacement of non-HE toilets and urinals	All customer segments
Smart Irrigation Controller Contractor Incentives	Offer contractor incentives for installation of smart irrigation controllers	All customer segments
Large Landscape Water Use Reports	Expand existing Cal Water Large Landscape Water Use Report Program providing large landscape customers with monthly water use reports and budgets	Non residential customers with significant landscape water use and potential savings
Large Landscape Surveys & Irrigation System Incentives	Provide surveys and irrigation system upgrade financial incentives to large landscape customers participating in the Large Landscape Water Use Reports programs and other targeted customers	Non residential customers with significant landscape water use and potential savings
Food Industry Rebates/Vouchers	Offer customer/dealer/distributor rebates/vouchers for high-efficiency dishwashers, food steamers, ice machines, and pre-rinse spray valves	Food and drink establishments, institutional food service providers
Cooling Tower Retrofits	Offer customer/dealer/distributor rebates/vouchers of cooling tower retrofits	Non-residential market segments with significant HVAC water use
Industrial Process Audits and Retrofit Incentives	Offer engineering audits/surveys and financial incentives for process water efficiency improvement	Non-residential market segments with significant industrial process water uses

Dominguez System Conservation Programs

Conservation programs selected for the Dominguez system are summarized in Table 9. A water savings requirement analysis showed that after accounting for water savings from existing water efficiency codes and ordinances, scheduled adjustments to water rates, and past investment in conservation programs, projected 2015 baseline demand (excluding recycled water use) in the

Dominguez system is 1,307 AFY above the level required for SBx7-7 compliance. The analysis also showed that 713 AFY of water savings from new programs would be required to satisfy MOU compliance requirements in 2015.

Table 9: Dominguez System Projected Water Savings by Conservation Program

Program	Water Savings AFY				
	2011	2012	2013	2014	2015
CORE PROGRAMS					
Rebates/Vouchers					
Toilets	24.5	48.0	70.6	105.5	139.0
Clothes Washers	10.9	21.3	31.3	41.2	50.6
Urinals	0.0	0.0	0.0	0.0	0.0
Customer Surveys/Audits	34.3	65.3	93.1	135.3	173.3
Conservation Kit Distribution	9.0	16.9	23.9	30.0	35.4
Pop-Up Nozzle Distribution	34.6	69.3	103.9	138.6	173.2
Subtotal Core Programs	113.3	220.8	322.8	450.5	571.5
NON-CORE PROGRAMS					
Direct Install Toilets/Urinals	19.1	38.7	57.5	141.5	222.2
Smart Irrigation Controller Vendor Incentives	1.6	3.2	4.9	15.7	26.5
Large Landscape Water Use Reports	5.6	5.6	5.6	11.2	11.2
Large Landscape Surveys/Incentives	9.0	18.0	27.0	36.0	44.9
Commercial Kitchen Rebates/Vouchers	0.0	0.0	0.0	14.9	29.9
Cooling Tower/Process Water Retrofit Incentives	58.6	117.3	175.9	194.2	212.4
Subtotal Non-Core Programs	93.9	182.8	270.8	413.4	547.1
Total Core and Non-Core Program Savings	207.3	403.5	593.6	864.0	1,118.6

Water Shortage Allocation Plans

Cal Water has also developed Water Shortage Allocation Plans (WSAP), which are plans of action to reduce water demand should significant water supply shortages occur. These actions may be implemented for several months or several years depending on circumstances. The WSAP differs from the WCMP, which is focused on achieving permanent reductions in per capita water use by Cal Water's customers and is not driven by significant short or long reductions in supply. In the short-term, the WSAP assists Cal Water in further reducing demand so that it matches significant reductions in supply.

Implementation of Cal Water's WSAP for the Dominguez system will generally be triggered by actions taken by the West Basin Municipal Water District (WBMWD) and the Metropolitan Water District (MWD). Except in unusual circumstances, Cal Water will follow the lead of these agencies when deciding whether to implement its WSAP. Cal Water has a four-stage approach that corresponds to specific levels of projected water supply shortage. Depending on the supply reduction

target, this approach becomes increasingly more aggressive in requiring customer water use reductions. The stage selected depends on such factors as wholesale supply reductions, availability of alternative supplies, time of year and coordinated regional actions among all affected water utilities and agencies.

The percentage of supply shortage determined by MWD will be a significant factor in Cal Water's decision on which stage of supply reduction it will implement for the Dominguez system. Supply reductions percentages are shown for each of the 4 stages in Table 10.

Table 10: Cal Water Supply Shortage Reduction Stages

Stage	Projected Supply Reduction %
Stage 1	5 to 10%
Stage 2	10 to 20%
Stage 3	20 to 35%
Stage 4	35 to >50%

A description of each stage follows.

Stage 1 is for water supply shortages of up to 10 percent and can be used to address annual variations in precipitation and mild dry year periods of one or two years duration. All reductions in Stage 1 are voluntary and impacts to customers are considered minimal. Actions to be taken by Cal Water in Stage 1 are listed in Table 11.

Table 11: WSCP Stage 1 Demand Reduction

Stage 1	Cal Water Actions
• 5 to 10 percent • Shortage Up to 10 Percent Reduction Goal • Voluntary Reductions	• Request voluntary customer conservation as described in CPUC Rule 14.1. • Maintain an ongoing public information campaign. • Maintain conservation kit distribution programs. • Maintain school education programs. • Maintain incentive programs for high efficiency devices. • Coordinate drought response with wholesale suppliers and cities. • Lobby cities for passage of drought ordinances. • Discontinue system flushing except for water quality purposes. • Request that restaurants serve water only on request.

Stage 2 is based on projected water supply shortages between 10 and 20 percent. Stage 2 is for water shortages of moderate severity such as those caused by a multi-year dry period. Reductions by customers can be voluntary or mandatory depending on percentage of water shortage. Mandatory requirements would likely be implemented if supply shortage exceeds 15 percent. Customers will experience moderate impacts on normal water use and some businesses may experience financial impacts. In Stage 2, Cal Water intensifies demand reduction by implementing the actions listed in Table 12.

Table 12: WSCP Stage 2 Demand Reduction	
Stage 2	**Cal Water Actions**
• 10 to 20 Percent Shortage • Up to 20 Percent Reduction Goal • Voluntary or Mandatory Reductions	• Increase or continue all actions from Stage 1. • Implement communication plan with customers, cities, and wholesale suppliers. • Request voluntary or mandatory customer reductions. • File Schedule 14.1 with CPUC approval if necessary. • Request memorandum account to track penalty rate proceeds and other drought related expenses. • Lobby for implementation of drought ordinances. • Monitor water use for compliance with reduction targets.

Stage 3 will be activated if there is a water supply reduction between 20 and 35 percent. This stage can be triggered by a very severe multi-year dry period or major failures in facilities for storage, transmission, treatment water and distribution facilities due to a natural disaster such as an earthquake. Supply reduction of these percentages could impact public health and safety and cause significant financial impacts on local businesses. All reductions are mandatory and customer allocations will be made. In Stage 3, Cal Water will take the actions listed in Table 13.

Table 13: WSCP Stage 3 Demand Reduction	
Stage 3	**Cal Water Actions**
• 20 to 35 Percent Shortage • Up to 35 Percent Reduction Goal • Mandatory Reductions	• Increase or continue all actions from previous stages. • Implement mandatory conservation with CPUC approval. • Install flow restrictors on repeat offenders. • Require customers to have high efficiency devices before granting increased allocations. • Require participation in survey before granting an increased allocation.

Stage 4 would be triggered by a reduction of supply greater than 35 percent, and possibly above 50 percent. This would be a crisis caused by a most severe multi-year dry period, a severe natural disaster resulting in catastrophic failure of major water supply infrastructure. In Stage 4, Cal Water will take the additional actions listed in Table 14.

Table 14: WSCP Stage 4 Demand Reduction	
Stage 4	**Cal Water Actions**
• 35 to 50+ Percent Shortage • Up to and above a 50 percent Reduction Goal Mandatory Reductions	• Increase all actions from previous stages. • Discontinue service for repeat offenders. • Monitor water use daily for compliance with reduction targets. • Prohibit potable water use for landscape irrigation and other non- essential activities

Cal Water's groundwater supply from the Central and West Basins is limited to its APA of 16,897 AFY, which is based on the safe yield of each basin and is fixed in both wet and multiple dry year periods. After Dominguez system well pumping capacity is increased to sustainably produce the APA, groundwater supply can be used to offset reductions in imported water from WBMWD. Recycled water is a drought-proof supply not subject to reductions by WBMWD. During critical water shortage periods, Cal Water will maximize recycled water use with existing customers and work on increasing use by additional customers in order to reduce potable water demand.

In April of each year, MWD assesses its available water supply for the coming water year and determines if reductions in water use by its member agencies are not required, are advisable or are in fact needed. MWD evaluates the performance of WBMWD retailers as a whole and will only assess penalties to WBMWD if retailers' collective use exceeds its allocation. These reduction targets are passed along through WBMWD to Cal Water and from Cal Water to its customers. If requested by MWD, the allocation period begin on July 1st and continues for at least one year or until the availability of supplies warrants the lifting of requesting water use reductions.

During all stages of water shortages, water production data for all sources are monitored by Dominguez system management. Customer water use data is concurrently monitored to determine if demand reduction percentages are being achieved and, if not, which customers require greater attention by Cal Water.

Harbor UCLA Medical Center Project Water Demand

Existing Harbor UCLA Medical Center Water Use

Cal Water provides water service to the Project area through four metered service connections. Table 15 is a summary of Cal Water metered water use sales data by year from 2012 through 2015 for the existing Medical Center campus.

Table 15: Harbor UCLA Medical Center Campus Annual Water Use Data - gpd					
Year	Service Connection 1	Service Connection 2	Service Connection 3	Service Connection 4	Total All Connections
2012	114,782	32,279	44,107	594	191,763
2013	78,860	39,570	73,515	74	192,019
2014	91,850	42,925	64,283	72	199,130
2015	94,240	25,668	37,601	0	157,508
Average: gpd	94,933	35,110	54,877	185	185,105
AFY	106.4	39.4	61.5	0.2	207.5

Annual average daily potable metered water use for these four years is 185,105 gpd or 207.5 AFY. The peak annual daily use in 2014 was 199,130 gpd and the lowest annual daily use in 2015 was 157,508 gpd – a difference of 41,622 gpd or a 20.9% reduction. Presumably, the reduction between 2014 and 2015 reflects increased water conservation actions as a result of four years of drought and California's mandate for all urban areas to achieve a 25% reduction in annual water use.

Existing total square footage of the medical campus is 1,279,284 ft^2. The average water use factor for all existing facilities including an estimated 2.5 acres of landscaping is 185,105 gpd/1,279,284 ft2 = 0.1447 gpd/ft^2.

Harbor UCLA Medical Center Project Water Demand

Of existing campus facilities, 759,649 ft^2 are to be demolished. Total new construction square footage is 1,908,520 ft^2. Total planned facilities area in year 2023 is 1,400,425 ft^2 and at build out in year 2030 is 2,457,355 ft^2 so the net increase in building space is 1,178,071 ft^2.

All existing uses (administrative office, day-care center, central utilities/industrial/infrastructure, hospital/inpatient, library, medical offices/outpatient, biomedical research and development, warehouse/storage) are part of the master plan. The primary difference is that some functions will have greater square footage – at build out, the hospital space will increase from 648,810 ft^2 to 1,202,655 ft^2; LA biomedical space will increase from 94,754 ft^2 to 225,000 ft^2. New Biomedical R&D space in the Bioscience Park will be 250,000 ft^2. New retail area will be 35,000 ft^2.

The proposed Medical Center project will replace existing facilities with those that will fully comply with more stringent and current LA County water conservation requirements including the California Plumbing Code and the California Green Building Code, which mandate installation of water conserving plumbing fixtures and fittings. However, it is not known how much additional water demand may be created by new laboratories and other water using medical and biomedical research and development activities. Therefore, as an offset to the installation of more water conserving fixtures, machines and cleaning practices, the existing average water use factor of 0.1447 gpd/ft^2 is used.

Therefore, the estimated water use in 2023, excluding irrigation of landscape area improvements, is:
1,400,425 ft^2 x 0.1447 gpd/ft^2= 202,642 gpd or 227.2 AFY

The proposed master plan includes a substantial increase in landscaped areas when compared to the existing campus which is minimally landscaped. The landscaped area estimate using the Master Plan map is 26.5 acres. The estimated existing landscaped area is about 2.5 acres; therefore, the net increase in landscaped area is 24 acres.

For the year 2023 it is assumed that 56% of the total landscaped area or 13.4 acres will be in place (same percentage as the 2023 building space area is to the 2030 building space area.)

The landscape plan identifies a number of plants, shrubs and trees which are drought tolerant. A typical historic Southern California irrigation rate for public landscaped areas is between 3 and 4 AFY/acre. For a more water conserving irrigation system (i.e., drip system) with plantings that are more drought tolerant, an irrigation rate of 2.5 AFY/acre is assumed. This would result in an irrigation water use of 33.5 AFY in the year 2023 and 60 AFY in the year 2030.

The Harbor UCLA Medical Center Campus is not close to West Basin Municipal Water District's (WBMWD) recycled water transmission pipeline which could supply recycled water for landscape irrigation. While it is suggested this option be explored with WBMWD, the assumption in the WSA is that landscape irrigation will be done with potable water.

Therefore, estimated Medical Center Campus Project water demand in 2023 is: 227.2 + 33.5 = 260.7 AFY.

For the year 2030 (project build out), estimated water use, excluding irrigation of landscaped area improvements is 2,457,355 gpd x 0.1447 gpd/ft^2= 355,579 gpd or 398.6 AFY.

Total estimated Medical Center Campus Project water demand in 2030 is: 398.5 + 60 = 458.6 AFY.

Net new water demand for the Medical Center Project is as follows:

Year 2023: 53.2 AFY(260.7 – 207.5)

Year 2030: 251.1 FY (458.6 – 207.5)

California Water Code 10631, Paragraph (e) (2), requires a water use projection (average annual demand forecast) in five-year increments for the 20-year forecasted period.

The average annual day demand in five-year forecast increments for the Medical Center Campus Project for the next 20 years is shown in Table 16.

Table 16: Harbor UCLA Medical Center Project Demand Forecast (Net Increase)

Year:	2015	2020	2025	2030	2035	2040
AF:	0	0	54	251	251	251

Harbor UCLA Medical Center Project and Dominguez System Demand Comparison
This section compares the increase in demand by the Harbor UCLA Medical Center Project with the projected water demand for the Dominguez system.

Table 17 shows Dominguez system and Harbor UCLA Medical Center projected potable water demands in five-year increments. Since the Harbor UCLA Medical Center Project was not explicitly part of the projected increase in Dominguez system demand, the two water demands are combined.

In 2025, projected Harbor UCLA Medical Center project water demand would cause an increase in Dominguez system demand of only 0.17 percent. In 2030, projected Harbor UCLA project water demand would cause an increase in Dominguez system demand of 0.8 percent

Table 17: Dominguez System and Harbor UCLA Medical Center Net New Project Potable Water Demands - AF

	2015	2020	2025	2030	2035	2040
Dominguez System	31,291	30,884	31,221	31,567	31,910	32,260
Harbor UCLA MC Project	0	0	54	251	251	251
Combined	31,291	30,884	31,275	31,818	32,161	32,511

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The Harbor UCLA project's increase in demand is not considered part of the demand forecast for the Dominguez system; therefore, it is treated here as additive since the total projected increase in demand from 2025 to 2030 for the Dominguez system is 346 AFY while the Harbor UCLA Medical Campus project increase is 197 AFY, or approximately 57 % of the Dominguez system increase. The Harbor UCLA Center project demand in 2030 represents only 0.8% of total Dominguez system demand and should not have affect the ability of Cal Water to provide an adequate supply to meet water demand.

Dominguez District Water Supply

Information from Cal Water's Draft 2015 UWMP, Adopted 2010 UWMP, the June 2009 Dominguez system WSFMP and more recent data on recycled water use through 2015 was used to develop the supply plan for the Dominguez system to 2040.

The Dominguez system is supplied by the following water sources:

- Imported water purchased from Metropolitan Water District of Southern California through the West Basin Municipal Water District.
- Groundwater pumped from two adjudicated groundwater basins - the West Coast Basin and the Central Basin. Groundwater is extracted from both basins using 10 wells (8 active and 2 inactive).
- Cal Water purchases treated desalted brackish groundwater produced in the C. Marvin Brewer Desalter owned by West Basin Municipal Water District.
- Recycled wastewater produced by the West Basin Municipal Water District in their West Basin Water Recycling Plant located in El Segundo.

In 2015, the Dominguez system used 26,886 AF of purchased water and 4,405 AF of groundwater pumped from Cal Water wells for a total of 31,291 AF. Hence, groundwater supplied 14 percent of total annual demand.

Since 1926 (90 years), Cal Water has continuously supplied an adequate amount of water to meet Dominguez system demands during normal, dry and multiple dry year periods using sources and water conservation measures as described in the following sections. Actual and projected Dominguez system water supply sources and quantities are summarized in Table 18. Note total supply quantities equal the projected total demand for potable and recycled water and the Harbor-UCLA Project. Cal Water operates its potable water distribution system so that demand not met by groundwater sources is supplied through its interconnections with the WBMWD transmission system. Cal Water has a capital improvement program to maximize use of its adjudicated groundwater rights by constructing new wells and installing treatment on wells with non-compliant water quality. The plan is to provide sufficient well capacity to fully utilize its annual allocation. Currently, Cal Water leases a portion of its groundwater rights using short-term transfer agreements. The amount of recycled water listed is the projected demand from this source and does not include estimated unaccounted for losses in the recycled water distribution system. Purchased water will be used to provide the remaining supply.

Table 18: Dominguez System Actual and Projected Water Supplies (AFY)

Water Supply Sources	2010 Actual	2015	2020	2025	2030	2035	2040
West Basin Municipal Water District – Purchased Water	27,247	26,886	13,987	14,378	14,917	15,264	15,564
Cal Water Groundwater Wells	8,575	4,405	16,897	16,897	16,897	16,897	16,897
Recycled Water	4,515	5,089	6,776	7,481	8,260	9,120	10,069
Total	**40,337**	**36,380**	**37,660**	**38,756**	**40,074**	**41,281**	**42,530**

Purchased Water

Purchased potable water is imported and supplied by MWD to WBMWD. Purchased water will continue to be the main supply source through 2019. In 2020, groundwater is planned to provide 54.7% of potable water and in year 2040, 52% of potable supply.

Water from MWD is delivered through four interconnection feeders (Palos Verdes Feeder, Victoria Feeder, Long Beach Lateral and Extension and the Sepulveda Feeder) to WBMWD and through seven WBMWD service connections to the Dominguez system. The total rated capacity of the seven service connections is 72,000 gpm. If operated at full capacity, these connections are capable of delivering up to 103.68 mgd (116,140 AFY) – a flow rate higher that the distribution system could likely accommodate.

Cal Water has a supply purchase agreement with WBMWD. Water purchased by Cal Water and supplied to the Dominguez system comes from either the Colorado River Aqueduct, which is owned by MWD, or through the California Aqueduct, a facility of the State Water Project (SWP), which is owned and operated by the California Department of Water Resources (DWR).

MWD classifications of service and rate structure have changed in recent years and further changes are anticipated. Key to these changes is a purchase agreement for imported water between WBMWD and MWD. This agreement became effective January 1, 2003, had an initial term of five years, and establishes requirements for water sales within MWD's service area. The agreement sets a Base Allocation for each Purchaser, which is essentially their share of the supply MWD has made available to WBMWD. The Base Allocation is determined on that Purchaser's five-year average non-surplus purchases during fiscal years ending 1997 through 2001. Over the term of the agreement, the Purchaser commits to purchase at least 60 percent of the Base Allocation times five, which is known as the Purchase Commitment. If a Purchaser does not purchase the full Purchase Commitment over the term of the agreement, then they must pay for the balance at the current Tier 1 Supply Rate.

A two-tier rate and annual allocation is another aspect of this agreement. The agreement sets a Tier 1 Annual Maximum at 90 percent of the Base Allocation. All water purchased in any year in an amount that is equal to or less than the Tier 1 Maximum will be purchased at the current Tier 1 Rate. Any amount of water purchased in excess of the Tier 1 Annual Maximum will be at the Tier 2 Rate. In 2013, the Tier 1 rate for water purchased from WBMWD was $1,089/AF and the Tier 2 rate was $1,239/AF.

In the Imported Water Purchase Agreement between Cal Water and WBMWD, the Base Allocation, Tier Allocations, and Purchase Commitment are established as a combined amount for all four Cal Water systems served (Palos Verdes, Hermosa-Redondo, Dominguez and Hawthorne). The Dominguez system shares in the combined amount with the other three service areas. The agreement became initially effective on January 1, 2003. There have been several subsequent amendments, with No. 4 dated January 1, 2008, being the most recent. It eliminated Cal Water's Base Allocation, set the Tier 1 Annual Maximum to 70,000 acre-feet and the Purchase Commitment is 210,000 acre-feet. Cal Water has developed an allocation that distributes the Tier 1 Annual Maximum to each of its four districts, so that if the total Tier 1 Maximum is exceeded the applicable Tier 2 charges can be assessed to the appropriate district. Allocations among the four districts are as follows: Dominguez 22,400 AF, Hawthorne 4,900 AF, Hermosa-Redondo 16,800 AF, and Palos Verdes 25,900.

In-Lieu Seasonal Storage is an economic incentive program designed to encourage purveyors to shift groundwater production from winter to summer to reduce peak summer demands. Seasonal Storage Service is a classification for water that is available for delivery by MWD during the October through April period during years of adequate supply. Monthly certification is required to receive this reduced-price Seasonal Storage Service.

To qualify for In-Lieu Seasonal Storage service water rates, a purveyor must reduce demand for supplemental water from MWD in the summer months (May to September) and shift production of groundwater from winter to summer. The baseline production ratio between local groundwater supply and total demand verifies that this shift has been accomplished. In-Lieu Seasonal Storage groundwater not pumped is left in the ground to augment groundwater replenishment. This unused groundwater results in a rebate or compensation from the Water Replenishment District (WRD) for the amount not pumped.

This program benefits MWD by reducing the summer peak flows that push MWD's treatment facilities and distribution system to capacity limits, and enables MWD to maximize water importation during winter when surplus flows are abundant in the areas of origin. Changes are anticipated in this conjunctive use program in the future. Cal Water's participation in this conjunctive use program will depend on the makeup of the economic incentives provided by these changes.

Groundwater

In 1965 the Central Basin was adjudicated, and in 1961 the West Coast Basin was adjudicated, with the Department of Water Resources as Watermaster. The adjudication orders are attached to the Dominguez District 2010 UWMP as Appendices J and K for each basin, respectively. The DWR Annual Summary of Watermaster Service reports on groundwater status in each of the basins. This summary includes historical fluctuation of water level elevation in wells throughout the basin. These references indicate that, since the reduction in pumping began in 1954 and the adjudication was implemented in 1961, groundwater levels in the West Coast Basin have risen some 20 to 60 feet, depending on location. However, many groundwater elevations in the basin remain below sea level, requiring maintenance of seawater intrusion barriers.

The West Coast Basin is a pressurized aquifer groundwater basin with three primary aquifers: the 200-foot Sands, the Silverado Aquifer, and the Lower San Pedro Aquifer. These aquifers have continuity with the Pacific Ocean in Santa Monica Bay. Overdraft of the basin was caused by excessive pumping due to population growth and rapid industrialization of the Los Angeles Coastal Plain beginning in the 1930s. This overdraft caused lowering of the piezometric head of the aquifers, which increased pumping cost and resulted in seawater intrusion. The adjudication of the West Coast Basin began in 1945 when Cal Water, along with the City if Torrance and the Palos Verdes Water Company, filed a lawsuit in Superior Court, Los Angeles County, to quiet title to the groundwater rights and control pumping in the basin. As part of the effort to resolve the overdraft condition, the WBMWD was formed in 1947 to distribute supplemental water to the major water purveyors imported into the region by the MWD. In 1955 when pumpers realized the severity of the overdraft, groundwater pumping was limited under an interim agreement. In 1961, the Court rescinded the interim agreement and signed the West Coast Basin Judgment.

The Dominguez Water Company was identified as a party to the judgment and granted water rights. Now Cal Water, as a result of the merger with Dominguez, owns 10,417.45 acre-feet of adjudicated rights in the West Coast Basin, or 16.15 percent of the total basin annual adjudicated rights of 64,486.25 acre-feet. This amount is in addition to the 4,070 acre-feet held by Cal Water's Hermosa-Redondo District. As a result of the reduction in pumping ordered by the adjudication and increased recharge via the injection wells of the seawater intrusion barrier, in-lieu replenishment and improved underflow from Central Basin, the water levels in the West Coast Basin have slowly recovered to near 1940 levels.

The adjudication of the Central Basin began not out of litigation as in the West Coast Basin, but out of the collective concern expressed by the major pumpers regarding the impacts that reduced groundwater quantity and quality would have on the future of their communities. The Central Basin Municipal Water District was formed in 1952 to distribute supplemental water to the major water purveyors. In 1954 it was annexed to the MWD, so that access to the imported water supplies was available to the region.

The WRD was created in 1959, largely out of cooperation between the West Coast Basin Water Association and the Central Basin Water Association, with the directive to facilitate artificial replenishment of the two basins as a means of eliminating the overdraft and halting seawater intrusion. To quiet the title to and limit production of the groundwater in Central Basin, the WRD filed a lawsuit in Superior Court, Los Angeles, in 1962 against more than 700 parties. Later that year after a vast majority of the pumpers approved of the approach, the Court adopted an interim agreement to limit the production from the basin. In 1965, following extensive meetings by the parties to work out a settlement that was supported by pumpers representing over 75 percent of the basins anticipated water rights, the court approved the stipulated judgment for the Central Basin.

This judgment established an adjudicated water right for each party, but limited the allowable pumping allocation (APA) to 80 percent of the water right, which equals 217,367 acre-feet annually. The Dominguez Water Company was identified as a party to the judgment and granted water rights. As a result of the merger with Dominguez, Cal Water now owns these 8,100 acre-feet of adjudicated right with the associated 6,480 AFY of APA in the Central Basin. This amount is in addition to the 11,774 acre-feet held by Cal Water's East Los Angeles District. Table 19 summarizes Cal Water's Dominguez system allowable pumping allocation for the two basins.

Table 19: Cal Water Groundwater Pumping Rights

Basin	Pumping Rights AFY
Central Basin	6,480.00
West Coast Basin	10,417.45
Total	16,897.45

The principle mechanisms for recharge in the West Coast Basin are injection of water into the seawater intrusion barriers, in-lieu replenishment, and inflow to the West Coast Basin from the Central Basin. The Central Basin is recharged through percolation of water applied to surface spreading ponds in the Montebello Forebay, in-lieu replenishment, and inflow to the Central Basin from the San Gabriel Valley.

The Los Angeles County Department of Public Works owns and operates all groundwater recharge facilities as a county-funded activity through a longstanding inter-agency agreement. As a result, costs associated with the capture and recharge of storm water runoff are not directly accounted for in the cost of water replenishment. All other water used for replenishing the groundwater of the Central and West Coast Basins is funded by the WRD through the Replenishment Assessment. Additionally, the WRD manages various groundwater quality cleanup programs. To finance its designated responsibilities, the WRD levies a Replenishment Assessment on every acre-foot of groundwater produced in the Central and West Coast Basins.

Cal Water's management plan for Dominguez District water supplies includes participating in existing regional conjunctive-use programs and making use of economic incentives and the lease market to the fullest extent possible.

Basin Boundaries and Hydrology

The West Coast Subbasin is bounded on the north by the Ballona Escarpment, an abandoned erosional channel from the Los Angeles River. On the east it is bounded by the Newport-Inglewood fault zone and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills. The surface of the sub-basin is crossed in the south by the Los Angeles River through the Dominguez Gap, and the San Gabriel River through the Alamitos Gap, both of which then flow into San Pedro Bay.

The Central Subbasin occupies a large portion of the southeastern part of the Coastal Plain of Los Angeles Groundwater Basin. This subbasin is bounded on the north by a surface divide called the La Brea High, and on the northeast and east by emergent less permeable Tertiary rocks of the Elysian, Repetto, Merced and Puente Hills. The southeast boundary between Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift. The Los Angeles and San Gabriel Rivers drain inland basins and pass across the surface of the Central Basin on their way to the Pacific Ocean Bay.

A detail description of the basin is given in the California's Ground Water Bulletin 118, which is included as Appendix D in the Dominguez District 2010 UWMP. The Urban Water Management Plans for West Coast Basin and Central Basin are included in Appendix H and I, respectively.

Groundwater Management Plan

As the regional groundwater management agency for two of the most utilized groundwater basins in the state of California, the WRD plays an integral role in overall water resource management in southern Los Angeles County. The WRD manages groundwater for nearly four million residents in 43 cities of southern Los Angeles County. The 420 square mile service area uses about 250,000 AF of groundwater per year, which equates to nearly 40 percent of the total demand for water. The WRD ensures that a reliable supply of high-quality groundwater is available through its clean water projects, water supply programs, and effective management principles. A copy of WRD's Strategic Plan is included as Appendix J in the Dominguez District 2010 UWMP.

Dominguez System Wells (Groundwater) Summary

For 2012, total production capacity of the 7 active wells in the Dominguez system was approximately 6,650 gpm, which if operated continuously would produce 10,735 AFY. Actual well production in 2012 was 7,991 AF or approximately 74.4% of production capacity. In 2015, well production decreased to 4,405 AF. However, for 2020 Cal Water projects annual well production of 16,897 AF (its allowable pumping allocation from the West and Central Basins) and the same amount through at least 2040. Three wells (219-02, 275-01, and 294-01) will have treatment facilities installed and become operational between 2016 and 2018, which will add 2,600 gpm for a total production of 14,932 AFY.

Cal Water temporarily has lost some well production capacity due to localized groundwater quality issues and reduced well efficiencies. In 2009, well production capacity was approximately 10,700 AFY. If the wells were operated at 90 percent utilization, this would equal a production of 9,630

AFY out of its allowable pumping right of 16,987 AF. In 2000, Cal Water pumped 14,737 AF or 87 percent of its adjudicated rights.

Cal Water has additional well projects in its current capital budget program that it intends to bring on line before the year 2020 in order to bring production capacity to it allowable pumping allocation. In addition to capital improvement projects for adding production capacity, Cal Water has projects for constructing new wells to replace older wells that are declining in output or are non-functional.

Table 20 is a summary of existing well pumping rates for 2015 and projected well pumping rates for existing wells for 2020 for the Dominguez system.

Cal Water is implementing the recommendations of its 2009 WSFMP which include in addition to continued maintenance and improvements of existing wells construction of 5 to 7 new wells to achieve full use of Cal Water's its groundwater rights and to replace wells at the end of their useful life. In 2016, Cal Water will replace station 215-02, which has been destroyed. By 2020, it recommends replacement of station 290-01 (700 gpm). If the average production rate of a new well is 1,200 gpm, 5 new wells would have a combined production rate of 6,000 gpm. Total well production capacity in 2020, assuming no other changes in the other wells listed in Table 20, would be: 7,000 + 6,000 = 13,000 gpm. If these wells operate at a rate of 90 percent of production capacity (allows for downtime for maintenance), they could provide a groundwater supply of 18,888 AFY. Cal Water's allowable pumping groundwater right is16,987AFY. In summary, Cal Water's groundwater pumping right as a percentage of available production would be 90% (16,987/18,888)
.

Table 20: Dominguez System Existing Production Wells Summary

Well Number	2015 Discharge Rate (GPM)	Estimated 2020 Discharge Rate (GPM)
215-01	420	400
219-02	Treatment to be added – online 2017	600
203-01	Destroyed	0
277-01	670	500
279-01	750	700
294-01	Treatment to be added – online 2016	1,000
298-01	Well rehabilitation – online 2016	1,300
275-01	Treatment to be added – online 2016	700
272-02	Treatment to be added – online 2017	500
290-01	700	700
297-01	650	600
Total	**3,190**	**7,000**

Cal Water provides ongoing maintenance, well rehabilitation and engineering support to maintain production in all of its active wells including adding treatment facilities for wells with water quality issues.

Recycled Water

Although Los Angeles County Sanitation District's (LACSD) Joint Water Pollution Control Plant (JWPCP) provides wastewater collection and treatment services for the Dominguez service area, recycled water comes from WBMWD's West Basin Water Recycling Facility (WBWRF). The source of water to that facility is secondary effluent from the City of Los Angeles' Hyperion Wastewater Treatment Plant, which provides secondary treatment using the activated sludge process. Most of the Hyperion treated effluent is disposed of through an ocean outfall. Approximately six percent of treated effluent goes to the WBWRF in El Segundo where it undergoes chemical clarification, recarbonation, microfiltration, and chlorination. The WBWRF produces 42,000 AFY (37.5 mgd) of recycled water and has a maximum capacity of 67,210 AFY (60 mgd).

WBMWD has one of the largest recycled water programs in the United States. WBMWD has identified over 105 economically feasible recycled water users. Fully implemented, the recycling program has the potential to use over 67,210 AFY of recycled water. In the Dominguez system, Cal Water began purchasing recycled water from WBMWD in 2000 for industrial process waters and landscape irrigation. WBMWD and Cal Water's plan is to increase use of recycled water with as new customers as WBMWD's distribution system is expanded. This will result in less potable water use where that water is being used for those purposes.

Recycled water from the WBWRF is used for groundwater replenishment through more than 100 injection wells. In addition to serving Cal Water the WBWRF provides recycled water to more than 140 sites in Manhattan Beach, Torrance, Hermosa Beach, Carson, and Inglewood. Its biggest customers are the Chevron, Mobil and BP oil refineries. It should be noted that Cal Water operates and maintains the recycled water distribution system under contract to WBMWD. Figure 8 shows the 2009 transmission system.

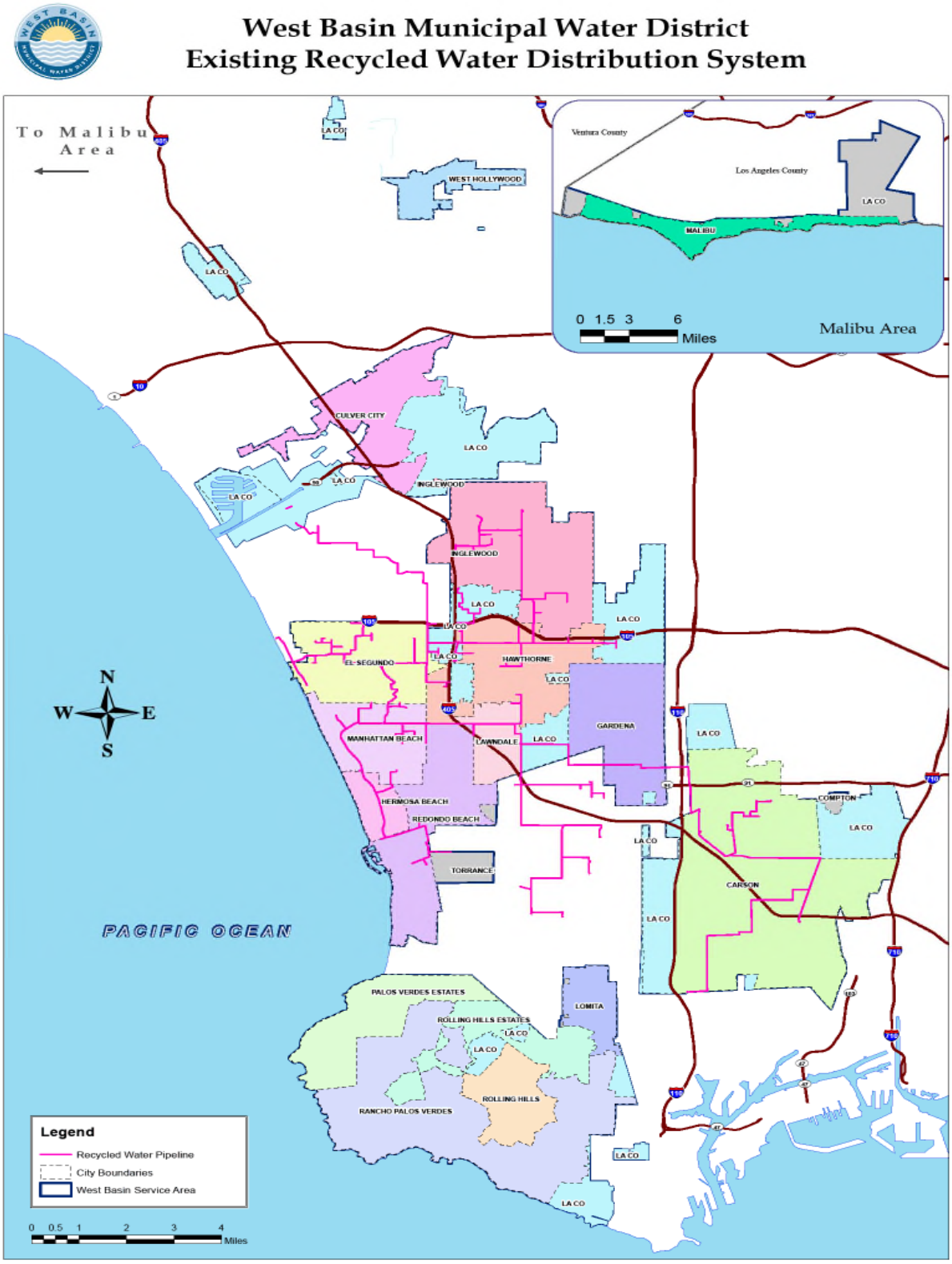
WBMWD is responsible for:

- Determining the technical and economic feasibility of supplying recycled water to the Dominguez service area
- Encouraging the use of and optimizing the use of recycled water in the Dominguez service area
- Extension of recycled water lines within the Dominguez service area

Cal Water actively supports use of recycled water by its customers and offers recycled water at a reduced cost. WBMWD has identified over 105 feasible recycled water users with a combined estimated average annual demand of 19,100 AFY. In 2015, Cal Water supplied 5,089 AF of WBMWD recycled water to 11 customers in the Dominguez system. Examples of recycled customers include the BP/ARCO refinery, the Home Depot sports complex with numerous soccer fields, and the Cal State University Dominguez Hills campus.

The Harbor UCLA Medical Center Campus site is not close to an existing WBMWD recycled water transmission main. WBWMD would have to construct a recycled transmission pipeline running west from an existing line in Carson for several miles. Hence, the WSA takes the position that in the next 5 years at least, all water demands for the project will be met by potable supplies.

Figure 8: WBMWD Recycled Water Transmission System



The WBMWD Water Recycling Master Plan identified potential customers in the Dominguez service area. Currently there are eleven customers in the Dominguez system that use recycled water. The WBMWD plan ambitiously projected an increase in commercial, industrial and irrigation customers to 158 services by 2007 and use of 10,800 AFY. WBMWD's recycling plan includes several projects to install pipelines capable of delivering recycled water throughout the Harbor/South Bay area.

WBMWD believes there is a significant growth potential for recycled water; hence, the projected increase in recycled water use from 5,080 AFY in 2015 to 10,069 AFY in 2014 or an increase of approximately 5,000 AFY in 25 years (200 AFY per year increase) can be considered to be conservative when compared to the projections in WBMWD's Water Recycling Master Plan.

Given four continuous years of severe drought in California (2011 - 2014) and the emphasis on developing local supply sources by MWD, WBMWD's strong development plan for recycled water use, projected recycled water use growth are conservative since

In the future, WBMWD plans to further extend its pipe delivery system for recycled water in the Harbor/South Bay area.

Estimates of increased use of recycled water in WBMWD's Water Recycling Master Plan (WRMP) are quite high when compared to what has actually occurred in the Dominguez system. The WRMP assumes several large water users will switch to recycled water rather pump groundwater for which they hold water rights at a cost nearly double the cost of groundwater. The WRMP anticipates large uses of recycled water by several industrial customers for processes for which use of recycled water has not been demonstrated. Hence, for the Dominguez system, Cal Water uses a lower growth projection than WBMWD.

Table 21 summarizes Cal Water's projected recycled water supply in the Dominguez system through 2040. Cal Water assumes that 80 percent of recycled water supply will be for industrial use and 20 percent for landscape irrigation.

Desalinated Water

Desalted Brackish Groundwater

Seawater intrusion into the groundwater of the West Coast Basin has been a problem since the 1930s. Two seawater intrusion barriers, the West Coast Basin Barrier and the Dominguez Gap Barrier, have been constructed and put into operation to stop salt water intrusion. The Los Angeles County Department of Public Works is responsible for maintenance of these barriers and the WRD provides freshwater that is injected into these barriers. A large amount of brackish water still lies inland of the saltwater barriers. It is being removed by extraction wells and treated at the C. Marvin Brewer Desalter, a reverse osmosis treatment plant that started operating in 1993. Dominguez Water Corporation, with the support of the WBMWD, WRD, MWD, and the US Bureau of Reclamation established the desalter project. Its costs of operation are reduced through a MWD incentive program so that the unit cost of desalinated brackish water is slightly less than non-interruptible imported freshwater from MWD. Since the merger of Cal Water and Dominguez Water Corporation in 2000, Cal Water has operated the desalter project.

Desalinated Ocean Water

In 2014, WBMWD completed an ocean water desalination demonstration project at the L.A. Conservation Corps' SEA Lab facility in Redondo Beach for the purpose of developing and collecting data for planning, permitting, design, construction, and operation of a full-scale desalination facility. The demonstration plant used full-scale equipment to assess operating factors, evaluate alternative processes and assess water quality and energy efficiency. Based on the results of the study, WBMWD determined that building a full-scale desalination plant is feasible.

1. WBMWD intends to build a 20 mgd desalination plant in El Segundo (expandable to 60 mgd) because that location offers many advantages and has none of the significant issues associated with the demonstration plant site in Redondo Beach. Because of the extensive permitting and approval requirements, conducting the necessary environmental and scientific field studies, preparing the necessary draft and final documents, obtaining funding, designing, constructing, testing and commissioning of all new facilities could take at least 10 years to complete.
2. WBMWD is interested in discussing with Cal Water its interest in participating in its El Segundo desalination plant and what that might entail in terms of supply, costs and other factors. Cal Water is considering this option.
3. The research completed by WBMWD at the Redondo Beach demonstration plant could provide useful information to Cal Water in locating possible treatment plant sites and in developing a preliminary feasibility assessment should Cal Water elect to pursue its own desalination project. An in-depth technical, environmental, permitting and cost analysis would be required to provide the information needed to decide whether or not it was feasible for Cal Water to move forward with its own desalination project.

Transfer or Exchange Agreements

Both the West Coast Basin and Central Basin judgments allow for transfer of groundwater rights through sale or lease agreements between parties and for the carryover of unused rights in an amount up to 20 percent of the groundwater rights held by a party. DWR is the designated Watermaster for both the West Coast Basin and Central Basin Adjudications. In that capacity, DWR accounts for all groundwater production in the basin, and annually reports on groundwater production and related groundwater-use transactions. The parties must file monthly production reports and notify the Watermaster regarding all leases or sales of rights.

The lease or purchase of additional adjudicated water rights could be used to increase supply reliability and availability. Obtaining additional adjudicated rights would further increase the savings available to the system under MWD's seasonal service program. Hence, the Dominguez system's program for increasing reliable groundwater production capacity of its wells to fully utilize all of its existing adjudicated rights and those of other agencies when opportunities become available. In the past nine years, Cal Water leased a portion of its adjudicated rights in both basins on a short-term basis to other pumpers that had production capacity and had the need for more water. As Cal Water increases its well production capacity, it will not renew these leases. Cal Water has had several short-term leases with local municipalities and private companies to use their available excess groundwater allocations for supply and will evaluate negotiating new leases as Dominguez system well capacity increases and full use of Cal Water's allowable pumping allocation is achieved.

Future Water Supply

Cal Water's plan for the Dominguez system and its three neighboring districts is to continuously provide adequate reliable supplies through facilities that meet peak demand requirements and have sufficient reserve capacity for fire protection. Cal Water recognizes that water supply planning is an ongoing process that requires regular reviews of assumptions and conditions.

The reliability of MWD imported water supplies has been affected by a number of factors in recent years, so MWD has implemented several programs to improve supply reliability:

- Financial incentives for development of local supplies
- Use of imported supplies on a seasonal basis and in a manner that maximizes the importation of supplies into Southern California
- Storage for surplus imported supplies for future use
- Restore use of local groundwater that have been contaminated

Cal Water will evaluate prospective additional supply projects and regional supply conditions to include:

- Status of West Coast and Central Basin groundwater basin storage, availability of groundwater and utilization of adjudicated water rights
- Transfer Agreements with other utilities that hold adjudicated groundwater rights in the two basins and have surplus water rights available
- Status and maintenance of seawater intrusion barriers managed by the Los Angeles County Department of Public Works
- Increased participation in WBMWD's water recycling program in the Dominguez and adjacent systems.
- Possible participation in WBMWD's desalination treatment project.

Cal Water coordinates its supply planning activities with other purveyors who are served by WBMWD. Cal Water participated in the development of the WBMWD Water Shortage Contingency Plan. Proposed Programs in this plan include:

- West Coast Basin Judgment Work Group - Representatives of the West Coast Basin Water Association are developing possible amendments to provide more flexible operations during drought, expansion of storage and conjunctive operation of the basin, and innovative water management practices.
- Water Supply and Drought Management Planning.
- Implementation of the Best Management Practices through a Memorandum of Understanding.
- West Coast Basin Reclamation Program.
- West Coast Basin Saline Plume Mitigation Planning.

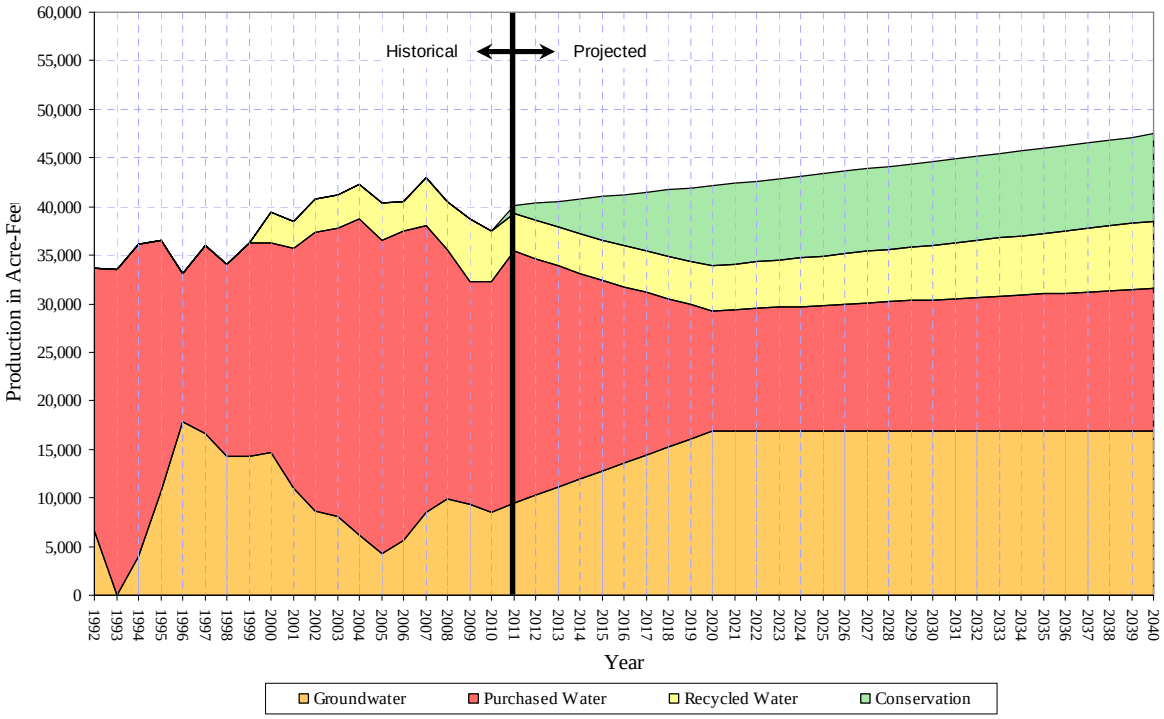
While Cal Water recognizes that MWD and WBMWD are committed to providing reliable and affordable imported water supplies, it also recognizes that as water demand increases the potential for water shortages does also. MWD's and WBMWD's objective is to provide 100 percent supply reliability over the next twenty years to meet all non-discounted, non-interruptible demand in the region. MWD initiatives to ensure this reliability include the Integrated Resource Plan (IRP), the

Water Surplus and Drought Management Plan (WS&DMP) and the Local Resource Investments program.

As indicated previously, Cal Water is committed to implementing new programs and projects in increasing water conservation, expanding use recycled water and maximizing use of its groundwater rights to decrease reliability on MWD supplied water.

Figure 9 shows is a graphical depiction of Dominguez system supply source history and plan for meeting demands through 2040.

Figure 9: Dominguez System: Historical & Projected Supply Source Plan



Supply Adequacy and Reliability Assessment

This section combines and compares previously presented information on projected demand and supplies for the Dominguez system to address the question of whether Dominguez system supplies are adequate and reliable for the next 20 years for normal hydrologic conditions, one dry year and a multiple dry year period.

Normal Water Year

Groundwater supply is limited to Cal Water's adjusted pumping allocation (APA) and by the capacity of wells to pump water. As explained previously, Cal Water is installing new wells to increase pumping capacity and adding wellhead treatment to existing wells with water quality issues. Cal Water plans to maximize use of its APA by 2020. Recycled water supply is matched to expected demand from this source. If some industrial customers in the Dominguez system were to convert their process water use to recycled water sooner, this would decrease potable water demand and make existing potable supplies available for future growth.

Cal Water's combined projected purchased water for all four of its districts receiving WBMWD water will be below its Tier I maximum of 70,000 AFY in normal hydrologic years.

According to MWD's 2010 Regional Urban Water Management Plan, sufficient supplies of imported water will be available in normal hydrologic years to meet all projected demands. For the WSA analysis as previously noted, normal demand is considered equal to Cal Water's calculated demand minus one standard deviation rather than the SBx7-7 target water demand projection. This results in a higher potable demand from 2020 to 2040. Table 21 compares demand with supply for a normal hydrologic year and demonstrates adequacy of supply to meet demands.

Table 21: Normal Hydrologic Year Supply and Demand Comparison - AFY

	2015	2020	2025	2030	2035	2040
Purchased water	26,886	13,987	14,378	14,917	15,264	15,564
Groundwater	4,405	16,897	16,897	16,897	16,897	16,897
Recycled water	5,089	6,776	7,481	8,260	9,120	10,069
Supply totals	36,380	37,660	38,756	40,074	41,281	42,530
Demand totals	36,380	37,660	38,756	40,074	41,281	42,530
Difference	**0**	**0**	**0**	**0**	**0**	**0**

Single Dry Year

Cal Water projects no decrease in total supply available and that it will meet projected demands. As noted in the previous section, groundwater and recycled water are expected to be available in the quantities projected and are not affected by a dry year. MWD's 2010 Regional Urban Water Management Plan indicates sufficient supplies of imported water will be available in single dry years to meet all projected demands. MWD indicates that the policies in its 2010 IRP update will insure this reliability. Therefore, the supply is projected to be fully meet demand during a single dry year as shown in Table 22.

Table 22: Single Dry Year Supply and Demand Comparison - AFY

	2015	**2020**	**2025**	**2030**	**2035**	**2040**
Purchased water	26,886	13,987	14,378	14,917	15,264	15,564
Groundwater	4,405	16,897	16,897	16,897	16,897	16,897
Recycled water	5,089	6,776	7,481	8,260	9,120	10,069
Supply totals	36,380	37,660	38,756	40,074	41,281	42,530
Demand totals	36,380	37,660	38,756	40,074	41,281	42,530
Difference	**0**	**0**	**0**	**0**	**0**	**0**

Multiple Dry Year Period

Because of adequate existing groundwater basin storage volume and ongoing regional groundwater recharge programs, groundwater supply is considered reliable. Therefore, Cal Water will be able pump up to its annual APA based on need and well production capacity. The quantity of recycled

water to be delivered in the Dominguez system during a multiple dry year period is expected to be the same as that delivered during a normal hydrologic year.

MWD's 2010 Regional Urban Water Management Plan indicates that sufficient supplies of imported water will be available during multiple dry years to meet all projected demands. MWD believes that the policies in the 2010 IRP update will insure reliability.

As a conservative approach, a scenario with 10 percent reduction of MWD supply in year 2 and 20 percent in year 3 of a multiple dry year period was developed. Table 23 presents this water supply scenario for an assumed multiple dry year period from 2015 - 2017. Normal year demand is assumed for year 2010. The quantity of MWD imported water delivered to the Dominguez system is assumed to be reduced by 10 percent in 2016 and by 20 percent in 2017. The quantity of groundwater pumped and recycled water increases as shown in Table 23. Groundwater and recycled water supplies are not expected to be affected by a multiple dry year period. Table 23 shows that even if there were cut backs in MWD supply of 10 percent and 20 percent, Dominguez system supplies would be adequate to meet projected normal demand during a multiple dry year period.

Table 23: Multiple Dry Year Period Supply and Demand Comparison: 1st & 2nd Years AFY

Water Supply Source	2010 Normal Water Year Water Supply	Multiple Dry Water Year Water Supply		
		2015	2016	2017
Purchased	27,247	26,886	24,522	21,798
Recycled	4,515	5,089	5,426	5,764
Groundwater	8,575	4,405	6,608	9,270
Total Supply	40,337	36,380	36,556	43,354
Demand	**40,377**	**36,380**	**36,556**	**36,832**

Table 24 is a comparison of supply to normal demand for the 3rd year in a multiple dry year period where a 20% reduction (relative to 2010) in purchased water is assumed. Cal Water will be implementing increased water conservation program measures during the period from 2015 to 2020, which should result in further decreases in per capita water use as previously discussed; however, no additional potable water demand reduction over what is shown in Table 17 is assumed. Recycled water use will be increasing and by 2020, Cal Water expects to be able to pump it full groundwater allocation. Table 24 shows that even with a 20% reduction in purchased water, total supplies are more than adequate to meet normal projected demands for the Dominguez system and the Harbor UCLA project.

Table 24: Multiple Dry Year Period: 3rd Year - AFY						
	Supply Source	**2010**	**2015**	**2020**	**2025**	**2030**
Third Dry Year	**Purchased**	27,247	21,798	21,798	21,798	21,798
	Groundwater	8,575	4,405	16,897	16,897	16,897
	Recycled water	4,515	5,089	6,776	7,481	8,260
	Supply Total	40,337	36,380	45,471	46,176	46,955
	Demand Total	40,337	36,380	37,660	38,756	40,074

During dry years when deliveries from the Colorado River Aqueduct and the SWP are reduced, MWD can draw water from other storage areas established through groundwater banking and transfer agreements made with other agencies. These agreements are further described in MWD's Water Surplus and Drought Management Plan (WSDM Plan).

Summary and Conclusion

Based on:

- Adequacy of existing and planned supplies from WBMWD and MWD,
- Plans to construct new wells and maintain existing wells including constructing treatment facilities to address water quality issues where needed in order to fully utilize its adjudicated groundwater rights,
- Plans to continue to participate in MWD's in-lieu storage program for increasing basin groundwater storage for use during drought periods,
- Plans to increase use of recycled water from WBMWD,
- In-place, ongoing and planned expanded water conservation programs and best management practices for reducing demand during normal and single and multiple dry years,
- Continuing participation in regional supply programs sponsored by WBMWD and MWD,
- Success in obtaining increased reductions in water use during multiple dry years by implementing its four-stage water demand reduction program, and
- Ninety years of experience in continuously providing an adequate supply to meet demands during normal, single and multiple dry years in the Dominguez service area,

Cal Water concludes that for the next 24 years (2016 – 2040), the Dominguez system will have adequate water supplies to meet projected demands associated with the proposed Harbor UCLA Medical Campus Center Project and those of all existing customers and other anticipated future customers for normal, single dry year and multiple dry year conditions.

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